AECOM

APPENDIX S

Benthic Resources Characterization Report – Submarine Export Cable

Photo credit: Matt Goldsmith, Equinor

June 2023

Prepared for

Beacon Wind LLC

Benthic Resources Characterization Report – Submarine Export Cable

Beacon Wind LLC (Beacon Wind) hereby submits the Benthic Resources Characterization Report – Submarine Export Cable as part of the Construction and Operations Plan (COP) for the Beacon Wind Project for Lease Area OCS-A 0520 (Project; Lease Area) to the Bureau of Ocean Energy Management (BOEM).

This report details the results from the marine benthic sampling survey of the Beacon Wind submarine export cable corridor, which will support the Beacon Wind offshore wind facility located within the Lease Area. Environmental data acquisition was comprised of benthic video, sediment sampling, photography, sediment profile imaging, and plan view imaging to characterize existing habitats and species present on the seabed.

Note that all submarine export cable routes detailed within the COP project design envelope (PDE) are under consideration by the Project and treated equally within the PDE. The proposed Project includes all options within the PDE, and the use of the terms “alternative” or “preferred” in the following Benthic Resources Characterization Report – Submarine Export Cable is not meant to imply that any routes or variants are less considered.

CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION

BENTHIC REPORT FOR THE SUBMARINE EXPORT CABLE CORRIDOR FOR LEASE OCS-A 0520 (BEACON WIND)

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BENTHIC SAMPLING SURVEY

US EAST COAST
Q3-Q4 2021

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ABBREVIATIONS AND DEFINITIONS

aRPD	Apparent Redox Potential Discontinuity
BOEM	Bureau of Ocean Energy Management
CMECS	Coastal and Marine Ecological Classification Standard
DP	Dynamic Positioning
DPR	Daily Progress Report
EFH	Essential Fish Habitat
GIS	Geographic Information System
GNSS	Global Navigation Satellite Systems
HD	High Definition
HDPE	High-Density Polyethylene
HRG	High-Resolution Geophysical
HSE	Health Safety and Environment
KP	Kilometer Post
MAC	Mobilization and Calibration
NMDS	non-Metric Multidimensional Scaling
M/V	Motor Vessel
NCCA	National Coastal Condition Assessment
NMFS	National Marine Fisheries Service
OSI	Organism-Sediment Index
QC	Quality Control
QINSy	Quality Integrated Navigation System
PPS	Pulse Per Second
PV	Plan View
PVS	Potentially Vulnerable Species
SD	Standard Deviation
SIMPROF	Similarity Profiles Routine
SPI	Sediment Profile Imaging
SSS	Side Scan Sonar
TOC	Total Organic Carbon
USEPA	United States Environmental Protection Agency
UTC	Coordinated Universal Time
UTM	Universal Transverse Mercator

EXECUTIVE SUMMARY

This report details the results from the marine benthic sampling survey of the Beacon Wind submarine export cable corridor, which will support the Beacon Wind offshore wind facility located in the designated Renewable Energy Lease Area OCS-A 0520. Environmental data acquisition was comprised of benthic video, sediment sampling, photography, sediment profile imaging, and plan view imaging to characterize existing habitats and species present on the seabed. The survey was performed using a high-definition (HD) drop/tow camera system, a sediment profile and plan view imaging (SPI/PV) system, a Smith-McIntyre grab sampler for collecting benthic sediment, and a grab-mounted HD benthic video camera, deployed from the dynamic positioning (DP) 2 survey vessel M/V *Deep Helder* in offshore waters and the R/V *Dolphin* in nearshore waters.

SPI/PV was collected at a total of 374 benthic stations along the submarine cable corridor. Benthic video and benthic grabs were taken at 198 of these 374 stations, with 188 stations yielding successful grabs where unconsolidated sediments were collected. Particle size distribution (PSD) and total organic carbon (TOC) were analyzed at all 188 stations, while a subset of 128 stations were selected for infauna analyses. An additional 93 stations were assessed with benthic video only (for a total of 291 benthic video stations). Video-only stations were most often used to evaluate areas of potential complex habitat identified by the geophysical survey.

The videographic data displayed a seabed generally characterized by a soft bottom substrate consisting primarily of finer particle sizes with occasional regions of cobble and boulder sized materials. No consolidated hardbottom substrates, sensitive seafloor communities, or species of concern were identified (with species of concern being guided by the NOAA Fisheries establishment of Species of Concern list [Cain 2004]). The benthic video collectively showed productivity in the form of biological assemblages with evidence of burrows, bioturbation, polychaete/amphipod tubes and macrobenthos on the finer particle size substrates and attached fauna associated with areas with boulder areas consisting of diverse colonizers including sponges, hydrozoans, bryozoans, and occasional coral colonies.

The results from the particle size distribution analysis indicated that sampled stations along much of the submarine export cable corridor had sediments mainly consisting of finer grained particles that ranged from Medium Sand (0.5 to 0.25 mm) to Silt (0.0625 to 0.0039 mm) based on the Wentworth grain size classification. Sampled stations with a gravel component were encountered occasionally in Block Island Sound and often within Long Island Sound. The gravel component of all samples containing gravel consisted of Granule (2.0 - 4.0 mm) and/or Pebble (4.0 - 64.0 mm).

Average sediment TOC concentration for stations (excluding ECR-B-110) was 0.83 percent (SE: 0.06). Sediment TOC concentrations were generally highest in the western portion of Long Island Sound and lowest approaching the eastern end of Long Island Sound to offshore areas. TOC values from sampled sites within the submarine export cable corridor are generally consistent with previous studies of marine sediments in the area (Boehm, 1984; Venkatesan, 1988; Poppe et al., 2000).

The submarine export cable corridor, which traverses the east-west axis of Long Island Sound before turning southeast onto and across the inner continental shelf, was sampled to quantify extant infauna assemblages. Of the 188 grab samples taken along the submarine export cable corridor, a total of 128, selected for infaunal analyses, yielded 352 taxa (224 [64 percent] of which were identified to species) and 27,786 individuals weighing 1,308 g. The data set included the following phyla arranged in descending order by total abundance: Annelida, Mollusca, Arthropoda, Echinodermata, Nemertea, Cnidaria, Sipuncula, Chordata, Platyhelminthes, Hemichordata, and Phoronida. Previous regional benthic sampling programs show multiple assemblages occur across western, central, and eastern Long Island Sound (Pelligrino and Hubbard, 1983; Reid et al, 1979; McCall, 1977; Schimmel et al., 1999; Zajac et al., 2000).

Two Coastal and Marine Ecological Classification Standard (CMECS) Components (Biotic and Geoform) were used to classify biological community structures and geological formations based on a review of towed video data for stations located along the submarine export cable corridor. For the Biotic Component, the Biotic Setting and the Biotic Class for the entirety of the submarine export cable corridor were classified as Benthic/Attached Biota and Faunal Bed, respectively. There were two Biotic Subclass classifications, Soft Sediment Fauna and Attached Fauna, that were applied to most of the stations, with Soft Sediment Fauna observed in every submarine export cable corridor segment and associated with non-consolidated sediments. Attached Fauna was observed where boulders were present and was observed in all but one of the segments, Segment 8, the most offshore segment on the eastern end of the submarine export cable corridor. The Biotic subclass of Soft Sediment Fauna was further defined into three (3) Biotic Groups where applicable (Mobile Mollusks on Soft Sediment, Sand Dollar Bed, and Starfish Bed). The Biotic subclass of Attached Fauna was always further defined into the Biotic Group of Diverse Colonizers and the Biotic Community of Large Macrofauna.

For the CMECS Geoform Component, the Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. For the Physiographic Setting, submarine export cable corridor Segments 1 through 6 located within Long Island Sound, were classified as Sound, and Segments 7 and 8, located outside of and east of the Sound, were classified as Continental Shelf. Geoform Levels 1 and 2 were utilized for the classifications of each station along the submarine export cable corridor, with modifications made in certain instances (e.g., as provided in Chapter 5). The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 1 km^2 in size and Level 2 represents features smaller than 1 km^2. (Mittermayr, 2020). Within Long Island Sound (Segments 1 through 6), all stations were categorized with the Geoform Level 1 as Flat. At the finer scale, Geoform Level 2 classifications included classifications of Burrows/Bioturbation (of biogenic origin) and two other categories Flat and Boulder Field (both of geologic origin). The Boulder Fields Geoform is applied to areas and described as an area dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. It should be noted that Boulder Fields classification is listed as a Level 1 Geoform, meant for regions greater than 0.4 mi^2 (1 km^2) in size but was deemed appropriate as a Geoform Level 2 classification based on the scale of their presence in the study area. The two segments outside of Long Island Sound (Segments 7 and 8) also included the Level 1 Geoform of Flat, with Segment 8 having an additional Level 1 Geoform present, Megaripples. At the finer scale, Geoform Level 2 categories of Boulder Field, Burrows/Bioturbation and Flat were present in Segment 7 and Burrows/Bioturbation was present in Segment 8. Burrows/Bioturbation was generally the more common Geoform Level 2 category observed throughout the submarine export cable corridor. The applied Geoform Level 2 category of Boulder Field was not observed at stations within Segment 8, the most offshore segment.

At submarine export cable corridor sampling stations where benthic grabs were obtained, NMFS-modified substrate types were derived from PSD data or benthic images. Biogenic substrates were found to be present at 3.2 percent of samples (n=6), while 34.9 percent contained coarse unconsolidated substrate types (n=66) and 61.9 percent contained fine unconsolidated substrate types (n=117). Generally, samples and imagery collected from stations offshore and nearer to the Lease Area were predominantly fine unconsolidated substrates, while substrates along the inshore portions of the submarine export cable corridor were somewhat more variable and contained a mix of fine and coarse unconsolidated substrates, as well as occasional biogenic substrates.

1 | INTRODUCTION

Beacon Wind LLC (Beacon Wind) proposes to develop and operate the Renewable Energy Lease Area OCS-A 0520 (Lease Area) in up to two individual wind farms, known as Beacon Wind 1 and Beacon Wind 2, for the generation of offshore wind energy and its transmission to interconnection points onshore in Queens, New York and/or Waterford, Connecticut.

Equinor Wind US, LLC (Equinor), the previous Lease holder, contracted MMT to provide marine environmental services for the benthic sampling survey within the Lease Area and within the proposed submarine export cable corridor. On January 27, 2021, Equinor assigned the Lease to Beacon Wind; this report and related reports may therefore reference both Equinor and Beacon Wind. MMT contracted CSA Ocean Sciences Inc. (CSA) and Tombo Environmental LLC (Tombo) with NewFields Companies LLC (NewFields) to provide the benthic sampling services.

This report provides the methods, results, and discussion of the benthic sampling survey along the submarine export cable corridor, which has been divided into eight geographical segments. These eight geographical segments are presented in Table 1 and illustrated in Figure 1.

The benthic sampling survey included data collection associated with a real-time benthic drop/tow camera, benthic sediment sample grabs, sediment profile imaging (SPI), and plan view (PV) imaging. Sampled stations are designated with the format ECR-<letter>-### (e.g., ECR-B-224). "ECR" denoted stations along the export cable corridor, the letter (A, B or C) denoted the type of sampling, and the three or four number sequence was a unique sample station identifier. In most instances, the "A" stations were designated as sediment profile imaging (SPI) and plan view (PV) imaging sampling only, the "B" stations were all sampling methods, and "C" stations were most often benthic drop/tow camera sampling to evaluate potential complex habitat based on the geophysical data; however, at some "C" stations SPI/PV and/or grab samples were also collected. For full details on sample locations and distribution of stations see Attachment A. Summary project details are provided in Table 2.

Table 1 Geographic segments of the submarine export cable corridor.

Segment	Description	Kilometer Posts (KPs)
1	East River – Astoria power complex (Queens, New York) to Throgs Neck	KP 0.0 – KP 11.0
2	Long Island Sound – Throgs Neck to Eatons Neck	KP 11.0 – KP 55.0
3	Long Island Sound – Eatons Neck to Central Long Island Sound	KP 55.0 – KP 130.0
4	Long Island Sound – Central Long Island Sound to The Race	KP 130.0 – KP 175.0
5	Long Island Sound – Eastern Long Island Sound to Millstone (Waterford)	KP 0.0 – KP 10.4
6	Block Island Sound – The Race to the New York State waters boundary	KP 175.0 – KP 200.0
7	Block Island Sound – New York State waters boundary to Block Island Sound	KP 200.0 – KP 225.0
8	Offshore Submarine Export Cable Corridor – Block Island Sound to Lease Area	KP 225.0 – KP 317.0

Table 2 Project details.

Client:	Beacon Wind LLC
Project:	Beacon Wind
MMT Sweden AB (MMT) Project Number:	103746
Survey Type:	Benthic Sampling
Client ID: Task 3 - Offshore Benthic:	EQ21902
Area:	US East Coast offshore Massachusetts and within Long Island Sound, New York
Survey period:	July 2021 – November 2021
Survey Vessels:	M/V *Deep Helder* (July 2021 – September 2021) R/V *Dolphin* (October 2021 – November 2021)
MMT/CSA Project Manager:	Sara Andersson (MMT) Melanie Cahill (CSA)
Client Project Manager:	Shantelle Worthylake

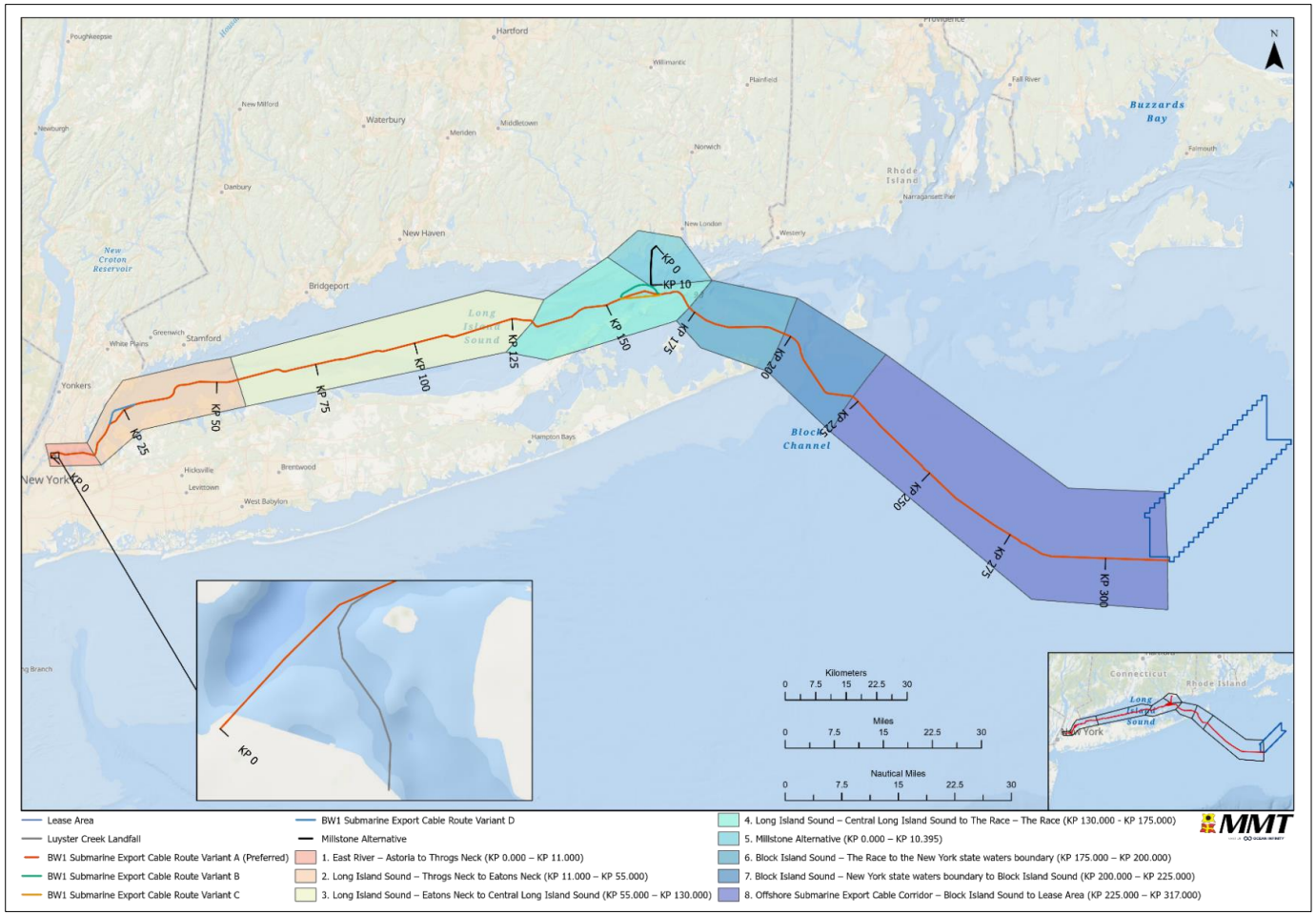


Figure 1 Sampling station area overview.

This report presents detailed information on the performance, instrumentation, processing stages and results from the benthic sampling survey within the Beacon Wind submarine export cable corridor. This report is a companion report to the Benthic Report for Lease Area OCS-A 0520 (Beacon Wind), which was specific to the Lease Area sampling. This report differs slightly in the organization of information, in that the SPI and PV results are provided in the main body of the report rather than as a standalone attachment per the Lease Area report which allows for a streamlined presentation of all collected data. The objective is to provide information on the environmental conditions within the submarine export cable corridor, which are based on data analyses and interpretations.

1.1| SCOPE OF WORK

A benthic sampling survey was conducted to document and characterize seafloor habitats within the study area, as required by Bureau of Ocean Energy Management (BOEM) 2019 guidelines and NOAA Fisheries 2021 recommendations. The benthic habitats along the submarine export cable corridor are a resource at risk possibly affected by the proposed construction and operations of the Project. These data will inform siting decisions with the goal of avoiding or minimizing potential impacts to sensitive biological communities and essential fish habitat (EFH).

Information used to support the benthic habitat assessment includes existing literature on marine biological communities in the region and the collection of site-specific field data (e.g., grab samples for analysis of physicochemical and biological parameters).

This document specifically addresses the BOEM guidelines for benthic habitat field studies as defined within 30 CFR Subpart F §585.625, the BOEM 2019 guidelines and NOAA Fisheries 2021 recommendations. Consistent with BOEM guidance and NMFS recommendations, the objectives of this benthic sampling survey are to:

- Identify dominant benthic macrofaunal and macrofloral communities and substrate along the submarine export cable corridor associated with development of the Beacon Wind Project;
- Collect information to support spatial planning, routing, and siting decisions;
- Collect information to reduce the uncertainty associated with existing conditions and/or to inform the interpretation of survey results;
- Obtain data to establish a pre-construction baseline that may be used to assess potential changes to benthic environments resulting from proposed operations; and
- Provide data to inform the EFH assessment.

1.2| REFERENCE DOCUMENTS

The reference documents relevant to the marine benthic sampling survey of the Beacon Wind submarine export cable corridor are presented in Table 3.

Table 3 Reference documents.

Ref.	Document number	Title	Author
1.	103746-EQU-MMT-QAC-PRO-PROJMANU	Project Manual	MMT
2.	103746-EQU-MMT-QAC-PRO-ENVSPEC	Environmental Specifications	MMT
3.	103746-EQU-MMT-HSE-PRO-HAZOP	Hazard and Operability Study	MMT
4.	103746-EQU-MMT-HSE-PRO-HSEPLAN	HSE Plan	MMT
5.	103746-EQU-MMT-HSE-PRO-ENFDEEPH	Emergency Notification Flowchart	MMT
6.	103746-EQU-GLI-MMT-QAC-PRO-CADGIS	CAD and GIS Specification	MMT
7.	103746-EQU-MMT-MAC-PRO-DEEPHELD	Mobilization and Calibration Procedures	MMT
8.	103746-EQU-MMT-MAC-REP-DEEPHELD	Mobilization and Calibration Report	MMT
9.	103746-EQU-MMT-SUR-REP-OPRBENTH	Benthic Scope Operations Report	MMT
10.	QUA-W-QUA-QASSURAN-MAN	Quality Assurance Manual	MMT
11.	Appendix A	SOW	EQU
12.	Appendix C	Schedule	EQU
13.	Appendix E	Specification	EQU
14.	BOEM (May 27, 2020)	Guidelines for Providing Archaeological and Historic Property Information, Pursuant to 30 CFR Part 585	BOEM
15.	BOEM (May 27, 2020)	Guidelines for Providing Geophysical, Geotechnical, and Geohazard Information, Pursuant to 30 CFR Part 585	BOEM
16.	BOEM (May 27, 2020)	Guidelines for Submission of Spatial Data for Atlantic Offshore Renewable Energy Development Site Characterization Surveys	BOEM
17.	BOEM (Jun 2019)	Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585	BOEM
18.	BOEM (May 27, 2020)	Guidelines for Information requirements for a Renewable Energy Construction and Operations Plan (COP) (Version 4.0: May 27, 2020)	BOEM
19.	BOEM	Lease Number OCS-A 0520 – Addendum C Lease Specific Terms, Conditions and Stipulations	BOEM

2| SURVEY PARAMETERS

2.1| GEODETIC DATUM

2.1.1| ACQUISITION

The geodetic datum used for equipment during acquisition are presented in Table 4 and Table 5 for the M/V *Deep Helder* and R/V *Dolphin*, respectively.

Table 4 Geodetic parameters used during acquisition aboard the M/V Deep Helder.

Horizontal datum: WGS84	
Datum	WGS84
Ellipsoid	WGS84
Prime Meridian	Greenwich
Semi-major axis	6 378 137.000 m
Semi-minor axis	6 356 752.314 245 m
Inverse Flattening (1/f)	298.257 223 563
Unit	Meter

Table 5 Geodetic parameters used during acquisition aboard the R/V *Dolphin.*

Horizontal datum: ITRF2014	
Datum	ITRF2014
EPSG Datum Code	1165
Spheroid	GRS80
Semi-major axis	6 378 137.000 m
Inverse Flattening (1/f)	298.257 222 101
Unit	Meter

2.1.2| PROCESSING

The geodetic parameters used during processing and reporting are presented in Table 6 and Table 7 for the M/V *Deep Helder* and R/V *Dolphin*, respectively.

Table 6 Geodetic parameters used during processing data from the M/V *Deep Helder.*

Horizontal datum: NAD83 (2011)	
Datum	NAD83 (2011)
Ellipsoid	NAD83 (2011)
Prime Meridian	Greenwich
Semi-major axis	6 378 137.000 m
Semi-minor axis	6 356 752.314 m
Inverse Flattening (1/f)	298.257 222 101
Unit	Meter

Table 7 Geodetic parameters used during processing data from the R/V *Dolphin.*

Horizontal Datum: NAD83 (2011)	
Datum	NAD83 (2011)
EPSG Datum Code	6318
Spheroid	GRS80
Semi-major axis	6 378 137.000 m
Inverse Flattening	298.257222101
Unit	Meter

2.2| TRANSFORMATION PARAMETERS

The transformation parameters used for data collected by the M/V *Deep Helder* during the project are presented in Table 8 and test coordinates for the datum shift from WGS84 to NAD83 (2011) are provided in Table 9.

The transformation parameters used for data collected by the R/V *Dolphin* during the project are presented in Table 10 and test coordinates for the datum shift from ITRF2014 to NAD83 (2011) are provided in Table 11.

Table 8 Transformation parameters for data collected by the M/V *Deep Helder.*

Datum Shift from WGS84 to NAD83 (2011) (right-handed convention for rotation - coordinate frame rotation)	
Parameters	**Epoch 2020**
Shift dX (m)	1.0133
Shift dY (m)	-1.9152
Shift dZ (m)	-0.5556
Rotation rX (“)	0.02744840
Rotation rY (“)	-0.00799430
Rotation rZ (“)	0.01041910
Scale Factor (ppm)	-0.0003300000

ppm = parts per million.

Table 9 Test coordinate for datum shift for data collected by the M/V *Deep Helder.*

UTM Zone	**Datum**	**Easting (m)**	**Northing (m)**	**Latitude (N)**	**Longitude (W)**
19N	WGS84	373465.004	4517637.971	40° 48’ 00”	70° 30’ 00”
	NAD83 (2011)	373465.392	4517636.859	40°47’ 59.9642”	70° 29’ 59.9826”

Table 10 Transformation parameters for data collected by the R/V *Dolphin.*

Datum Shift from ITRF2014 to NAD83 (2011) (coordinate frame rotation)	
Parameters	**Epoch 2020**
Shift dX (m)	1.0133
Shift dY (m)	-1.9152
Shift dZ (m)	-0.5556
Rotation rX (“)*	0.02744840
Rotation rY (“)*	-0.00799430
Rotation rZ (“)*	0.01041910
Scale Factor (ppm)*	-0.0003300000

*The units for the transformation rotation are arc seconds. Units for scale factor are parts per million (ppm).

Table 11 Test coordinate for datum shift for data collected by the R/V *Dolphin.*

UTM Zone	**Datum**	**Easting (m)**	**Northing (m)**	**Latitude (N)**	**Longitude (W)**
19N	ITRF2014	373465.004	4517637.971	40° 48’ 00’’	70° 30’ 00’’
	NAD83	373465.392	4517636.859	40° 47’ 59”.9642”	70° 29’ 59.9826”

2.3| PROJECTION PARAMETERS

The projection parameters used for processing and reporting are presented in Table 12 and Table 13 for the M/V *Deep Helder* and R/V *Dolphin*, respectively.

Table 12 Projection parameters for the M/V *Deep Helder.*

Projection Parameters	
Projection	UTM
Zone	19 N
Central Meridian	69° E
Latitude origin	0° N
False Northing	0 m
False Easting	5000 000 m
Central Scale Factor	0.9996
Units	Meter

Table 13 Projection parameters for the R/V *Dolphin.*

Datum parameters	
Projection	NAD83 (2011)
Zone	UTM 19 N
EPSG CRS Code	26919
Central Meridian	69° W
Latitude origin	0° N
False Northing	0 m
False Easting	500 000 m
Central Scale Factor	0.9996
Units	Meter

2.4| VERTICAL REFERENCE PARAMETERS

The vertical reference parameters used for processing and reporting are presented in Table 14.

Table 14 Vertical reference parameters.

Vertical Reference Parameters	
Vertical reference	MLLW
Height model	NOAAS VDATUM

Global navigation satellite system (GNSS) tide is used to correct the bathymetry data to MLLW, the defined vertical reference level (Figure 2). The GNSS tide is obtained by post-processing GNSS data collected by an Applanix PosMV 320 system that was employed on each vessel.

The GNSS data is post-processed in the software POSPac MMS. Both the POS MV and POSPac MMS are developed by Applanix. The output from POSPac is ellipsoidal heights with accuracies of 5 cm RMS, which are corrected for motion and referenced to the multibeam echosounder reference point.

By incorporating a model of the defined vertical datum into the process, all heights will use the same vertical reference which is valid at the location of the actual measurement independent of the size of the survey area, instead of choosing a single mean value. Comparisons with the closest water level station were performed to ensure that the data is leveled correctly.

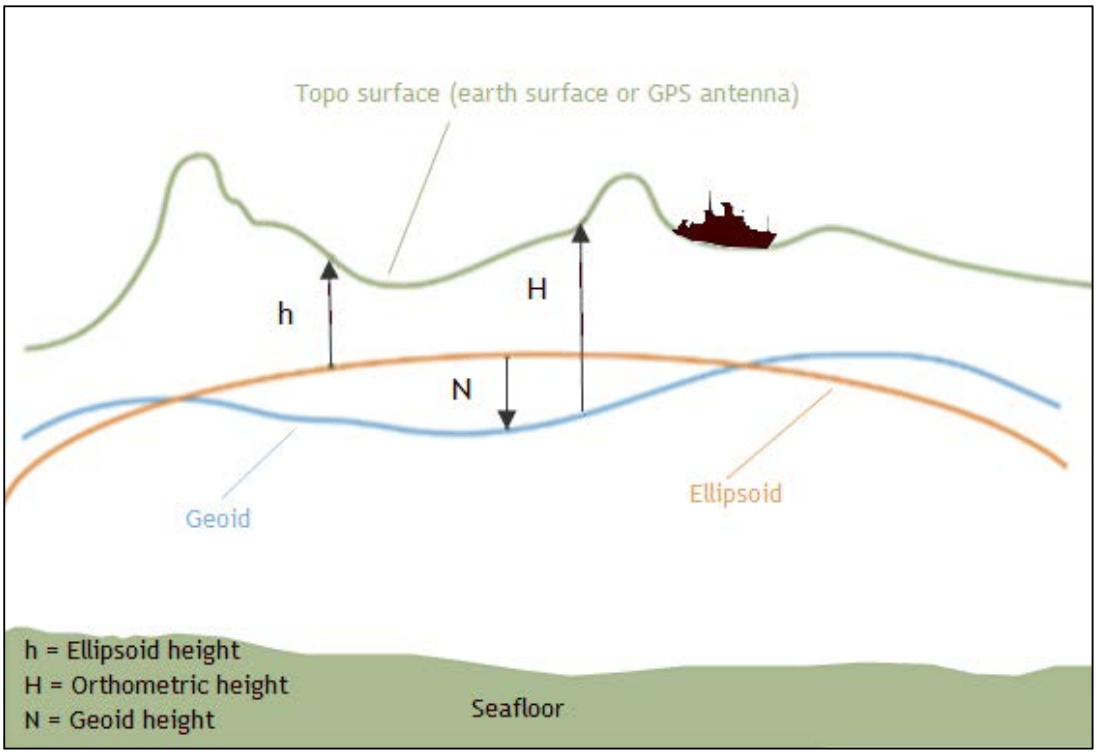


Figure 2 Overview of the relation between different vertical references.

This tidal reduction methodology encompasses all vertical movement of the vessel, including tidal effect and vessel movement due to waves and currents. The short variations in height are identified as heave and the long variations as tide.

This methodology is robust since it is not limited by the filter settings defined online and provides accurate results in complicated mixed wave and swell patterns. The vessel navigation is exported into a post-processed format, smoothed best estimated trajectory that is then applied onto the multibeam echosounder data.

The methodology has proven to be accurate as it accounts for any changes in height caused by changes in atmospheric pressure, storm surge, squat, loading or any other effect not accounted for in a tidal prediction.

2.5| TIME DATUM

Coordinated universal time (UTC) is used on all survey systems on board the vessels. The synchronization of the vessels on board system is governed by the pulse per second issued by the primary positioning system. All displays, overlays and logbooks are annotated in UTC as well as the daily progress report that is referred to UTC.

3| SURVEY PERFORMANCE

3.1| SURVEY TASKS

The benthic sampling survey was performed using a high-definition (HD) drop/tow video camera system to collect video data along a drift transect, a Smith-McIntyre grab sampler with a mounted HD video camera to collect video of the grab station, and an SPI/PV system. The combination of sampling with the drop/tow camera, the benthic grab with mounted camera, and SPI/PV was dependent upon the station location – some requiring the full suite of sampling technologies with others either just the SPI/PV system or drop/two camera (typically) combined with grab sample and grab video data collection as described in Section 1.

There was a total of 467 benthic sampling survey stations. Only drop/tow camera benthic video data was collected at 93 of the 467 stations. These drop/tow camera-only stations were most often used to evaluate areas of potential complex habitat identified during the geophysical survey. SPI/PV was collected at 374 stations along the submarine cable corridor. In addition to SPI/PV, drop/tow camera benthic video and grabs were planned to be taken at 198 stations; however due to hardbottom substrates encountered at some stations, benthic grabs were only collected at 188 of those 198 stations. Of the 188 stations, 128 stations were selected for infauna analyses; all 188 grab stations were analyzed for PSD and TOC. The total number of stations for each sampling type is as follows:

- Drop/tow camera sampling was conducted at 291 stations (93 of these stations were drop/tow camera-only stations);
- SPI/PV imaging was conducted at 374 stations;
- Grab with grab-mounted benthic video camera sampling was conducted at 198 stations;
    - Sediment grab sampling was successful at 188 of the 198 stations.

3.2| SURVEY PERSONNEL

The benthic sampling survey was conducted from two vessels, the M/V *Deep Helder* and the R/V *Dolphin*. The M/V *Deep Helder* conducted 24-hour operations with two marine scientists and two operations technicians provided by CSA. In addition, two SPI personnel from Tombo and NewFields were onboard for the entirety of the survey. The R/V *Dolphin* conducted 12-hour operations with two marine scientists provided by CSA and two SPI scientists from Tombo and NewFields. A list of the science and technical staff involved in the effort is provided in Table 15.

Table 15 Science and technical staff involved in the survey effort aboard the M/V Deep Helder and R/V Dolphin.

Personnel	Affiliation	Vessel
Bruce Graham	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Ed Hughes	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Jeffery Landgraf	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Terry Stevens	CSA Ocean Sciences Inc.	M/V *Deep Helder* and R/V *Dolphin*
Keith Spring	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Tony Martin	CSA Ocean Sciences Inc.	M/V *Deep Helder* and R/V *Dolphin*

Personnel	Affiliation	Vessel
Steve Viada	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Jason Clermont	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Thomas Lamoure	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Gordon Stevens	CSA Ocean Sciences Inc.	R/V *Dolphin*
Woodrow Straley	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Robert Shiffer	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Russ Karnap	CSA Ocean Sciences Inc.	M/V *Deep Helder*
Ian Stupakoff	Tombo	M/V *Deep Helder* and R/V *Dolphin*
Leon Delwiche	NewFields	M/V *Deep Helder*
Preston Martin	NewFields	M/V *Deep Helder* and R/V *Dolphin*

CSA personnel mobilized benthic sampling equipment and supplies, directed and conducted requisite sample collection and processing, and coordinated transfer/shipment of samples to respective analytical laboratories. The SPI data was processed by Tombo and NewFields. Onshore support for benthic sampling was provided by CSA's regional office in East Greenwich, Rhode Island.

3.3| EQUIPMENT

Equipment utilized during the benthic sampling survey is presented in Table 16. Table 17 and Table 18 provide information specific to the navigation and positioning equipment used on the M/V *Deep Helder* and the R/V *Dolphin*, respectively.

Table 16 Environmental Sample Equipment.

Instrument	Name
Grab sampler	Smith McIntyre grab sampler (0.1-m^2 sampling area, 16 cm depth penetration)
Camera stills/video	Drop/Tow Camera System: - Outland Technologies high-definition camera - 5,000-lumen light emitting diode (LED) lamp.
	Grab-mounted Camera System: - SOLO Series X Autonomous HD (1080p at 30fps) Recording Camera (Williamson & Associates) with rechargeable battery pack - 5,000 lumens LED light
Sediment Profile / Plan View System	Ocean Imaging System model 3731 sediment-profile camera with internal strobe Chimaera MKII camera with external flash; Images taken 1.6 to 6.6 ft (0.5 to 2 m) from bottom via external trigger
Benthic Sampling Support Equipment and Supplies	Laboratory van for workspace (M/V *Deep Helder* only) 20-HP winch with wire rope (M/V *Deep Helder* only) 10-HP winch with synthetic rope (R/V *Dolphin* only) Sieve station 0.5-mm stainless steel sieves 10 percent formalin (preservative) Sample containers and miscellaneous sampling supplies Digital storage for video

Table 17 Vessel equipment summary – M/V *Deep Helder.*

Instrument	Name
Navigational System	
Primary Positioning	Applanix POS MV 320 with FUGRO G2 corrections
Secondary Positioning	Fugro Seastar with XP2 corrections
Primary Gyro and INS	Applanix POS MV 320
Underwater Positioning	IXSEA GAPS USBL
Survey Navigation Software	QPS QINSy (Quality Integrated Navigation System)
Sound Velocity (SV)	
Hullmounted SV at MBES transducer	Valeport miniSVS
Sound Velocity Profiler	Valeport Midas SVX2

Table 18 Vessel equipment summary – R/V *Dolphin.*

Instrument	Name
Navigational System	
Primary Positioning	Applanix POS MV OceanMaster with RTK corrections
Primary Gyro and INS	Applanix POS MV OceanMaster
Survey Navigation Software	Hypack 2021

4| METHODOLOGY

The field methods and survey design were planned, written, and executed by environmental scientists at CSA in consideration of the BOEM *Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585* (June 2019), NMFS *Updated Recommendations for Mapping Fish Habitat* (March 2021) and Beacon Wind requirements.

4.1| FIELD METHODS

4.1.1| BENTHIC VIDEO AND SEAFLOOR IMAGERY

A drop/tow camera system with an estimated 11.8 ft^2 (1.1 m^2) field of view at 3.3 ft (1 m) altitude was used to collect real-time video (and optional opportunistic still images) for generally characterizing the benthic habitats at all sampled stations. The video camera and lights mounted on the imaging system were positioned to collect forward-looking video imagery directed at an oblique angle from a tow altitude of approximately 3.3 ft (1 m) above the seafloor. The system deployed and lowered to an appropriate altitude off the seafloor was maneuvered on a controlled drift for 5 to 15 minutes at a relatively low speed of <1 knot, as dictated by the vessel's DP. The system instrument cable conveyed standard-definition real-time video for onboard observations while HD video was recorded and logged by the camera. Logged HD imagery data was downloaded from the camera between stations and time-synchronized with the navigational systems to ensure positional accuracy.

Seafloor photographic data were also acquired at all sediment sampling stations with a Williamson & Associates SOLO Series X autonomous high-definition camera equipped with an underwater 5,000 lumens LED light. The camera system was mounted onto the frame of the Smith McIntyre grab sampler and turned on just prior to deployment providing a continuous recording of visual data during each grab sample deployment. The camera's visual detection begins at approximately 1 m above the seafloor due to light penetration within the water column.

4.1.2| SEDIMENT AND MACROINFAUNA SAMPLING

Parameters, guidelines for containers (type and size), preservation methods, and holding times for sediment samples are provided in Table 19. These guidelines are generally based on United States Environmental Protection Agency (USEPA) standards (USEPA, 2015) and laboratory recommendations.

Table 19 Sediment parameters, minimum weight, guidelines for containers, preservation method, and holding times for samples collected during the benthic sampling survey.

Parameter/ Analyte(s)	Minimum Sample Weight	Container Type and Size	Storage Conditions and/or Preservation Method	Holding Time
Particle size	200 grams	250-mL plastic	Stored refrigerated to reduce bacterial proliferation and shipped on ice	Indeterminate
Total organic carbon	50 grams	125-mL amber glass	Stored frozen and shipped on ice	28 days
Benthic infauna	---	1-L HDPE	Ship-board processing (sieve through 0.5-mm sieve) and preserved with 7–10 percent buffered formalin	Indeterminate; samples can be transferred to 70 percent ethanol after being fixed and stored in formalin

HDPE = high-density polyethylene.

A Smith McIntyre grab sampler (1-ft^2 [0.1-m^2] surface area) was deployed using a winch and A-frame system to collect sediment for physicochemical and macroinfauna analyses. Physicochemical and macroinfauna sampling parameters were collected from a single grab by using a metal insert to split the contents of the grab (with a minimum of 2.8-in [7-cm] sediment depth). One portion of the partitioned sediment was used for sediment physiochemistry (i.e., particle size and total organic carbon [TOC]), and the other portion for macroinfauna analyses. The metal insert was positioned so that the resulting portion for macrofauna analysis had a surface area of approximately 0.4 ft^2 (0.04 m^2) and sediment volume of approximately 1.3 gal (6 L) to align with *BOEM's Guidelines for Providing Benthic Habitat Survey Information for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585* (BOEM, 2019).

Each grab sample was inspected prior to processing to provide suitable samples for the project parameters and to meet the criteria set forth in the Scope of Work (Enquiry No. 464785) as well as to generally meet the sediment sampling criteria provided in the USEPA National Coastal Condition Assessment Field Manual (2015). During the inspection, CSA scientists looked for the following:

- Grab sampler doors were secure to limit potential scouring of surficial sediments;
- Minimum penetration depth of at least 7 cm;
- Collected sediment was generally intact; and
- No evidence of sediment loss from incomplete closure of the grab sampler jaws.

Prior to processing, each sediment sample was photographed in the grab sampler (Image 1) and notes were collected regarding sediment penetration depth, appearance (i.e., color based on Munsell color chart), texture, odor, and presence/absence of fauna, flora, and/or anthropogenic debris. Depth of Apparent Redox Potential Discontinuity (aRPD) was assessed and measured, if present, using a clear 3.8-cm acrylic core tube inserted to full depth of the sediment opposite of the macroinfauna portion of the grab sample. The sediment-filled acrylic core was removed from the grab, photographed in proximity to a metric scale, and the depth of the aRPD was noted, if present (Image 2).

Image 1 Example image of the grab sampler open with metal divider inserted (upper left corner).

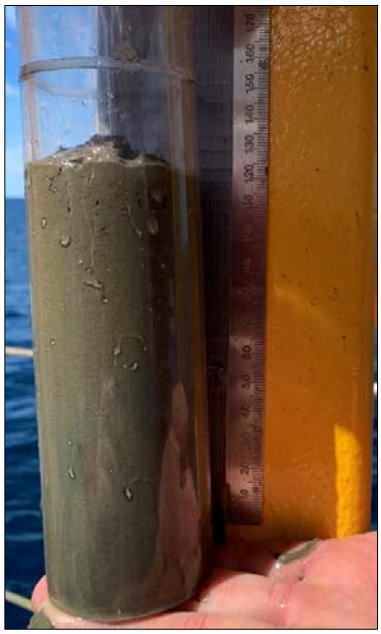


Image 2 Sediment-filled acrylic core removed from the grab, photographed in proximity to a metric scale, so the depth of the Apparent Redox Potential Discontinuity can be measured if present.

Following the processing of the aRPD sample, the sediment from the acrylic core tube was homogenized, appropriately allocated for particle size and TOC analyses, and placed directly in pre-cleaned and labeled sample containers.

There was a total of 198 benthic stations identified for benthic grab sampling. Of those stations, grab samples were successfully obtained at 188 stations. Grab sampling was unsuccessful at those 10 stations due to fouling of the grab from hardbottom substrates. At these 10 stations, multiple (two to three) attempts to obtain a successful grab sample were made after an initial unsuccessful attempt.

Macroinfauna samples were collected directly from the full depth of sediment from the designated side of each grab. Sediment was elutriated and wet-sieved on board over a 0.5-mm mesh sieve with gentle streams of seawater of high volume and low pressure using a floatation (overflow barrel) technique that minimized trauma to the infauna organisms and facilitated separation from the sediment matrix.

The infauna sieving station consisted of a seawater supply manifold and hoses, mixing-overflow barrel, a sieve screen and holder, and a collection sink with drain hoses (Image 3).

Image 3 Sieving station for processing infauna using the floatation (overflow barrel) technique.

The following three steps were required to process macroinfaunal samples:

1. Supply seawater in the barrel with a controllable flow rate to facilitate overflow of seawater from the barrel to the sieve screen.
2. The collected sediment was placed within the barrel in stages and was gently worked by hand and the flow of the supply seawater to break down and suspend the sediment.
3. After the sediment was emptied from the barrel, the processed sample (consisting of macroinfauna, some residual sediment and debris remaining on the sieve screen) was transferred to a sample container (or containers) and preserved with a 7 to 10 percent borax-buffered formalin-in-seawater solution (1:10 dilution of 37 percent formaldehyde).

Processed samples were placed in 1-L plastic jars and labeled, sealed with vinyl tape, and stored in cool, dry coolers while aboard the vessel. Once preserved with buffered formalin, infauna samples were stored at ambient temperature pending shipment to the analytical laboratory.

4.1.2.1| QUALITY CONTROL MEASURES

Field quality assurance (QA)/quality control (QC) measures were implemented throughout the survey to collect quality representative samples, minimize data and sample loss, and ensure the collection of requisite samples and data as fundamental components of the project QA program. Sediment samplers and sample processing equipment were cleaned according to accepted procedures prior to use in the field. Between stations, rinsing of sample collection and processing equipment with site water was conducted. Field replicates homogenized splits for TOC and grain size samples were collected at 14 stations. Data and sample checklists were completed in the field. Prior to departing each sampling station, biologists reviewed the checklist, confirmed data files, logbooks, and sample containers to ensure that the data and required samples were collected and properly stored. All samples were transported or shipped under a chain of custody process and accompanied all samples. Photographic and navigational data were saved to a digital data storage media along with navigational data. Multiple copies of photographic data were developed and maintained for transport and archival purposes. All hard copies of logs and sample checklists were scanned to create digital copies for archival purposes.

Details of analytical laboratory QA/QC procedures for TOC and grain size analysis can be found in Attachment C.

4.1.3| SEDIMENT PROFILE AND PLAN VIEW IMAGING

SPI and PV imaging are useful reconnaissance tools that provide a holistic assessment of benthic habitat and sediment condition (e.g., anoxic, oxidized, or infaunal successional stage) and allow for a determination of the overall health of the benthic habitat (Germano et al., 2011; Rhoads and Germano, 1982). A description of the instrumentation and image collection methods are provided in the following subsections.

4.1.3.1| SEDIMENT PROFILE IMAGING

High-resolution SPI was collected using an Ocean Imaging Systems model 3731 digital sediment-profile camera (Image 4). The sediment-profile camera consisted of a wedge-shaped prism with a Plexiglas face plate and a back mirror mounted at a 45-degree angle. Light was provided by an internal strobe. The mirror reflected the image of the profile of the sediment-water interface up to a Nikon® D7100 digital single-lens reflex (DSLR) camera with an internal strobe light was mounted horizontally on top of the prism. The camera obtained profile images of up to 8 in (20 cm) of the upper sediment column.

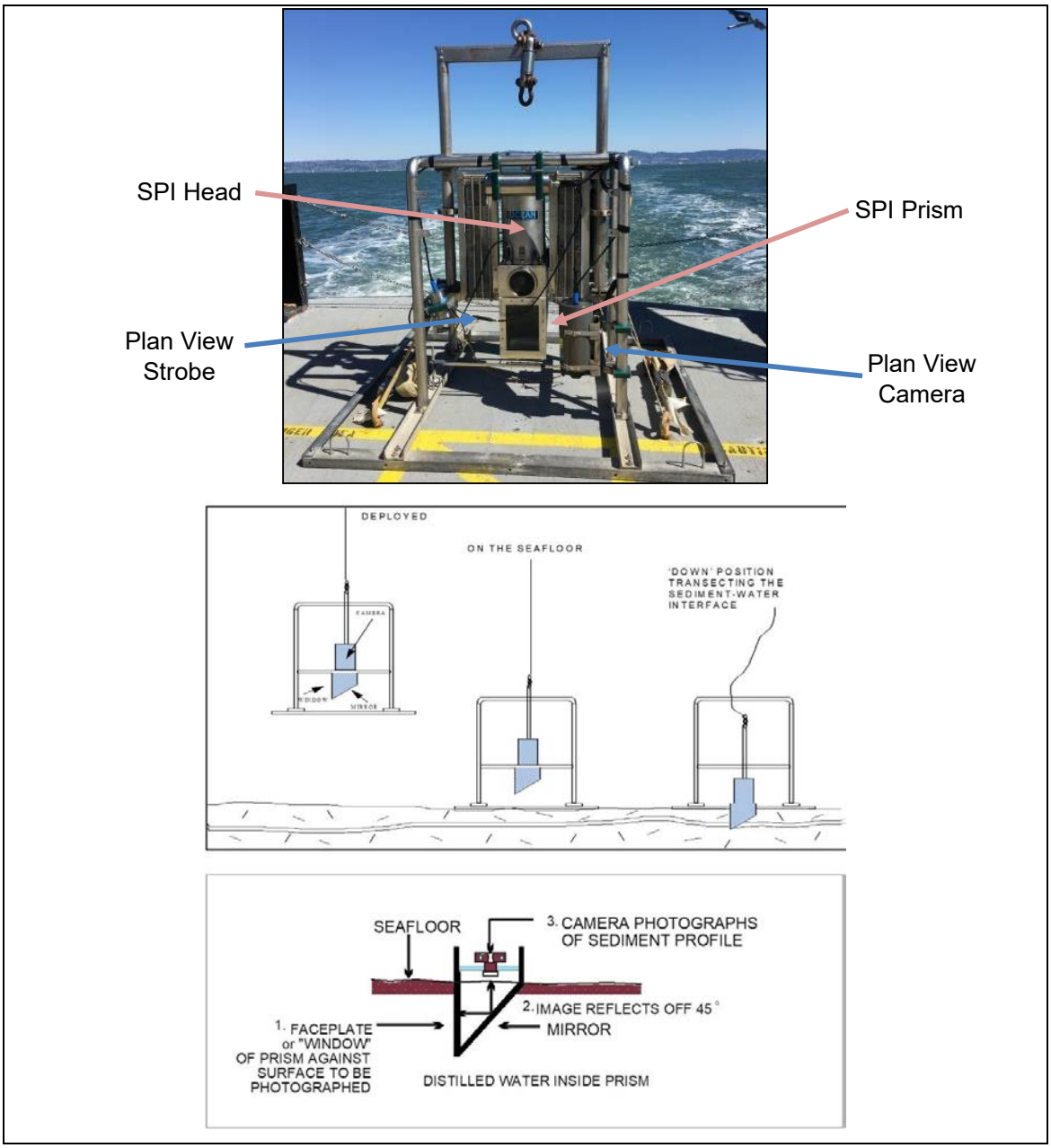


Image 4 Ocean Imaging Systems Model 3731 sediment-profile camera with Chimaera MKII plan view camera and sequence of sediment profile imaging operation on deployment.

The camera prism was mounted on an assembly that was moved up and down within a stainless-steel frame by allowing tension or slack on the winch wire. As the camera was lowered, the tension on the winch wire kept the prism in the up position. Once the camera frame touched the bottom, slack on the winch wire allowed the prism to vertically intersect the seafloor. The rate of fall of the prism of 2.4 in/second (6 cm/second) was controlled by an adjustable passive hydraulic piston, which minimized the disturbance of the sediment-water interface.

Three replicate SPI/PV images were collected at each station within a 66 ft (20 m) diameter area. Upon impact with the seafloor, the SPI trigger was tripped activating a 15-second time delay on the camera shutter release allowing the prism to obtain maximum penetration before an image was collected. After an image was collected, the camera was raised up to 33 ft (10 m) from the bottom, a wiper blade automatically cleaned off any sediment adhering to the prism faceplate, and the strobes were recharged. The camera was then moved to the next replicate location and the camera system lowered for imagery collection Once the camera was brought to the surface, a portable laptop computer was connected to the camera via a USB port and the images were downloaded.

Two weight racks, each capable of holding 125 lb (57 kg) of lead [in 25 lb (11 kg) increments] can be loaded to increase prism penetration (Image 4). If prism penetration was too great, adjustable stops, which controlled the distance the prism can descend, could be lowered, or “mud” doors could be attached to each side of the frame to increase the bearing surface of the entire unit and prevent over penetration of the SPI prism into the sediment.

Date and time of image acquisition, water depth, frame stop-collar position, and the number of weights used were recorded in the field logs for each replicate image (Attachment E).

The internal clock in the digital SPI system was synchronized with the vessel’s navigation system using the local date and time. Each image was assigned a unique time stamp in the digital file attributes by the camera’s data logger and cross-checked with the time stamp in the navigational system’s computer data file. Digital image files were renamed with the appropriate station names prior to image analysis.

4.1.3.2| PLAN VIEW IMAGING

High-resolution plan view images were captured using a downward-facing underwater Chimaera MKII camera with an external flash, manufactured by SubC Control, Newfoundland, Canada (Image 4). The Chimaera MKII was equipped with dual lasers located 2.5 in (6.25 cm) apart, which allowed an accurate scale to be applied to each image. The PV camera and external flash were mounted on the frame of the SPI camera in a downward-looking orientation. Images were collected just before the SPI camera touched the seafloor, using a 5 lb (2 kg) lead ball attached to a trigger cable, which in turn, was attached to a bounce trigger. The trigger cable length was changed depending on water clarity. The clearer the water, the 1.3 m trigger cable was used. In turbid waters, the shortest 1.6 ft (0.5 m) trigger cable was used. When the SPI camera was raised from the bottom, the bounce trigger was automatically reset, and the PV camera was ready to take another image. The total surface area captured in the PV camera field of view increased or decreased depending on water clarity at the site. On average, the plan view camera captured a 2.7 ft^2 (0.25 m^2 ± 0.17 m^2) area of the seafloor during the survey. A minimum of two PV images were analyzed at each station.

4.1.4| SAMPLE EQUIPMENT SEQUENCE

On the M/V *Deep Helder*, sampling was typically completed in the following sequence – drop/towed video, benthic grabs, and then SPI/PV camera work.

While not always performed in that sequence, all three sampling methods were typically completed while on station prior to moving to the next station, again with a few exceptions (e.g., very strong currents may have warranted a return to a station for improved towed video). During the shallow water survey aboard the R/V *Dolphin*, the vessel was first mobilized to conduct drop/towed video and grab sampling before reconfiguring the vessel for SPI/PV sampling at stations at the landfall sites in New York and Connecticut.

4.2| LABORATORY METHODS

4.2.1| SEDIMENT SAMPLING PARAMETERS

Table 20 summarizes the analytical methods and laboratory-specified method detection limits for sediment sampling parameters, and the accredited laboratory used for sample analysis.

Table 20 Analytical parameters, analysis methods, and reporting units of quantification for the benthic sampling survey.

Parameter/Analyte	Analytical Method	Quantification Limit	Units	Analytical Laboratory
Particle size analysis	Wentworth classification	0.1	mm or percent	Alpha Analytical
Total organic carbon	USEPA Method 9060	0.01	percent	
Macroinfauna	Taxonomy, abundance, and biomass (wet weight)	LPIL; Class level (Biomass)	N/A	Barry Vittor and Associates, Inc.

LPIL = lowest practical identification level; N/A = not applicable; USEPA = U.S. Environmental Protection Agency.

PHYSICOCHEMICAL ANALYSES

The sediment samples were sent to Alpha Analytical for sediment particle size (ASTM D6913 and ASTM D7928) and TOC analysis. The reports received from Alpha Analytical are provided in Attachment C. Grain size data was provided using the Wentworth (1922) classification (Table 21).

Table 21 Major and individual sediment size classes and corresponding size ranges used in the reporting of the particle size analysis (from Wentworth, 1922).

Size Class		Size Range (mm)
Major	**Individual**	
Gravel (≥2mm)	Boulder	256 to <4,096
	Cobbles	64 to <256
	Pebble	4 to <64
	Granule	2 to <4
Sand (0.0625 to <2 mm)	Very Coarse Sand	1 to <2
	Coarse Sand	0.5 to <1
	Medium Sand	0.25 to <0.5
	Fine Sand	0.125 to <0.25
	Very Fine Sand	0.0625 to <0.125
Mud (<0.0625 mm)	Silt	0.004 to <0.0625
	Clay/Colloid	<0.004

4.2.2| BIOLOGICAL ANALYSIS (BENTHIC INFAUNA)

Barry A. Vittor & Associates, Inc. conducted the macroinfauna analyses (taxonomic identification, counts, and biomass to class level) on samples taken at 128 of the 188 benthic grab stations. The 128 stations were selected by reviewing geophysical data to obtain representative samples from all apparent habitat types. Specimens were sorted, counted, and identified to the lowest practical identification level (LPIL).

Identifications were performed using relevant keys and literature, as determined by the analytical laboratory (Abbott, 1974; Bousfield, 1973; Day, 1973; Gardiner, 1975; Kensley, 1997; King and Cawood, 2007; LeCroy, 2000; Pettibone, 1963, unpublished; Robbins, 1993; San Martin,1992; Uebelacker and Johnson, 1984; Watling, 1979; Williams, 1984). Infauna samples were transferred from the formalin preservative to 70 percent denatured alcohol for archival. Upon arrival to the lab, rose bengal solution was added to each sample and left for 48 hours before rinsing. Rose bengal is a staining agent that dyes the proteins of the infauna to help with the efficiency of sorting and can also aid with identifications by making taxonomic features more easily visible under the microscope. After identification, fauna samples were transferred from the formalin preservative to 70 percent denatured alcohol for archival.

Taxa and their abundances were entered into a spreadsheet for each site. A tabulated list of taxa abundance observed for faunal samples at all stations is provided in Attachment D. The remaining infauna samples were archived in climate-controlled storage should they be needed for further future assessment.

4.3| DATA ANALYSES

4.3.1| BENTHIC VIDEO

A post-survey review of video obtained from the drop/tow camera system, as well as select still images obtained from the grab-mounted camera systems was conducted. This analysis included a description of visually detectable and discernable benthic organisms and habitat features as provided in Attachment B. The summary of the seafloor imagery described any major observations with specific images. Visually discernable organisms, due primarily to distinguishing color and shade contrast, large size, and motion were identified to the lowest practical taxonomic level based on the orientation of organisms within the video and overall video quality.

4.3.2| PARTICLE SIZE ANALYSIS AND TOTAL ORGANIC CARBON

Particle size distribution (PSD) of sediments from each successful benthic grab sampling site was received from the analytical laboratory reported as the percentage by weight in each of the Wentworth fractional component categories. Grab samples from stations ECR-B-476 and ECR-C-1479 were reported to Unified Soil Classification System (Howard, 1986) and converted to Wentworth using the closest relative particle size range (for more detail on these 2 samples, see Sections 5.5.3 and 5.5.8). The PSD data were compiled and parsed according to the cable corridor segment. PSD data were used (in part) to derive site-specific CMECS and NMFS-modified CMECS substrate classifications (see Section 4.4).

The TOC concentrations received from the laboratory were compiled and a mean TOC concentration was calculated for each cable corridor segment. TOC concentrations were compared to previously reported concentrations from the area, where available.

4.3.3| INFAUNA

Infauna assemblage structure in the study area was assessed with univariate summary statistics, diversity indices, and multivariate analysis of species composition. Biomass was calculated at the level of taxonomic class. All other univariate and multivariate analyses described below were based only on organisms identified to species.

UNIVARIATE STATISTICAL ANALYSES

Four diversity indices that capture different aspects of species-abundance relationships were used to analyze the samples. The indices differ in how they use the number of species (S) and the number of individuals (N) in their calculation. Margalef's species richness index (d) is a measure of diversity that uses only S and N to estimate species richness independent of sample size. Fisher's alpha uses the ratio of N/S to estimate the number of species expected to be represented by a single individual. The Shannon-Wiener diversity index (H') emphasizes species in the middle (not common or rare) of the species rank abundance sequence and accounts for both abundance and evenness of the species present. The greater the H' value, the greater the diversity and evenness of the sample; the values are generally between 1.5 and 3.5 with the index rarely greater than 4. Pielou's evenness index (J') measures how evenly the number of individuals is distributed among the species. J' ranges between 0 and 1; a lower J' value indicates less evenness in community structure and the possible presence of a dominant species, while a higher J' value indicates more evenness.

Margalef's species richness index (d) was calculated using:

$$d = \frac{(S-1)}{lnN}$$

where *S* is the total number of taxa in the sample, and N is the number of individuals in the sample.

Shannon-Wiener diversity index (H') was calculated as follows:

$$H' = -\sum_{S}^{i=1} p_i\left(lnp_i\right)$$

where *S* is the number of taxa in the sample, *i* is the *i*th taxa in the sample, and p_I is the number of individuals of the *i*th taxa divided by (N) the total number of individuals in the sample.

Pielou's evenness index (*J'*=) was calculated with Pielou's (1966) index of evenness:

$$J' = \frac{\mathrm{H}'}{\mathrm{lnS}}$$

Fisher's alpha (α) is determined from the summation of the logarithmic series relating S, N, and α as follows:

$$S = \alpha ln[1 + N/\alpha]$$

Where S=number of species, N=number of individuals. Alpha defines the relationship between S and N independent of sample size or population density.

MULTIVARIATE STATISTICAL ANALYSES

Multivariate analyses were used to determine patterns of individual taxa across all stations. These analyses are based on among-sample compositional similarities. A sample similarity matrix was constructed from the samples-by-species raw data table using the Bray Curtis similarity index (Bray and Curtis, 1957). Raw data were fourth root transformed to reduce the influence of high and low abundance values when calculating the similarity indices. The resulting similarity matrix was then analyzed using a normal cluster analysis and MDS to define potential infauna groupings based on taxonomic composition. The cluster analysis produces a dendrogram displaying samples based on the similarity of the infauna composition. An inverse cluster analysis was also performed to determine if individual species grouped together over the samples. To examine how individual taxa are distributed among and between the samples a second similarity matrix, the inverse of the sample similarity matrix, was constructed using Whitaker's index of association (Clarke and Gorley, 2015). Only the 50 most abundant taxa, which accounted for over 90 percent of the overall abundance, were used in constructing this inverse matrix which was clustered in the same way as the sample similarity matrix. To identify groups of samples with statistically similar species composition we used the similarity profiles routine (SIMPROF). This procedure works sequentially (hierarchically) down the dendrogram comparing randomly generated similarity profiles with the observed data at each cluster node. The test statistic "π" measures departure of the real profile from the mean of the random profiles. A large "π" indicates significance (if it exceeds all but 50 of the 1000 random profiles, then homogeneity of the assemblages in this group would be rejected at $p<5$ percent (Clarke and Gorley, 2015). SIMPROF-identified groups were used to order the raw data matrix into a two-way display with species ordered by the inverse cluster analysis to help visualize patterns and identify species responsible for sample clusters.

The same sample similarity matrix analyzed by cluster analysis was also analyzed with non-metric multidimensional scaling (NMDS). NMDS is an ordination technique that provides a scatter plot of inter-sample relationships. Samples that are most similar in terms of species composition and abundance will cluster near one another in a two-dimensional ordination diagram. NMDS provides another view of patterns in the data using a numerical procedure that differs from cluster analysis. Agreement of results from NMDS and cluster analysis indicates patterns are real and not spurious.

The influence of environmental variables (sediment particle size composition and TOC was assessed with envfit routine (Oksanen et al., 2020) to visualize relationships among environmental variables and the NMDS ordination. Envfit is a multiple linear regression where NMDS axes 1 and 2 are independent variables and percent sand, percent gravel, TOC, and Northing (from station coordinates) are dependent variables. The graphic output of envfit is vectors (arrows) superimposed on the NMDS plot. The length and direction of the arrows indicates strength and direction of the correlation with NMDS axes and environmental factors.

Similarity calculations as well as cluster analyses, SIMPROF tests were performed with PRIMER 7 (Clarke and Gorley, 2015). NMDS ordinations and plots (envfit) were produced using the vegan package in R (Oksanen et al., 2020).

4.3.4| SEDIMENT PROFILE AND PLAN VIEW IMAGING

The following subsections describe the major components of analysis for SPI and PV images.

4.3.4.1| SEDIMENT PROFILE IMAGE ANALYSIS

Computer image analysis of SPI images followed a formal and standardized technique developed by Rhoads and Germano (1982, 1986). Physical and biological parameters were measured directly from the digital SPI images by an image analyst using a Geographic Information System (GIS)-based image analysis platform. Descriptive comments were also recorded for each image.

- Grain size major mode and sediment type;
- Prism penetration depth;
- Surface boundary roughness;
- aRPD depth;
- Infaunal successional stage (presence and absence of feeding voids);
- Sediment oxygen demand proxies (presence/absence of methane, sulfate-reducing bacteria);
- Organism-Sediment Index (OSI) calculation (derived from depth of the aRPD, infaunal successional stage, presence or absence of sedimentary methane and dissolved oxygen condition inferred from sediment oxygen demand proxies); and
- CMECS Substrate Group and Subgroup.

GRAIN SIZE MAJOR MODE AND SEDIMENT TYPE

The sediment grain-size major mode and range, in phi units, are visually determined from the SPI images by overlaying a grain-size comparator at the same scale. This comparator was prepared by photographing a series of Udden-Wentworth size classes (equal to or less than coarse silt up to granule and larger sizes) through the SPI optical system. Seven grain-size classes are provided on the grain-size comparator used for this survey: ≥4 phi (silt + clay), 4 to 3 phi (very fine sand), 3 to 2 phi (fine sand), 2 to 1 phi (medium sand), 1 to 0 phi (coarse sand), 0 to -1 phi (very coarse sand), and <-1 phi (gravels). The lower limit of optical resolution on the SPI camera is approximately 0.025 in (62 μm) (≥4 phi), allowing recognition of particle sizes equal to or greater than coarse silt (>0.02 mm). The accuracy of this method of particle size comparison has been documented by comparing SPI estimates using a grain-size comparator with grain-size statistics determined from laboratory sieve analyses (SAIC, 1986).

PRISM PENETRATION DEPTH

The prism penetration depth was determined by measuring both the largest and smallest linear distance between the sediment-water interface and the bottom of the image frame. Observations regarding the nature and condition of the sediment-water interface are also recorded. Comparative prism penetration depths from stations of similar grain size provide an indication of relative sediment water content and shear strength.

SURFACE BOUNDARY ROUGHNESS

Surface boundary roughness is determined by measuring the vertical distance (parallel to the image border) between the highest and lowest points of the sediment-water interface. In addition, the origin (physical or biogenic) of this small-scale topographic relief is sometimes evident and can be recorded.

In sandy sediments, boundary roughness can be a measure of sand-wave height. On silt-clay bottoms, boundary roughness values often reflect biogenic features such as fecal mounds or surface burrows. These features are abundant only in areas where boundary shear stresses are low enough that such delicate features are preserved. Other surface features are noted when evident, including shell fragments/lag deposits, mud-clay clasts, and wood debris. Physical surface disturbances (e.g., surface ripples) can often introduce high surface relief on an otherwise “smooth” bottom.

APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The depth of the aRPD, which is the change from oxidized to reduced sediment, can be measured using SPI imaging and computer image analysis. The upper surface of aerobic fine-grained sediments has a higher light reflectance value than underlying hypoxic or anoxic sediments. This is readily apparent in SPI images and is due to oxidized surface sediment that contains minerals in an oxidized state (typically an olive-brown color), while the reduced sediments below this oxygenated layer are generally green, gray, blue, or black. The boundary between the colored ferric hydroxide surface sediment and underlying sediment is called the aRPD. The aRPD is a sensitive indicator of infaunal succession, sediment bioturbation activity, and sediment oxygen demand. The depth of the aRPD has proven to be a useful parameter for mapping gradients of enrichment on the seafloor (Rhoads and Germano, 1982; Lyle, 1983).

The actual RPD is the boundary that separates the positive Eh region (presence of free oxygen) of the sediment column from the underlying negative Eh region (absence of free oxygen). The exact location of the Eh boundary (where Eh = 0) can only be determined with microelectrodes. Therefore, the reflectance boundary observed in the SPI images is termed the aRPD. In general, the depth of the actual RPD can be similar to or shallower than the depth of the aRPD, because organisms cause bioturbation of ferric hydroxide-coated particles downward below the Eh = 0 horizon. As a result, the aRPD depth provides an estimate of the degree of biogenic sediment mixing. Bioturbation vertically transports buried reduced compounds to the sediment surface and exposes them to an oxidizing water column (Aller, 1982). Bioturbation also affects sediment transport by changing the physical properties of sediments and their mechanical behavior (Rhoads and Boyer, 1982).

Another important characteristic of the aRPD is the contrast in reflectance values at this boundary. This contrast is related to the interactions among the degree of organic loading in the sediment, bioturbation, and bottom-water dissolved oxygen levels. High inputs of labile organic material increase sediment oxygen demand, stimulate sulfate reduction rate and result in sulfidic products. This results in more highly reduced (lower-reflectance) sediments at depth and higher aRPD contrasts. In a region where generally low aRPD contrasts exist, images with high aRPD contrasts indicate localized sites of relatively high inputs of organic-rich material.

In sandy sediments that have very low sediment oxygen demand (SOD), the sediment may lack a visibly reduced layer even if an aRPD is present. Because the determination of the aRPD requires discrimination of optical contrast between oxidized and reduced particles, it may be difficult to determine the depth of the aRPD in well-sorted sands with little to no silt or organic matter.

INFAUNAL SUCCESSIONAL STAGE

The mapping of infaunal successional stages from SPI images is based on the theory that organism-sediment interactions follow a predictable sequence after a major seafloor perturbation. This theory states that primary succession results in “the predictable appearance of macrobenthic invertebrates belonging to specific functional types following a benthic disturbance and these invertebrates interact with sediments in specific ways.

Moreover, functional types are the biological units of interest, and by definition do not demand a sequential appearance of particular invertebrate species or genera” (Rhoads and Boyer, 1982).

Infaunal succession following a major seafloor disturbance initially involves pioneering populations (Primary or Stage I succession) of very small organisms that live at or near the sediment/water interface (Pearson and Rosenberg, 1978, Rhoads and Germano, 1986). In the absence of further disturbance, infaunal deposit feeders eventually replace these early successional assemblages. The start of this “infaunalization” process is designated as Stage II.

Large, deep-burrowing infauna (Stage III taxa) represents a high order successional stage typically found in areas of low disturbance. Pioneering assemblages (Stage I assemblages) usually consist of dense aggregations of near-surface living, tube-dwelling polychaetes; alternately, opportunistic bivalves may colonize in dense aggregations after a disturbance (Rhoads and Germano, 1982, Santos and Simon, 1980). These functional types are usually associated with a shallow redox boundary; and bioturbation depths are shallow, particularly in the earliest stages of colonization (Figure 3).

Many deep-burrowing infauna feed at depth in a head-down orientation. This localized feeding activity results in distinctive excavations called feeding voids. Diagnostic features of these feeding structures include a generally semicircular shape with a flat bottom and arched roof, and a distinct granulometric change in the sediment particles overlying the floor of the structure. The relatively coarse-grained material represents particles rejected by head-down deposit-feeders, as this deep-dwelling infauna preferentially ingest the finer sediment particles. Other subsurface structures, including burrows or methane bubbles, do not exhibit these characteristics. The bioturbation activities of these deposit-feeders are responsible for aerating the sediment and causing the redox horizon to be located several centimeters below the sediment-water interface.

The mapped distribution of Stage III deep infaunal assemblages may be useful in identifying undisturbed sites in both shallow and deep-water environments. In sediment environments rich in labile organic material, it is not uncommon to observe Stage I communities coexisting with Stage II or III communities (Rhoads and Germano, 1986). These mixed infaunal stages are classified as Stage I on II, or Stage I on III.

In sandy, dynamic environments, the climax communities may consist primarily of surface dwellers that reside in the upper cm of the sediment surface and have few if any naturally burrowing community members. These type communities are classified as Stage I communities by SPI image analysis reflective of an area influenced by physical factors (e.g., higher energy) and the presence of a sandy substrate, rather than a higher order successional stage that would typically be assigned a climax community (as described above) in a depositional environment dominated by a silt + clay substrate.

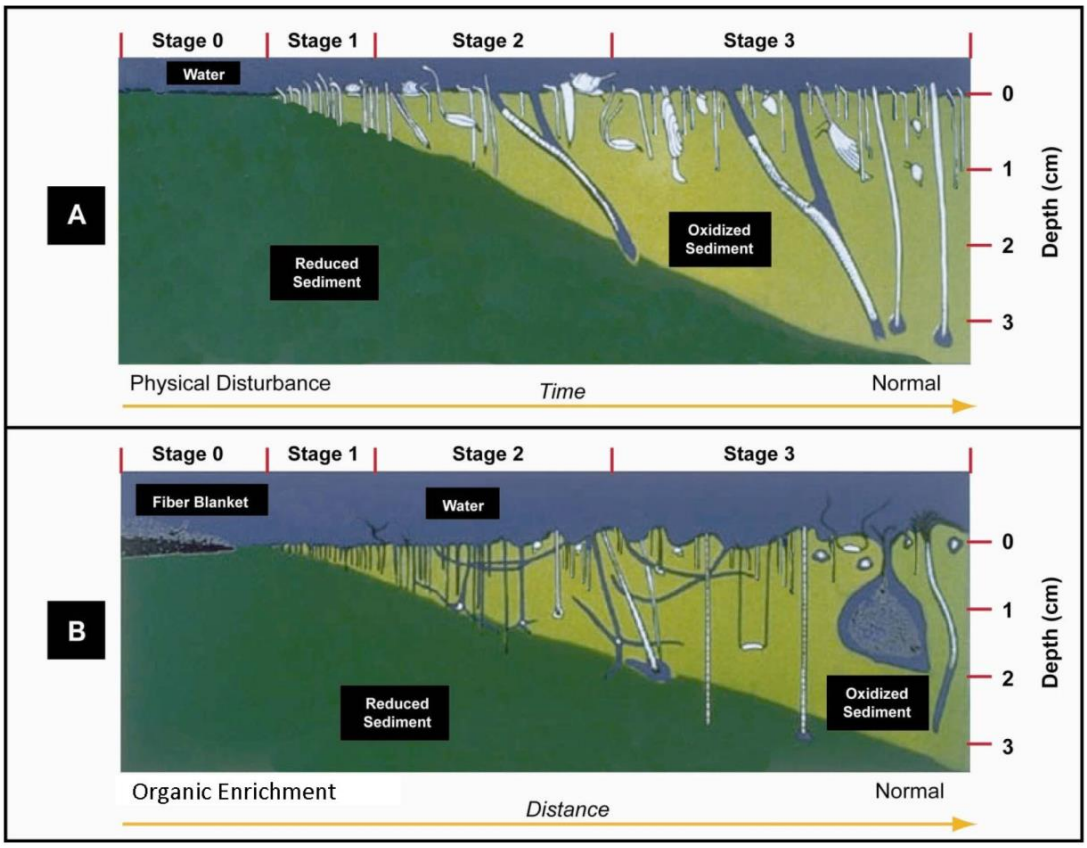


Figure 3 successional stage assemblages and relationship to sediment profile imaging (SPI) assemblages in soft-bottom benthic communities in response to (a) physical disturbance or (b) organic enrichment; from Rhoads and Germano (1982).

SEDIMENT OXYGEN DEMAND PROXIES

Sediment oxygen demand (SOD) represents the overall rate of oxygen consumption in surface sediments from chemical and biological processes. The relative amount of organic enrichment is indicated by sediment color; darker coloration indicates more reduced sediments with greater organic loading and higher SOD (Fenchel, 1969; Rhoads, 1974; Lyle, 1983).

Under high organic matter loading and subsequently high SOD, microbial sulfate reduction proceeds and may completely deplete porewater sulfate concentrations. Under these conditions, methanogenesis can occur, leading to methane bubbles in the sediment column. In SPI, methane appears as irregular shaped gas-filled voids with a glassy texture (due to the reflection of the strobe off the gas bubble).

Similarly, under highly reduced anoxic conditions, sulfate-reducing bacterial colonies (*Beggiatoa*) can exist on the sediment surface (at the interface between oxic and anoxic conditions). Bacterial colonies typically live within sediments and their presence on the surface indicates the lack of oxygen in underlying sediments. Bacterial mats can have the appearance of layers of white fibrous material overlying sediments that may appear black and anoxic (Nilsson and Rosenberg, 1997; Germano et al., 2011).

ORGANISM-SEDIMENT INDEX

The OSI provides a measure of general benthic habitat quality based on the depth of the aRPD, infaunal successional stage, presence or absence of sedimentary methane and dissolved oxygen condition inferred from sediment oxygen demand proxies (Rhoads and Germano, 1986). The OSI is a numerical index ranging from -10 to +11. The lowest value is given to bottom sediments with low or no dissolved oxygen in the overlying bottom water, no apparent macrofaunal life, and methane gas present in the sediment. High OSI values are given to aerobic bottom sediments with a deep aRPD, mature macrofaunal community, and no methane gas. The numerical values and ranges used in calculating the OSI are provided in Table 22.

Table 22 Calculation of the Organism-Sediment Index (OSI).

Choose One Value:	**Mean RPD Depth Classes**	**Index Value**
	0.00 cm	0
	>0–0.75 cm	1
	0.76–1.50 cm	2
	1.51–2.25 cm	3
	2.26–3.00 cm	4
	3.01–3.75 cm	5
	>3.75 cm	6
Choose One Value:	**Successional Stage**	**Index Value**
	Azoic	-4
	Stage I	1
	Stage I–II	2
	Stage II	3
	Stage II–III	4
	Stage III	5
	Stage I on III	5
	Stage II on III	5
Choose One or Both if Appropriate:	**Chemical Parameters**	**Index Value**
	Methane Present	-2
	No/Low Dissolved Oxygen	-4
SPI Organism-Sediment Index =		**Range: -10 to +11**

4.3.4.2| PLAN VIEW IMAGE ANALYSIS

PV images provide a downward-facing field of view of the seafloor. Typical parameters measured from PV images include sediment topography, structures such as feeding mounds and burrows openings, observations of shell hash, benthic algae, larger macrofauna, epifauna, and/or fish/invertebrates, bacterial colonies, and bedforms. Descriptive comments were recorded for each replicate PV image. The field-of-view for the PV images was measured using the scale information provided by the underwater lasers (i.e., the measurement between two laser points with a known distance of 2.5 in [62.5 mm]). SPI images were used to aid in the PV analysis whenever details in structure or biota could not be resolved in the PV image. PV image analysis results were also used for verification and confirmation of observations made in synoptic SPI images.

BEDFORMS

Sediment bedforms such as ripples and sand waves are physical features visible on the seafloor that develop because of hydrodynamic conditions. For example, short wavelength ripples on a sandy bottom can suggest active bedload transport. In contrast, fine-grained sediments in quiescent depositional environments may show biological structures with little to no surficial bedforms. Due to poor visibility of the water column, the trigger cable of the PV camera was shortened to increase seafloor visibility and image resolution. However, the view of the seafloor provided in most of the PV images collected was less than one square meter, which is a relatively small area to distinguish bedforms that exist over larger scales (e.g., sand waves or dunes).

FLORA AND FAUNA PRESENCE

Where visible in PV images, flora and fauna were identified to the lowest possible taxonomic group. The inferred presence of fauna was identified through observations of burrows, small and large tube building fauna, tracks, foraging pits, and fecal casts. The flora and fauna data were operationally grouped into several categories: infauna, sessile epifauna, mobile epifauna, emergent fauna, flora, fish, presence of eggs, and non-native taxa (Attachment G-2). These data were then used to further populate data groups such as type of common taxa, potentially vulnerable species (PVS), percent cover of all attached fauna, percent cover of emergent taxa and percent cover of flora. Further data analysis then populated the CMECS Biotic Subclass and CMECS Co-Occurring Biotic Subclass (Attachment G-2). Epifauna taxa is a CMECS modifier (Associated Taxa), adding detail to the CMECS classifications. Where attached flora and fauna were present in PV images, the percent coverage of the image was estimated using the CMECS Percent Cover Modifier (FGDC, 2012).

TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

Sensitive seafloor habitats include corals, submerged aquatic vegetation beds, and valuable cobble and boulder habitats (BOEM, 2019; NOAA Fisheries, 2021). Taxa that are vulnerable to project impacts such as long-lived and habitat-forming species like sponges, anemones, bryozoans, hydrozoans, corals, tunicates, and bivalves (NOAA Fisheries, 2021) were grouped into the category of PVS for image analysis. Other PVS such as squid eggs, black sea bass, and sea scallops were also taken into consideration (Guida et al., 2017).

The percent cover of emergent fauna was documented, recognizing that three-dimensional structures created by tube-forming amphipods represented a primary source of ephemeral habitat complexity (Auster et al., 1997) but are not considered sensitive habitat by either BOEM or NOAA Fisheries. The presence/absence of each PVS was noted for PV and SPI images.

PVS category was assigned to capture all potentially project-sensitive species that were listed in the NOAA-NMFS EFH letter. This category was intentionally left broad to allow reviewers to make distinction among the groups of species listed. Agree they are not all long-lived or habitat forming and assume that reviewers will make this distinction on their own.

NON-NATIVE TAXA

The introduction of non-native species to the water column and benthic habitat is an important concern related to offshore development. The introduction of new structures to the seafloor (e.g., concrete mattresses) during construction may also provide habitat for non-native species. References for potential non-native species included the Northeastern Aquatic Nuisance Species Panel

(https://www.northeastans.org/) and the National Exotic Marine and Estuarine Species Information System database (NEMESIS) curated by the Smithsonian Environmental Research Center.

4.3.4.3| DATA QUALITY ASSURANCE AND QUALITY CONTROL

Data QA/QC for the SPI and PV field survey included bench testing of systems prior to deployment to verify equipment calibration and operation, and sending full backup systems, including a second SPI camera head and full PV backup system and tools, parts, and electronics.

Digital image files were renamed with the appropriate station names prior to image analysis. The image file timestamp was verified with the recorded time in the navigation log as a quality assurance check. Quality assurance review of image analysis results consisted of a minimum 15 percent review of results by senior scientists to ensure the quality and accuracy of data and results presented in this report.

Image quality was affected by several factors for both SPI and PV cameras. Images acquired from the SPI camera were checked for proper lighting, presence of undisturbed sediment water interface (SWI), prism over-penetration (i.e., SWI is not present), sediment disturbance due to yanking of the SPI frame through the winch cable or by any other physical disturbance that may have rendered the SPI image unacceptable for analysis (e.g., steep bottom slopes that prevent the prism mechanism from sliding down into the sediment, destroyed SWI or stirring of surface sediment). If any factor affecting image quality caused the image to be rejected, then additional steps would be taken to prevent the cause of image rejection (e.g., adding mud doors to prevent over penetration) and the SPI camera would be redeployed to obtain acceptable images for analysis. For example, mud doors were added to the SPI frame and redeployed a third time at station ECR-B-1156 in Segment 1, after the first attempt yielded prism over penetration of all three SPI camera drops with all weights on and a second attempt yielded prism over penetration of all three SPI camera drops with all weights removed (Attachment E).

Images acquired from the plan view camera were checked for proper lighting, water clarity, bottom sediment disturbance and general surface area coverage. When factors affecting PV image quality caused the image to be rejected, additional steps were taken to prevent the cause of image rejection (e.g., increasing the distance between drops to avoid areas of resuspended particles created by the landing of the SPI frame from the previous drop) and the camera was redeployed to obtain acceptable images for analysis.

Water clarity was an important factor in obtaining good quality PV images. Suspended particulates in the water column, such as sediment or planktonic organisms can significantly decrease water clarity.

The greater the concentration of suspended particles, the lower the resolution of the PV images due to the backscattering of the strobe light. For some images, it was possible to improve the quality with the help of a computer software such as Adobe Photoshop. However, for the most part, the PV trigger cable was shortened so that photographs could be taken closer to the sea bottom (from 6.6 ft to 1.6 ft [2.0 m to 0.5 m] from the bottom) and thus minimize the amount of backscattered light.

4.3.5| CMECS AND NMFS-MODIFIED CMECS COMPONENTS CLASSIFICATION

CMECS habitat classifications allow for a standardized format of interpreting and presenting habitat data. Using CMECS habitat classifications will facilitate a standardized method of assessment and monitoring of change to habitats as well as allowing for comparisons across spatial and temporal scales. Classification of the benthic environment assessed during this survey was based on CMECS geoform, substrate (NMFS-modified CMECS substrate) and biotic components (Federal Geographic Data Committee [FGDC], 2012; NOAA Fisheries, 2021).

The CMECS Geoform component was derived from the review and interpretation of the benthic drop/tow camera imagery.

The CMECS Biotic Component classifications were derived from SPI and/or PV imagery at each sampled location. Additionally, at stations where benthic drop/tow camera deployments took place, a separate CMECS biotic component was derived using benthic drop/tow imagery in combination with macroinfaunal analysis where applicable. The biotic component was classified to the lowest practical taxonomical unit.

The PV images were used to determine the CMECS Biotic Subclass, the key CMECS classifier that presents information about the surveyed area in terms of physical habitat and the potential presence of sensitive taxa. The dominant Biotic Group and Biotic Community (next dominant by percent cover) were also determined. The percent cover of a dominant community was reported as the highest percent cover at any given sampling station within a cable corridor segment and the total number of individuals counted were reported within a single segment. Attachment G-1 provides the CMECS biotic component summary statistics for each segment.

Two SPI and PV images were analyzed independently per station. The images identified under the CMECS Biotic Component Class Faunal Bed were further classified as one of the three CMECS subclasses: Attached Fauna, Soft Sediment Fauna and Inferred Fauna. For each station analyzed, the data from the two images were combined for plotting a single point on the map. A hierarchical approach was given to the CMECS subclasses to plot a single data point per station (Attached Fauna, Soft Sediment Fauna, Inferred Fauna). The CMECS Attached Fauna subclass had priority over the Soft Sediment Fauna subclass and the Inferred Fauna subclass was set at the lowest rank. When interpreting the data on a map, the reader should be aware that at each station location showing an Attached Fauna subclass symbol, may also include lower ranking subclasses such as Soft Sediment Fauna or Inferred Fauna. Conversely, if a station shows an Inferred Fauna symbol, it indicates that no other subclasses were present. The CMECS Aquatic Vegetation Class was treated with equal weight and priority as the Faunal Bed Class. However, none of the benthic macroalgae observed during the survey were classified as CMECS Aquatic Vegetation Beds and their occurrences were not plotted in the PVS maps.

NMFS-modified CMECS substrate classification was derived from SPI and/or PV imagery at each sampled location. Additionally, at stations where benthic grabs took place, a separate CMECS and NMFS-modified CMECS substrate component is reported. It is worth noting that one of the main differences between CMECS and NMFS-modified CMECS substrate component classifications is the removal of the “Slightly Gravelly” substrate group in NMFS-modified CMECS substrate classifications. This, however, does not change a sample’s classification at the substrate subclass level (i.e., coarse unconsolidated vs fine unconsolidated substrates); thus, complex habitat determinations would likely be similar using substrate component classifications from either source. CMECS substrate classification was assigned for all replicates where the surface layer profile was visible. For Shell Substrate classifications, the area-extent of shell material was assumed, but could not be determined using the profile.

The CMECS substrate classifications from benthic grab stations were derived from an initial conversion of PSD data using US Geological Survey (USGS) SedClass software (Poppe et al., 2003) and manual conversion. A subsequent review of benthic grab content photos and, where necessary, video imagery from the grab-mounted camera was used to evaluate sampled stations for biogenic substrate. At sampled stations where a biogenic substrate was identified, as defined by FGDC (2012) and NMFS (2021), this classification superseded substrate classifications derived by PSD conversion.

5 | RESULTS

Results from drop/tow benthic video, benthic grab sample analysis and mounted camera, and SPI/PV collected at sampling stations along the submarine export cable corridor are presented below. A broad overview of results is presented for most analyses, with the subsequent sections (Sections 5.1 to 5.8) detailing the results within the eight segments of the submarine export cable corridor. Note that an in-depth analysis of observations of fish and larger invertebrates from benthic video is presented in this section as an overview of species (1) within Long Island Sound and (2) outside of Long Island Sound/Offshore. A more detailed analysis of the benthic video observations is provided in the sections specific to each of the submarine export cable corridor segments.

Benthic Video

The videographic data from the drop/tow camera system displayed a seabed generally characterized by soft bottom substrate consisting primarily of finer particle sizes with occasional regions of cobble and boulder sized materials. No consolidated hardbottom substrates, sensitive seafloor communities, or species of concern were observed within the study area. Species of concern were guided by the NOAA Fisheries Establishment of Species of Concern list (Cain 2004). The benthic video collectively showed relatively productive biological assemblages evidenced by burrows, bioturbation, polychaete/amphipod tubes and predominantly mobile macrobenthos on unconsolidated substrates and attached fauna consisting of diverse colonizers including sponges, hydrozoans, bryozoans, and occasional corals associated with larger rock materials.

Numerous fish and commercially important macroinvertebrates were observed using the drop/towed video system and these observations are geographically grouped: Segments 1 through 6 are within Long Island Sound and Segments 7 and 8 are outside of Long Island Sound further offshore.

For these commercially important species observed within Long Island Sound, some appeared to have areas of concentration (and/or were more readily observed on video camera), some were more widely distributed within the study area, and some were considered present based on a very low observational frequency (Figure 4). Observational frequency of commercially important and managed species within Long Island Sound are as follows:

- Scup (*Stenotomus chrysops*) were most common, widely distributed and observed at 71 of 199 video stations within Long Island Sound;
- Hakes, including silver hake (*Merluccius bilinearis*), red hake (*Urophycis chuss*), and spotted hake (*Urophycis regia*), were uncommon and observed at five stations, primarily in the western portion of the Sound;
- Butterfish (Stromateidae, *Peprilus triacanthus*) were widely distributed and observed at 12 stations;
- Black Sea Bass (*Centropristis striata*) were widely distributed and observed at 18 stations;
- Anchovy (*Anchoa* spp.) were observed at 22 stations and appeared to be more concentrated in the western portion of the Sound;
- Bluefish (*Pomatomus saltatrix*) were observed at seven stations, primarily in the western half of the Sound;
- Flounder including sand flounder (Paralichthyidae), fourspot flounder (*Paralichthys oblongus*), and summer flounder (*Paralichthys dentatus*) were observed at 13 stations (concentrated in the eastern half of the Sound;
- Herring (Clupeidae) were widely distributed and observed at 12 stations;

- Skates (Rajidae) were only observed at one station (ECR-B-209);
- Blue crab (*Callinectes sapidus*) were observed at four stations concentrated in the western end of the Sound;

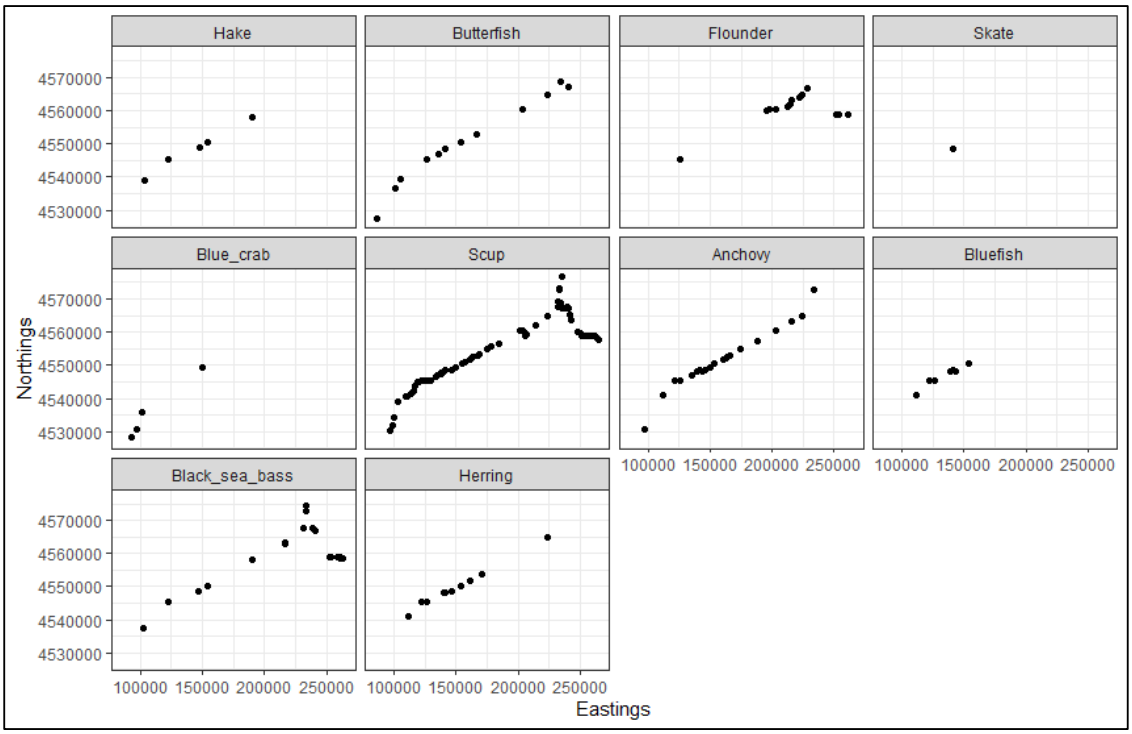


Figure 4 Presence and general distribution of various fish and blue crab observed within Long Island Sound (Segments 1-6).

The commercially important fish and invertebrate species observed outside of Long Island Sound and their general distribution are shown in Figure 5. Observational frequency of commercially important and managed species outside Long Island Sound in Segments 7 and 8 are as follows:

- Scup (*Stenotomus chrysops*) were observed at 9 of 85 video stations collected outside of Long Island Sound, primarily concentrated in the western portion of the offshore submarine export cable corridor;
- Hakes, including silver hake (*Merluccius bilinearis*), red hake (*Urophycis chuss*), and spotted hake (*Urophycis regia*), were widely distributed and observed at 26 stations outside of Long Island Sound;
- Butterfish (Stromateidae, *Peprilus triacanthus*) were widely distributed and observed at seven stations outside of Long Island Sound;
- Black sea bass (*Centropristis striata*) was observed at one station (ECR-B-508);
- Flounder including sand flounder (Paralichthyidae), fourspot flounder (*Paralichthys oblongus*), and summer flounder (*Paralichthys dentatus*) were widely distributed and observed at 22 stations outside of Long Island Sound;

- Skates (Rajidae), including winter skate, *Leucoraja ocellata*, and the little skate, *Leucoraja erinacea* were observed at 32 stations, the majority of which were located in the western half of the offshore submarine export cable corridor outside of Long Island Sound;
- Monkfish (*Lophius americanus*) was observed at a single station (ECR-B-540/ECR-C-1503) outside of Long Island Sound;
- Jonah crab (*Cancer borealis*) were widely distributed and observed at 40 stations, with a higher concentration of observations in the eastern half of the offshore submarine export cable corridor;
- Atlantic sea scallops (*Placopecten magellanicus*) were widely distributed and observed at 38 stations outside of Long Island Sound;
- American lobster (*Homarus americanus*) were located at two stations in the offshore segments (ECR-C-1521 and ECR-B-618);

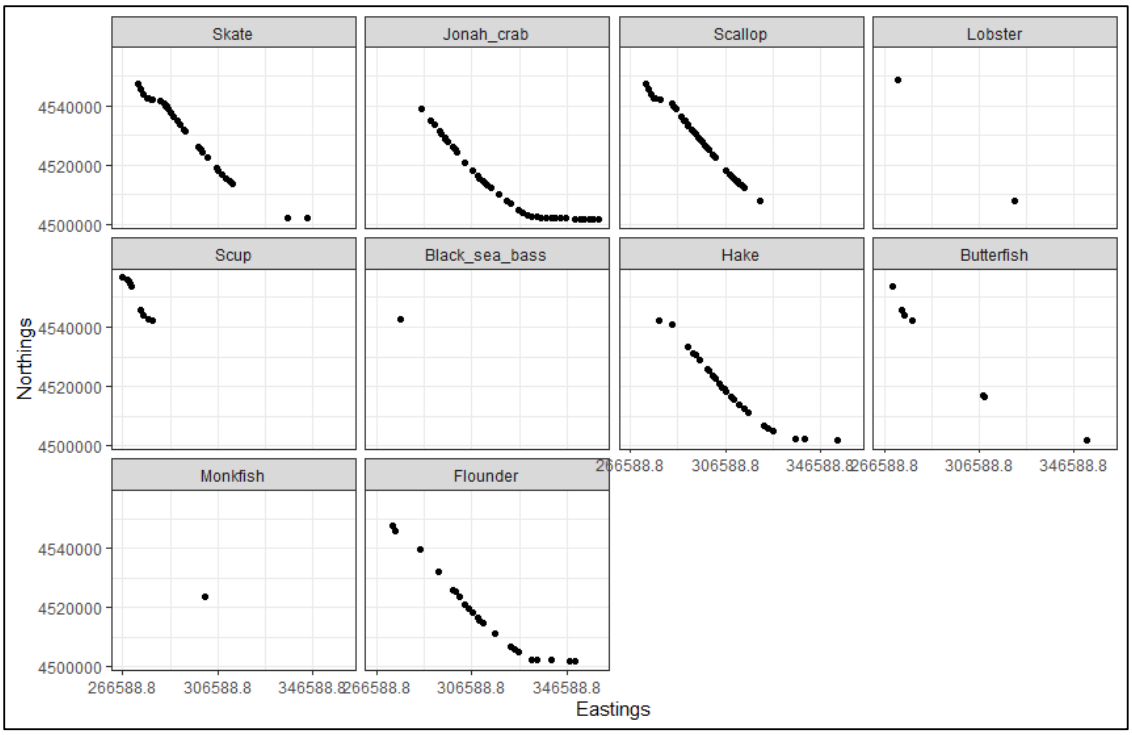


Figure 5 Presence and general distribution of various fish and invertebrate species observed outside of Long Island Sound (Segments 7 and 8).

Sediment Observations and Particle Size Distribution

Grain size analysis of sediments collected at benthic grab stations is provided in Sections 5.1 through 5.8. The results from the PSD analysis indicated that sampled sites along the submarine export cable corridor mainly consist of finer-grained sand and silt particles (Figure 6) that ranged from Medium Sand (0.25 to <0.5 mm) to Silt (0.004 to <0.0625 mm) based on the Wentworth grain size classification. Sampled sites with a gravel component were encountered occasionally in Block Island Sound and most often within Long Island Sound. The gravel component of samples containing gravel consisted of Granule (2.0 to 4.0 mm) and/or

Pebble (4.0 to 64.0 mm) except for one sample from station ECR-B-472 which contained an amount of Cobble (64 to 256 mm).

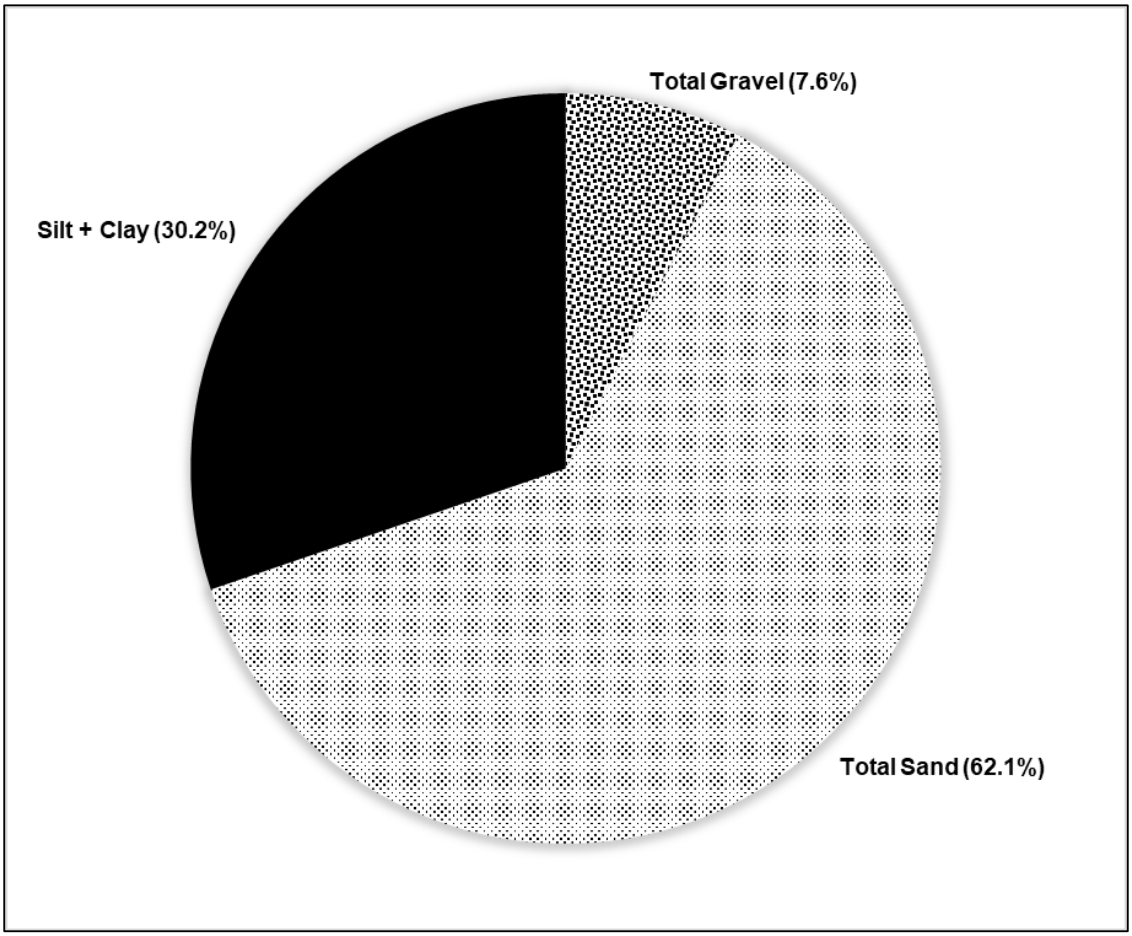


Figure 6 Average percentage of total gravel, total sand and total silt and clay from grab samples taken at benthic sampling stations along the submarine export cable corridor (including all variants)

Total Organic Carbon

Total organic carbon in sediment is derived from the decomposition of organic matter from various sources. In the marine environment, TOC availability affects the primary production of faunal communities (Dauwe et al., 1998). The level of TOC can also be used as a tool for estimating levels of contamination within an ecosystem as it can be correlated with potential contaminants (Avramidis et al., 2015).

A total of 188 grab samples were obtained at benthic sampling stations and analyzed for TOC content. Concentrations of sediment TOC ranged from 0.02 percent (ECR-B-452) to 3.91 percent (ECR-B-1136). Sample ECR-B-110 had a value of 9.5. percent and was omitted form the mean calculation as an outlier. Average sediment TOC concentration for stations (excluding ECR-B-110) was 0.83 percent (SE: 0.06).

These TOC values are consistent with values reported from previous studies of marine sediments in the area (Boehm, 1984; Venkatesan, 1988; Poppe et al., 2000).

Sediment TOC concentrations along the Variant A submarine export cable corridor (excluding alternate corridors) were generally higher in the western portion of Long Island Sound and lower along the eastern portion of Long Island Sound to offshore areas (Figure 7).

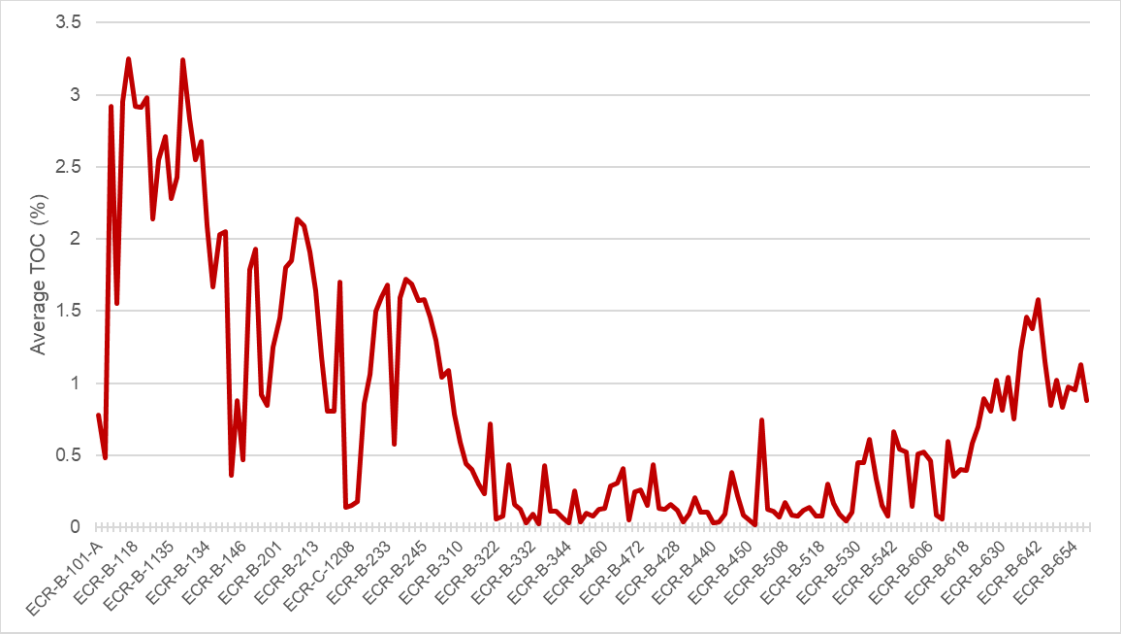


Figure 7 Sediment total organic carbon (TOC) concentrations from grab samples along the Variant A submarine export cable corridor from NY to the Lease Area (including NY and CT landfall corridors) plotted west to east (Note: Variant B and D corridors omitted to better illustrate geographical trends; Note 2: TOC result for station ECR-B-110 (9.5 percent) was omitted and considered an anomalous outlier).

Infauna From Grab Samples

The submarine export cable corridor traverses a range of substrates from western Long Island Sound (Segments 1 to 6) to the inner continental shelf (Segments 7 and 8).

Taxa recorded during the present sampling program agrees with existing assessments of infauna assemblages for inner and central Long Island Sound basins at high taxonomic levels but not at the species levels (e.g., Pelligrino and Hubbard, 1983; Reid et al, 1979; McCall, 1977). Taxa common or abundant during the present survey were not reported as such in the historic studies, which may be due to differences in sampling methodologies (e.g., sieve size).

Review of benthic sampling programs in the area suggests multiple assemblages occur in broadly defined areas: western, central, and eastern Long Island Sound (Zajac et al., 2000). The sedimentary environment along this submarine export cable corridor within Long Island Sound varied in a west- east fashion with westernmost Segments 1, 2, and 3 generally differing from easternmost segments (4, 5, and 6) in percent sand, gravel, and fines (silt and clay). Components of the infauna in the sample such as biomass, species

number, diversity indices, and species composition varied within Long Island Sound. Mean infauna biomass varied among Segments ranging from a low of 1.58 g in a sample from Segment 1 to a high of 60.20 g in a sample from Segment 7. Biomass values were usually driven by high numbers of bivalves and gastropods in the samples, but in some instances, a few large individuals at a single station greatly influenced the values for a segment. In Segment 3 for example, a few large clams (*Mercenaria mercenaria*) were responsible for high biomass at an individual station.

Diversity indices (H', J', Fisher's alpha, Margalef's d) calculated using individuals identified to species, varied along the corridor within Long Island Sound. The number of species per station averaged 18.9 and ranged from 14.9 in Segment 2 to 20.8 in Segment 5. H′ diversity which considers the relative abundance of individual species, averaged 2.12 and ranged from 1.81 in Segment 3 to 2.45 in Segment 2. Mean evenness (J), a distribution of abundance across species, for these samples was 0.759 with 0.669 at Segment 3 to 0.930 at Segment 2. Fisher's alpha averaged 4.56 and ranged from 4.30 to 7.27. Margalef's d averaged 3.8 and ranged from 4.72 to 3.83.

Numerically dominant species in the Long Island Sound samples included representatives from the following groups: bivalves (*Nucula proxima*, *Crassinella lunulata*), amphipods (*Unciola serrata*, *Protohaustorius wigleyi* and *Ampelisca vadorum*), gastropods (*Crepidula fornicata*, *Acteocina candei*), polychaete worms (*Levinsenia gracilis, Nephtys incisa*, *Glycinde multidens*, and *Pectinaria gouldii*) and nemertean worms (*Tubulanus* sp A).

Cluster analysis of sample similarity matrices revealed multiple groups of samples with statistically similar (SIMPROF) infauna species composition within the Segments 1 to 6. Segments 1, 3, and 6 exhibited multiple significantly significant clusters. Samples from Segments 2 and 4 were less structured and more similar in species composition across the samples. Significant groups were related to the abundance and occurrence of various polychaete, amphipod, gastropod, and bivalve species. NMDS ordinations of the sample similarity matrices generally agreed with groups identified by SIMPROF tests. NMDS axes correlated significantly with percent fine sediments and TOC content for Segment 1; percent sand and TOC content for Segment 2 and 3.

On the continental shelf submarine export cable corridor (Segments 7 and 8), sedimentary characteristics for Segments on the inner shelf comprised mostly of sand (fines averaging 13.0 and 25.7% and percent sand 75.1 and 73.1; TOC 0.174 vs 0.59. The mean number of species per sample was 15.8 (7=16.4 and 8=24.8). H diversity averaged 1.76 and ranged from 1.5 to 2.5, J averaged 0.690 and ranged from 0.594 to 0.709, Fishers averaged 4.56 and ranged from 4.3 to 7.27. Margalef's d averaged 2.89 and ranged from 2.84 to 4.38.

Samples from the Segments on the inner continental shelf were composed of bivalves (*Nucula proxima*), polychaete worms (*Levinsenia gracilis, Cossura soyeri, Scalibregma inflatum, Terrebellides stroemi*), cumaceans (*Eudorella pusilla*), and amphipods (*Ampleisca agassizi, Unciola irrorata, Ericthonius brasiliensis, Byblis serrata*).

Species composition in samples from the inner continental shelf samples was less structured in Segment 7 samples (three significant SIMPROF groups) than in Segment 8 samples (8 significant SIMPROF groups).

SPI Results

Grain Size - The grain size major mode was the dominant grain size of surface sediments (within the top 7.9 inch [20 cm] of the sediment column) determined using SPI. Within Long Island Sound, the grain size major mode consisted of coarse sands, gravels, and small pebbles in the East River, which transitioned to silt and clay within much of central Long Island Sound. Within this central region of Long Island Sound, the grain size major mode also exhibited occasional areas of sand, ranging from coarse to very fine sand. In

the eastern portion of Long Island Sound, the grain size major mode in surface sediments was predominantly medium sand.

Outside of Long Island Sound, the grain size major mode was predominantly fine and medium sand along the corridor, with some areas of coarse sand and very fine gravel along Endeavor Shoals near the Race. Further east, the grain size major mode transitioned to very fine sand and silt/clay, with small pockets of coarse sand, becoming predominantly silt/clay at the Lease Area boundary.

Prism Penetration - Mean prism penetration depth is the distance that the SPI camera prism penetrates the sediment and provided a relative measure of sediment water content and shear strength of surface sediments. Overall, prism penetration followed a distribution pattern similar to the grain size major mode observed in both Long Island Sound and the Block Island Sound and offshore areas. That is, prism penetration was shallow in areas with a compact or hard bottom, such as coarse sand and gravels, compact shell hash, and cobbles. Prism penetration was the deepest in areas containing very fine sands and silt.

Surface Boundary Roughness - Within Long Island Sound, physical boundary roughness was dominant and consisted of areas with distinct surface ripples or sloped surfaces. Physical roughness was observed in approximately 90 percent of the SPI replicates collected within Long Island Sound. Biological roughness was observed in 10 percent of the SPI replicates, but with no distinct pattern. However, the boundary roughness values from biological features (e.g., burrows and feeding pits) were higher than physical roughness, ranging from 0 to 3.2 in (0 to 8.2 cm) with an average of 0.8 in ± 0.6 in (2.1 cm ± 1.4 cm [n = 39 images]).

Outside of Long Island Sound, physical boundary roughness was also dominant and consisted of rippled or sloped surfaces. Physical roughness was observed in approximately 72 percent of the SPI replicates collected and ranged from 0 to 2.8 in (0 to 7.2 cm) with an average of 0.5 in ± 0.2 in [1.3 cm ± 0.91 cm (n = 204 images)]. Biological roughness was observed in 18 percent of the SPI replicates, with a high proportion found in the easternmost area, where deeper water depths and fine-grained sediments were present. The biological roughness ranged from 0 to 1.2 in (0 to 3.0 cm) with an average of 0.4 in ± 0.2 in (1.0 cm ± 0.51 cm).

Apparent Redox Potential Discontinuity Depth - Within Long Island Sound, the overall pattern of aRPD depths generally followed the distribution of grain size major mode. The aRPD depths increased toward the east as the grain size transitioned from coarse-grained to fine-grained sediments.

The grain size major mode in the East River consisted of compact coarse sands, gravels, and small pebbles, and the aRPD depths in this region averaged 0.9 in ± 0.7 in (2.27 cm ±1.8 cm). As the grain size major mode transitioned to sands and silt/clay within the central Long Island Sound, the aRPD depths increased to an average of 1.3 in ± 0.6 in (3.29 cm ±1.5 cm).

Outside of Long Island Sound and offshore areas, aRPD depths were relatively deep, showing an increasing trend to the east. The grain size major mode was predominantly fine and medium sand and the aRPD depths averaged 1.8 in ± 0.9 in (4.49 cm ± 2.2 cm).

In the offshore corridor to the Lease Area, the grain size major mode was predominantly silt/clay and the aRPD depths increased to an average of 2 in ± 0.7 in (5.0 cm ±1.8 cm).

Infaunal Successional Stage - Within Long Island Sound, the infaunal successional stages also followed a pattern similar to the grain size major mode. Stage II succession was the dominant stage in the East River where compact coarse sands, gravels, and small pebbles were present. In coarse-grained, dynamic environments, the climax community can be limited to Stage I or Stage II due to the limited number of naturally burrowing community members in this type of substrate. Toward the central area of Long Island

Sound where the grain size major mode transitioned to sand and silt/clay, the infaunal successional stage was predominantly Stage III (evidenced by feeding voids).

Outside Long Island Sound, several SPI stations were classified with an indeterminate successional stage due to underpenetration or no penetration of the SPI prism. In images with adequate prism penetration, Stage III, the advanced successional stage was most common. In the offshore corridor to the Lease Area, the infaunal successional stage was predominantly Stage III. Stage I on III, the advanced successional stage where Stage I communities coexist with larger head-down deposit feeding organisms and were present in deeper waters within Segments 7 and 8.

Sediment Oxygen Demand Proxies - Proxies for high sediment oxygen demand (SOD) in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies. High SOD was not evident in any areas within Long Island Sound, with the exception of one location. One replicate SPI image at station ECR-B-120 (western Long Island Sound) showed the presence of small methane gas bubbles. However, the SPI image showed a relatively deep aRPD (4.5 cm) and the presence of a small feeding void (Stage III), suggesting sediment conditions that did not exhibit high SOD. High SOD was not evident in any areas outside Long Island Sound.

Organism-Sediment Index Calculation - within Long Island Sound, the vast majority of OSI values were +6 or higher. The few locations where the OSI was less than +6 showed the presence of medium or fine pebbles and/or a shallow aRPD, which is a habitat type that can often remain in an earlier infaunal successional stage. Outside Long Island Sound showed a similar pattern, with nearly all OSI at +6 or higher. Only two SPI images had OSI values less than +6 due to physical boundary roughness features (e.g, surface ripples, *Crepidula fornicata* shell beds). These habitat types that can remain in an earlier infaunal successional stage or have a shallow aRPD, resulting in lower OSI values.

PV Results

Bedforms - Physical and biological bedforms were equally distributed in the East River, with muddy sand and sandy gravel, interspersed with pockets of live clam beds and live *Crepidula fornicata* reefs along the East River main channel. Physical bedforms were dominant within central Long Island Sound and were composed of muddy sand with pockets of cobbles, granules, and shell hash.

Biological bedforms in the central area of Long Island Sound were dominated by *Squilla* burrows, fecal mounds, decapod tracks, and gastropod trails. At the eastern end of Long Island Sound and at The Race, physical bedforms were dominant (90 percent of all segment sampling stations) and were composed of gravelly and gravel mixes. Biological bedforms made up the remaining 10 percent of the images and were composed mostly of Boulders with encrusted tunicates, gravelly sand with clam beds, and *Crepidula fornicata* reefs.

Outside Long Island Sound, physical bedforms were the most prevalent and were composed predominantly of muddy sand, sand, gravel mixes, and gravel. Two small pockets of biological bedforms were present as *Crepidula fornicata* shell reefs at two locations near and on Endeavor Shoals.

The shells and live stacks of *Crepidula fornicata* were present as a rough and complex three-dimensional sessile shell bed on the substrate surface forming a reef (NMFS-Modified CMECS Substrate Group Crepidula Reef Substrate) (Hubbard 2016).

Fauna and Flora Presence - At East River stations, the prevalent fauna were live bivalve and gastropod beds found in densely populated areas within the riverbed main channel. Large patches of live *Crepidula fornicata* and of an unknown bivalve species extended over 50 percent of the observable surficial areas at each specific location. The *Sertularia* hydroid and the probable invasive Didemnidae tunicate also reached

surficial coverages between 40 and 50 percent at certain locations on the East River. No flora was observed in this area of the East River.

In Long Island Sound, the most abundant fauna was the sessile gastropod *C. fornicata*, found mostly on sandy bottoms with the highest concentration of live *C. fornicata* forming reefs at two locations at the eastern end of Long Island Sound. The large tube-building infauna polychaete *Chaetopterus* was observed throughtout Long Island Sound with the highest concentration of tube structures located in Segment 5. Other sessile fauna included the Sertularia hydroid, the Didemnidae tunicate, and the northern star coral *Astrangia poculata*. Large numbers of the mobile gastropod *Ilyanassa obsoleta* were found over muddy sand. Despite their large numbers, the surficial area coverage by *I. obsoleta* never exceeded 20 percent. Other mobile fauna included the hermit crab *Pagurus,* found mostly on muddy sands, and two individual urchin *Arbacia punculata* found on hard substrates.

Benthic macroalgae were only found in Segment 4. The marine macrophytes identified were the leathery leafy algae *Chondrus crispus* and *Cocotylus truncatus*, the filamentous algae *Rhizoclonium riparium* and *Ceramium rubrum*, and the sheet algae *Agardhiella subulata* and *Grinella americana*. Most were found as small individual stalks attached to cobble or shell debris, but none were observed covering large surficial benthic areas.

The sampling stations outside of Long Island Sound were comprised of the sessile fauna gastropod *C. fornicata*, *Sertularia* hydroids, and the northern star coral *Astrangia poculata.* The burrowing anemone Ceriantharia, Pennatulid sea pens, Sabellidae feather duster worms, amphipod *Ampelisca*, and *Amphiura* brittle stars were also present. These organisms were observed in areas of dense populations for each species, but their beds were restricted to specific geographical locations in Segment 8 with dense areas of *Amphiura* brittle stars, the amphipod *Ampelisca*, and the Sabellidae feather duster worms. Mobile fauna included the hermit crab *Pagurus*, the gastropod *I. obsoleta*, the sand dollar *Echinarachnius parma*, and the burrowing seastar *Astropecten* sp. No macroalgae were observed within stations outside the Sound.

Non-native Taxa - The only non-native taxa identified was a Didemnidae tunicate. It was not possible to positively identify the species based on PV or SPI imagery. However, the conjectured genus *Didemnum* (in particular the species, *Didemnum vexillum*) is identified as an invasive species and is therefore classified in this report as non-native taxa.

CMECS Geoform and Biotic Component from Video

Two CMECS Components (Biotic and Geoform) were used to classify biological community structure and geological formations based on a review of towed video data for stations located along the submarine export cable corridor. For the Biotic Component, the Biotic Setting and the Biotic Class for the entirety of the submarine export cable corridor were classified as Benthic/Attached Biota and Faunal Bed, respectively. There were two Biotic Subclasses present at most of the segments, Soft Sediment Fauna and Attached Fauna, with Soft Sediment observed in every submarine export cable corridor segment and was associated with non-consolidated sediments. Attached Fauna was observed where boulders were present and was observed in all but one of the segments, Segment 8, the most offshore segment on the eastern end of the submarine export cable corridor. The Biotic subclass of Soft Sediment Fauna was further delineated into three Biotic Groups where applicable (Mobile Mollusks on Soft Sediment, Sand Dollar Bed, and Starfish Bed). The Biotic subclass of Attached Fauna was further defined as the Biotic Group of Diverse Colonizers with resolution as the Biotic Community of Large Macrofauna.

For the CMECS Geoform Component, the Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin.

For the Physiographic Setting, submarine export cable corridor Segments 1 through 6 located within Long Island Sound, were classified as Sound, and Segments 7 and 8, located outside of and east of the Sound, were classified as Continental Shelf. Geoform Levels 1 and 2 were utilized for the classifications of each station along the submarine export cable corridor, with modifications made in certain instances (e.g., as provided in Section 5.5).

CMECS and NMFS-Modified CMECS Substrate Components from Grab Samples

CMECS and NMFS-modified CMECS substrate classifications are presented below by submarine export cable corridor segment for benthic stations where grab samples (n=189) were collected. Along the submarine export cable corridor from the Lease Area to landfall sites in Connecticut and New York, a wide range of substrate types were encountered, including biogenic (i.e., shell substrate), coarse unconsolidated, and fine unconsolidated substrates.

Particle size distribution (PSD) analysis from a total of 188 sediment grab samples was converted to CMECS and NMFS-modified CMECS substrate types. One additional sample was analyzed visually using a still image captured from the grab-mounted camera, as no grab or SPI/PV imagery was available. After review of all benthic grab content still images and grab-mounted video (where necessary) six (6) stations were determined to have biogenic substrate where shell cover is greater than 50 percent of the surficial substrate composition.

At submarine export cable corridor sampling stations where benthic grabs were obtained, 3.2 percent of samples contained biogenic substrate types (n=6), 34.9 percent contained coarse unconsolidated substrate types (n=66) and 61.9 percent contained fine unconsolidated substrate types (n=117; Figure 8). Generally, data from sediment grab samples and imagery collected at stations offshore and nearer to the Lease Area showed that the seabed was composed of predominantly fine unconsolidated substrates, while substrates along the inshore portions of the submarine export cable corridor (e.g., Block Island Sound and Long Island Sound) were more variable in composition including biogenic (i.e., shell substrate), coarse unconsolidated, and fine unconsolidated substrates (see Sections 5.1 to 5.8).

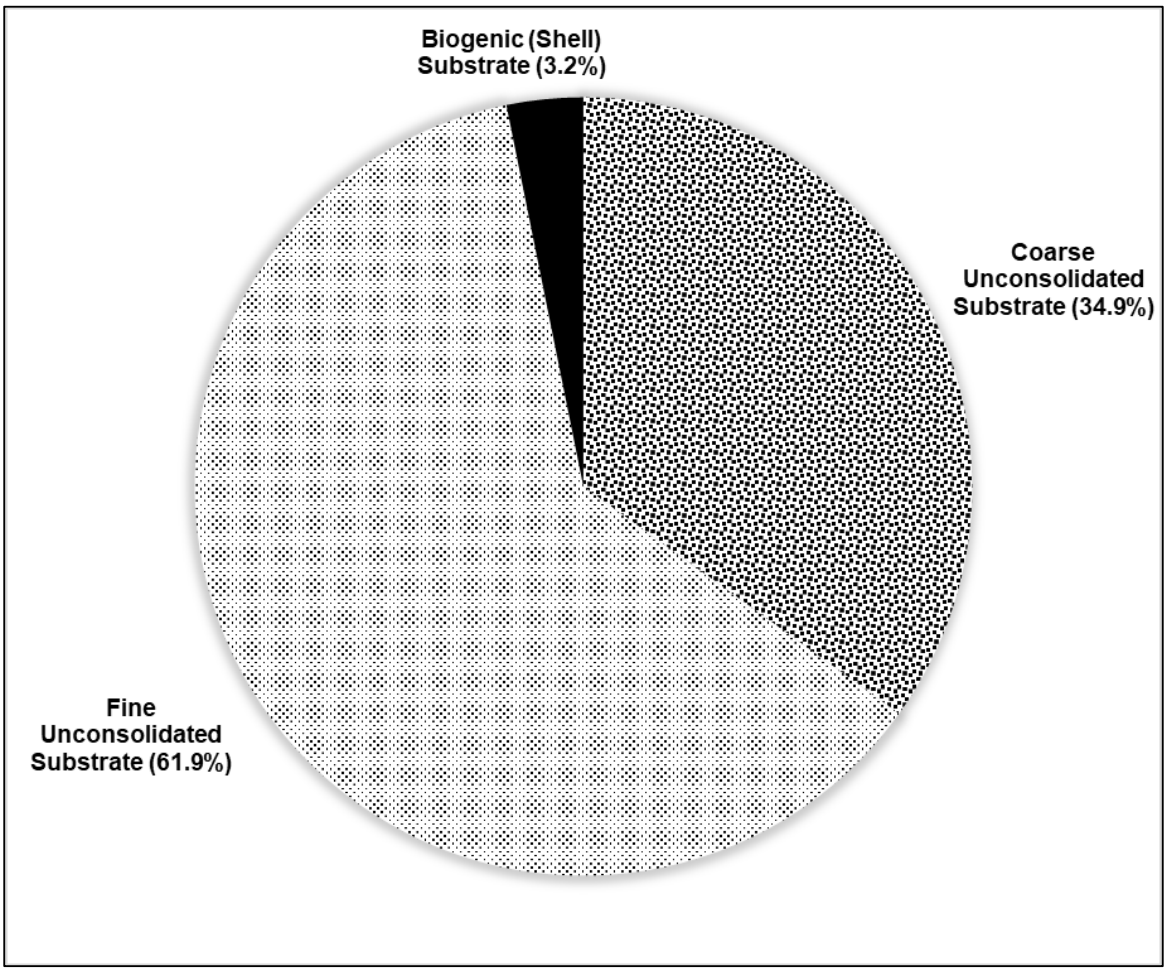


Figure 8 Percentage of substrate types (CMECS and NMFS-modified CMECS Substrate origin/class level) from grab samples taken at benthic sampling stations along the submarine export cable corridor (including all alternative routes).

NMFS-modified Substrate Component from SPI/PV

NMFS-modified CMECs substrate classification was determined for each SPI and PV image replicate selected for analysis along the submarine export cable corridor and landfall sites, including alternate routes (n = 1490 images) (Attachment K). A selection schema was applied to the dataset to report a representative classification for each station based on the combined SPI/PV results (n = 374 images) (Attachment K). The selection schema was based in part on the appropriateness of the methodology in classifying a particular substrate (e.g., biogenic substrate classification based on percent coverage was determined from PV imagery, whereas geologic substrate surface layer composition was determined from SPI imagery).

A wide range of substrate types were encountered within and outside Long Island Sound, the most dominant being Fine Unconsolidated Substrate.

There was significant variability among stations within Long Island Sound, with about 5 percent of stations classified as biogenic substrate and 27 percent as Coarse Unconsolidated Substrate. Within Long Island Sound, Shell Substrates and Coarse Unconsolidated Substrates were generally found in contiguous station groupings along the submarine export cable corridor and landfall sites, including The Race. Outside Long Island Sound, there was a transition from sand-dominated Unconsolidated Fine Substrate (Sand Group) and Coarse Unconsolidated Substrate, to Fine Unconsolidated Substrate with increasing presence of silt/clay in deeper water, toward the Lease Area. Greater than 85 percent of stations outside Long Island Sound were classified as Fine Unconsolidated Substrate.

CMECS Biotic Component from PV Images

CMECS Faunal Bed and Aquatic Vegetation subclasses were described in terms of the percentage of a subclass occurrence at each segment by dividing the number of stations with a recorded occurrence by the total number of stations in that Segment and multiplied by 100.

The percentages (rounded to the nearest significant figure) of subclass occurrence within Long Island Sound were as follows:

- Soft Sediment Fauna were present between 57 and 95 percent at all segments
- Attached Fauna were present between 3 and 23 percent at all segments
- Inferred Fauna were present between 0 and 55 percent at all segments
- Benthic Macroalgae were present between 0 and 36 percent at all segments

Soft Sediment Fauna Subclass was the dominant subclass within Long Island Sound, followed by Attached Fauna and Inferred Fauna subclasses, respectively.

The CMECS Biotic Group classification was further refined into Community Groups at the lowest taxonomic level possible. The number of community groups was then broken down into increased order of observed occurrences. The percentages of observed occurrences were as follows:

Attached Fauna

- *Sertularia* beds were present between 3 and 67 percent at all segments
- Didemnidae tunicate beds were present between 8 and 27 percent at all segments
- Astrangiidae coral beds were present between 1 and 15 percent at all segments
- *Crepidula fornicata* beds were present between 1 and 5 percent at all segments and *Crepidula* reef substrates were present in Segments 1 and 2

Soft Sediment Fauna

- *Ilyanassa obsoleta* beds were present between 2 and 27 percent at all segments
- *Pagurus* beds were present between 6 and 58 percent at all segments
- *Crepidula fornicata* (sessile) beds were present between 1 and 27 percent at all segments

Note that attached Fauna such as *Crepidula fornicata*, *Sertularia* hydroids and Didemnidae tunicates, observed in small numbers attached to shell debris, occasional cobble or other type of hard substrate, were included under sampling stations designated Soft Sediment Fauna Subclass (Attachment G-1). Attached fauna present at lesser percent cover values within the classified area of Soft Sediment Fauna were identified as Co-occurring Groups and Community Taxa (FGDC 2012) and were summarized in Attachment

G-1, with one exception. The counts of northern star coral colonies found in sampling stations designated Soft Sediment Fauna were added to the counts of Astrangiidae Corals Community under the Attached Fauna subclass.

Inferred Fauna

- Tracks and Trails beds were present between 0 and 9 percent at all segments
- *Arenicola* castings beds were present between 0 and 37 percent at all segments

Benthic Macroalgae

- Macroalgae beds were not observed at any of the segments.
- Macroalgae observed were sparse and fragmented with a few specimens observed in Segments 4 and 5. The marine macrophytes identified were the leathery leafy algae *Chondrus crispus* and *Cocotylus truncatus*, the filamentous algae *Rhizoclonium riparium* and *Ceramium rubrum*, and the sheet algae *Agardhiella subulata* and *Grinella americana*. Most were found as small individual stalks attached to cobble or shell debris, but none were observed covering large surficial benthic areas. The occurrence of macroalgal assemblages encountered in this survey were rare and were not present as dense vegetation beds. The macroalgae observed in Segments 4 and 5 of Long Island Sound were patchy and composed of a small number of individual plants attached to an occasional cobble, which included a variety of co-existing algal species, or algal fragments passively drifting through the sea bottom.
- CMECS (FGDC 2012) defines algal growth structures that shape the local environment by providing shelter, shade, and detrital material to an area, which is important to associated fauna. The observed macroalgal assemblages were not recognizable points along a continuum. Furthermore, diversity of associated fauna, including many that consume macroalgae (e.g., sea urchins and mollusks) were not found collocated with Biotic Groups and Communities defined by macroalgae and therefore, did not meet the CMECS requirements to be defined as an Aquatic Vegetation Beds and were not included in the PVS maps.

The percentages (rounded to the nearest significant figure) of subclass occurrence outside Long Island Sound were as follows:

- Soft Sediment Fauna were present between 69 and 98 percent at all segments
- Attached Fauna were present between 0 and 19 percent at all segments
- Inferred Fauna were present between 2 and 44 percent at all segments
- Benthic Macroalgae were not present at any segments

Soft Sediments Subclass was the dominant subclass within Long Island Sound, followed by Inferred Fauna and Attached Fauna subclasses, respectively.

The CMECS Biotic Group classification was further refined into Community Groups at the lowest taxonomic level possible. The number of community groups was then broken down into the increased order of observed occurrences as follows:

Attached Fauna

- *Crepidula fornicata* beds were present between 0 and 15 percent at all segments and *Crepidula* reef substrates were present in Segments 6 and 7
- *Astrangia poculata* coral beds were present between 0 and 8 percent at all segments

- *Sertularia* beds were present at 4 percent of all stations within Segment 7

Soft Sediment Fauna at all segments

- *Sertularia* beds were present between 0 and 8 percent of all stations
- *Crepidula fornicata* beds were present between 0.5 and 20 percent of all stations
- *Echinarachnius* beds were present between 0 and 10.0 percent of all stations
- At Segment 8
    - Ceriantharia beds were present at 10.8 percent of all stations
    - Sabeliid feather duster worm beds were present at 17.2 percent of all stations
    - *Ampelisca* beds were present between 60.2 percent of all stations
    - *Amphiura* brittle star beds were present at 23 percent of all stations
    - *Astropecten* beds were present at 28.0 percent of all stations

Inferred Fauna

- Tracks and Trails beds were present between 1.1 and 28.0 percent at all segments
- *Arenicola* Castings beds were present between 0 and 11.5 percent at all segments

Benthic Macroalgae

- Macroalgae beds were not observed at any of the segments.

5.1| EAST RIVER - ASTORIA TO THROGS NECK

Segment 1 includes sampling stations along the BW1 Variant A submarine export cable corridor New York Power Authority (NYPA) landfall corridor in the Astoria power complex in Queens, New York to Throgs Neck bridge and also includes additional stations along the Luyster Creek landfall corridor (Figure 9).

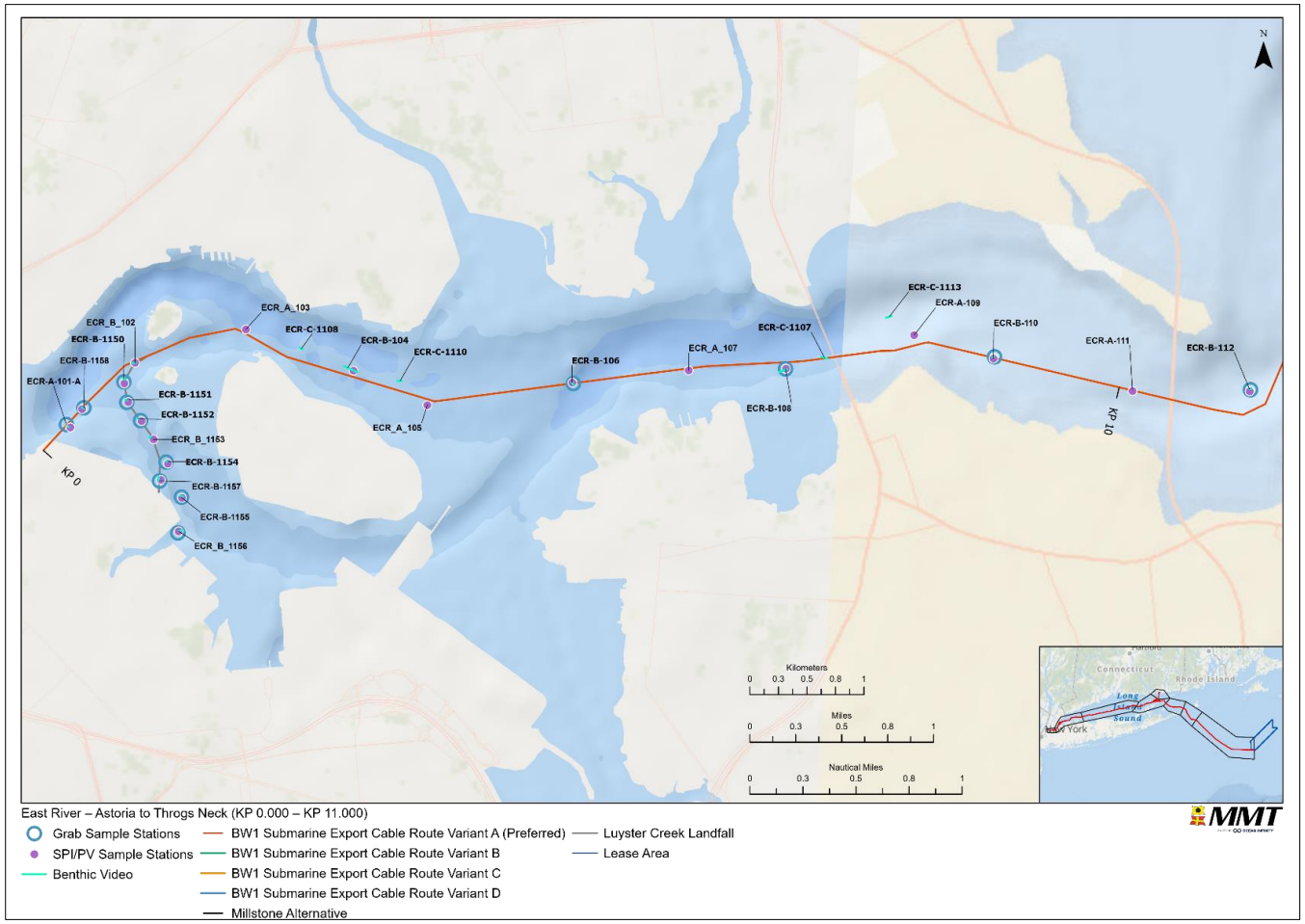


Figure 9 Overview of the Segment 1 sample stations.

5.1.1| BENTHIC VIDEO

The Segment 1 seabed was characterized by a range of substrates, from fine sandy silt to coarser sand substrate, with areas of cobble and boulder present covered with varying amounts of predominantly epiphytic growth. There were areas of concentrated shell substrate, some consisting of *Crepidula* spp., shell fragments and shell hash. The sampling benthic video log is presented in Attachment B. Representative images of the seabed benthic habitat along Segment 1 are provided in Image 5, Image 6 and Image 7. No consolidated hard substrates were observed within Segment 1. Underwater conditions were generally adequate for the collection of visual data with underwater near-bottom visibility delimited by suspended particles and relatively low light penetration of approximately 3.3 ft (1 m) within the water column.

Various macrobenthic taxa and fish were observed along the East River segment (see Section 5 for a list of observed fish). Observed macroinvertebrates included various mollusks – slipper snails (*Crepidula* spp.) and whelks (*Busycotypus* sp. and/or *Busycon* sp.); arthropods - hermit crabs (*Pagurus* spp.) and horseshoe crab (*Polyphemus limulus*); and attached taxa, including bryozoans, colonial tunicates, hydroids, and various sponges.

Image 5 Representative image from Segment 1 displaying coarse sand bottom with shell fragments and shell hash, and cobble and boulder with attached epifauna including hydroids, bryozoans, and sponge.

Image 6 Representative image from Segment 1 displaying a horseshoe crab (Limulus polyphemus).

Image 7 Representative image from Segment 1 displaying fine sand bottom with intact Crepidula spp. shell and fragments.

5.1.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 1 are provided in Attachment B. Twelve (12) of 15 benthic grab stations within this segment yielded sediment samples. Collection of benthic grab samples were unsuccessful at stations ECR-B-102, ECR-B-104 and ECR-B-1153 due to fouling of the grab from semi-consolidated substrates.

Two stations, ECR-B-108 and ECR-B-110, had samples with an anoxic odor (Attachment B). It should be noted that distinctive odor detected in samples are the result of some anoxic sediment with subtle pungency differences due to the composition of the sediment primarily the amount of organic material; note that description of odor and degree of pungency is rather subjective.

Anthropogenic debris was not observed in any of the Segment 1 benthic grabs. Successful grab samples had penetration adequate to sample infauna to a depth of ≥2.8 in (7 cm). Some grabs were observed to contain surficial shell and shell fragments (Attachment B; Image 8); while others contained finer sediments and little to no surficial shell materials (Image 8).

Image 8 Representative surficial grab sample from Segment 1 station ECR-B-108 displaying intact Crepidula spp. shells in silty sediment.

Image 9 Representative surficial grab sample from Segment 1 station ECR-B-1154 displaying medium grade sand with small shell fragments.

5.1.3| PARTICLE SIZE DISTRIBUTION

A total of 12 sediment samples from Segment 1 stations as shown in Figure 9 were analyzed for PSD; an additional QC sediment sample was collected at one station. The PSD for these sediment samples, based on the Wentworth scale (Table 21), is presented in Table 23. All 12 Segment 1 sediment samples had some type of gravel (Pebbles and/or Granules). Samples from eight stations had a gravel component greater than five percent; six of those stations had samples with gravel components greater than 10 percent. The sample from station ECR-B-1150 had a gravel component of 44.1 percent.

The five stations along the BW1 Variant A submarine export cable corridor yielded samples that were sandy with four of the five stations having sediment consisting of 50 percent or more of sand; station ECR-B-1158, had 84 percent sand. All five of these stations had some type of gravel – combined Pebbles or Granules. One station, ECR-B-101-A, had a total gravel fraction of 10 percent or more. The Silt and Clay fraction at these five stations ranged from 15.5 to 63.0 percent.

All seven of the stations along the Luyster Creek landfall corridor had Gravel gravel with five of the seven stations having over 10 percent gravel. Total sand at these stations ranged from 23.8 to 78.1 percent. For these 7 stations, the two stations closest to shore along the landfall corridor, ECR-B-1155 and ECR-B-1156 had the highest Silt and Clay fractions, of 55.8 percent and 71.1 percent, respectively.

The total gravel, total sand, and silt + clay was calculated and are presented in Figure 10 and Figure 11. Figure 10 and Figure 11 introduce TOC results, as more thoroughly presented in Section 5.1.4, relative to the percentage of total gravel, total sand, and silt + clay. A general correlation between increased TOC levels and greater percent fine fraction of silt and clay was evident.

Table 23 Percentages of particle size classes according to Wentworth (1922) from Segment 1. Note – the alternate Luyster Creek landfall corridor stations are shaded in blue. Grayed columns show the sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-101-A	--	--	9.7	1.3	11.0	2.9	4.7	35.1	25.5	1.2	69.4	16.6	3	19.6
ECR-B-1158	--	--	0.1	0.4	0.5	1.6	4.6	70.8	6.5	0.5	84.0	14.3	1.2	15.5
ECR-B-106	--	--	--	0.9	0.9	2.1	17.1	34.4	10.2	0.2	64.0	29.8	5.3	35.1
ECR-B-108	--	--	2.3	3.6	5.9	7.7	6.1	3.6	6.6	7.1	31.1	50	13	63.0
ECR-B-110	--	--	1.8	1.6	3.4	0.8	1.6	5	38	21.5	66.9	25.5	4.2	29.7
ECR-B-1150	--	--	31.6	12.5	44.1	13.6	13.6	12.6	1.8	0.5	42.1	11.1	2.7	13.8
ECR-B-1151	--	--	4.7	6	10.7	12.4	26.4	24.2	4.6	0.7	68.3	17.8	3.2	21.0
ECR-B-1151-QC	--	--	9.3	6	15.3	12.9	25.5	23.8	5.1	0.9	68.2	13.3	3.2	16.5
ECR-B-1152	--	--	13.7	10	23.7	13.4	17.9	24.1	5.9	0.9	62.2	12.7	1.4	14.1
ECR-B-1154	--	--	0.4	0.5	0.9	2.2	13.2	40.4	19.9	2.4	78.1	18.3	2.7	21.0
ECR-B-1157	--	--	13.7	3.7	17.4	4.6	9.9	27.6	20.6	2.5	65.2	16	1.4	17.4
ECR-B-1155	--	--	0.2	2.9	3.1	5.8	6.2	8.4	11.5	9.2	41.1	47.1	8.7	55.8
ECR-B-1156	--	--	0.1	5	5.1	10.8	6.7	3	1.9	1.4	23.8	58.4	12.7	71.1

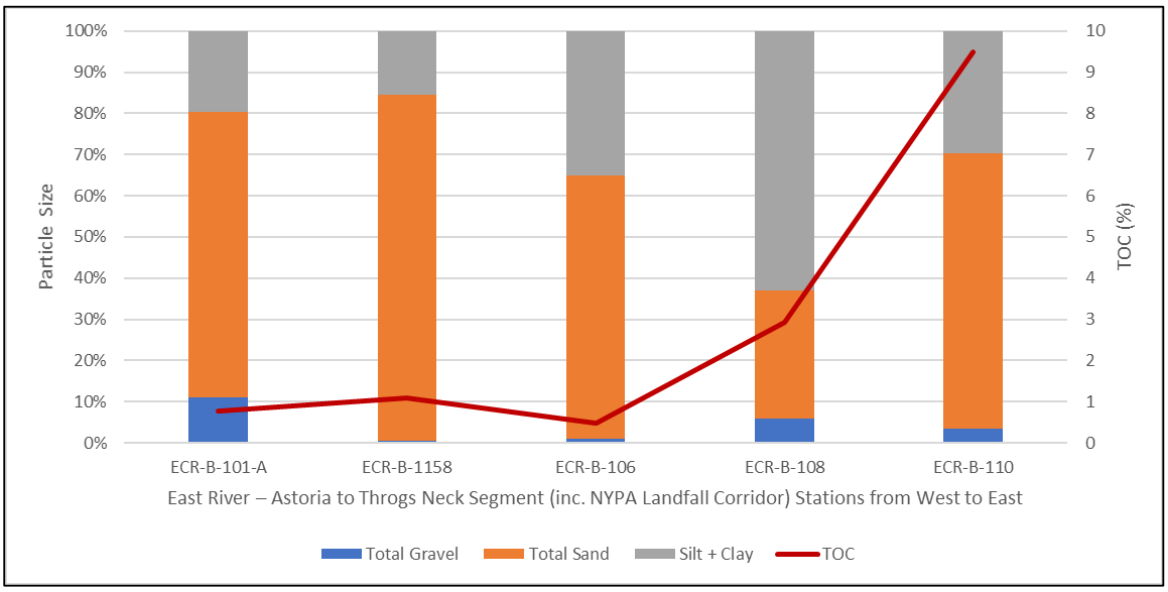


Figure 10 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Segment 1, excluding the alternate Luyster Creek landfall corridor, along the primary corridor presented West to East.

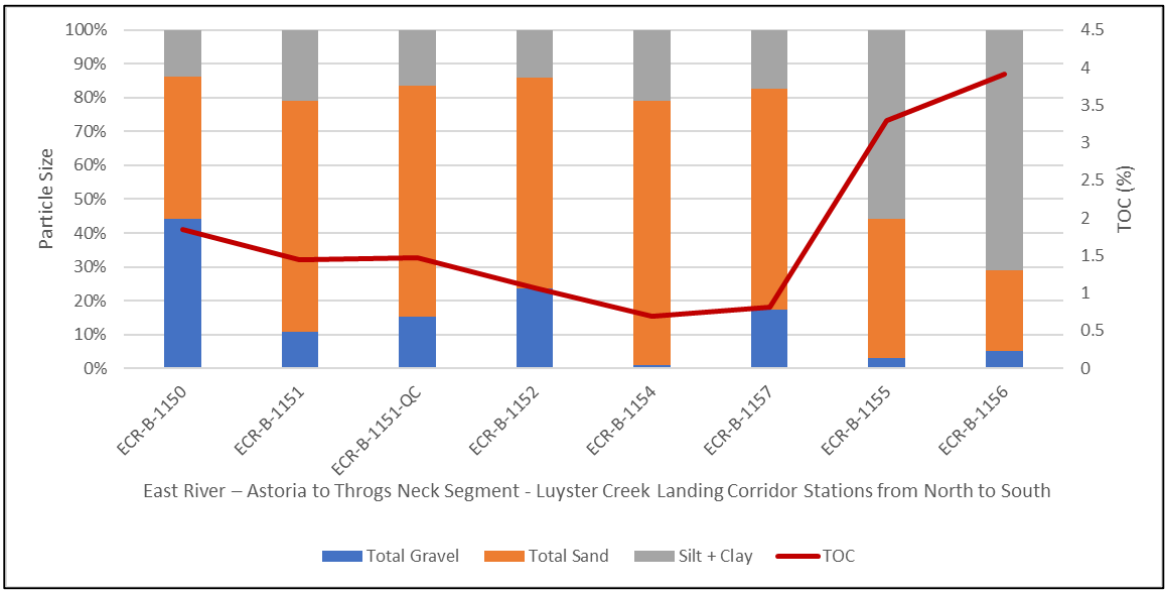


Figure 11 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Segment 1 along the alternate Luyster Creek landfall.

5.1.4| TOTAL ORGANIC CARBON

The TOC concentrations in sediment samples (exclusive of QC replicates) from benthic grab stations along Segment 1, including the alternate Luyster Creek landfall corridor ranged from 0.483 to 9.5 percent (mean: 1.67 percent; SE: 0.35; Table 24). Station ECR-B-110, located between the Whitestone and Throgs Neck bridges, yielded the highest TOC of all sampled sites within the study area and was not included in the average for Segment 1.

Table 24 Total organic carbon (TOC) concentrations from benthic grab stations along Segment 1, including the alternate Luyster Creek landfall corridor (shaded in blue).

Station	TOC (percent)
ECR-B-101-A	0.778
ECR-B-106	0.483
ECR-B-108	2.92
ECR-B-110	9.5*
ECR-B-1158	1.08
ECR-B-1150	1.85
ECR-B-1151	1.45
ECR-B-1151-QC	1.47
ECR-B-1152	1.07
ECR-B-1154	0.698
ECR-B-1155	3.29
ECR-B-1156	3.91
ECR-B-1157	0.812

*station ECR-B-110 is not included in mean.

5.1.5| INFAUNA FROM GRAB SAMPLES

Ten (10) of the 12 successful benthic grab samples were selected for infaunal analyses. The ten stations sampled along Segment 1 yielded 3,402 individuals and 107 total infauna taxa from the phyla Annelida, Arthropoda, Mollusca, and Nemertea. A total of 64 taxa were identified to species level and the other 43 to LPIL.

5.1.5.1| BIOMASS

Biomass was measured for 11 taxonomic classes (or LPIL) of infauna present in the samples. Total biomass for the 10 sampling stations was 15.8 g. The mean biomass per station was (1.58 g ± 2.15 SD). Bivalvia (bivalve mollusks) and Polychaeta (polychaete worms) contributed 48.1 percent and 42.6 percent of the total biomass sampled, respectively (Table 25). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 12. Bivalve biomass was highly concentrated at a single station (ECR-B-1150) of the segment. The high values were due to a small number (8) of a relatively larger-bodied bivalve (LPIL) taxon.

Table 25 Summary statistics for infauna biomass collected from Segment 1.

Class	Total (g)	Percent	Mean	SD
Bivalvia	7.60	48.05	0.760	1.945
Polychaeta	6.74	42.59	0.674	0.469
Gastropoda	0.79	4.97	0.079	0.237
Malacostraca	0.24	1.52	0.024	0.036
Ascidiacea	0.23	1.48	0.023	0.051
Anthozoa	0.10	0.66	0.010	0.015
Nemertea *incertae sedis*	0.04	0.28	0.004	0.004
Clitellata	0.04	0.26	0.004	0.012
Platyhelminthes (all Classes)	0.02	0.12	0.002	0.004
Sipunculidea	0.01	0.07	0.001	0.004
Pycnogonida	<0.01	<0.01	--	--

SD = Standard deviation.

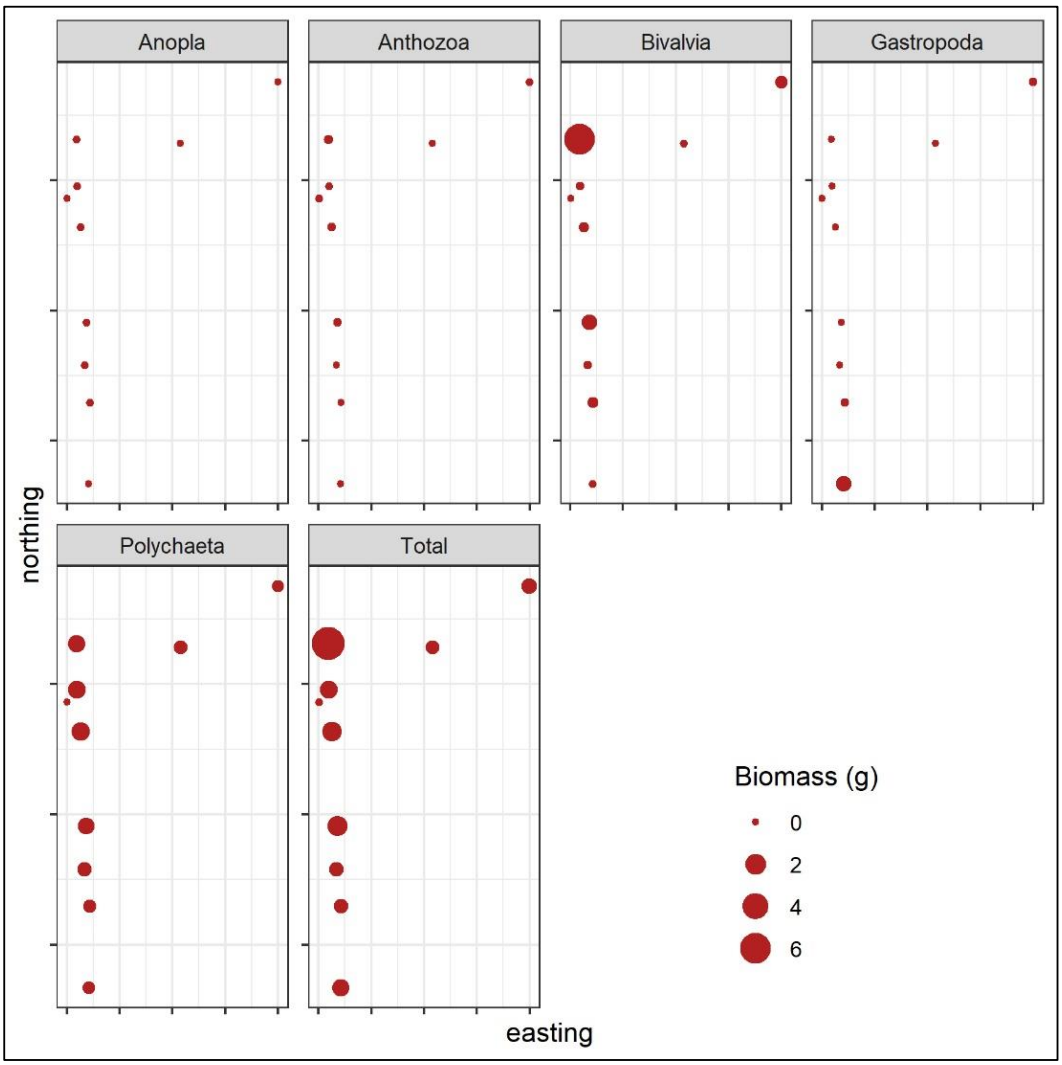


Figure 12 Biomass (g) of infauna organisms for the Classes Nemertea incertae sedis, Anthozoa, Bivalvia, Gastropoda, and Polychaeta and total infauna plotted on the station positions along Segment 1.

5.1.5.2| UNIVARIATE STATISTICAL ANALYSES

Species-level identifications included 1,915 individuals or 56.3 percent of the 3,402 total. Because samples from one station (ECR-B-1158) only contained LPIL taxa it was removed from the analyses, subsequently the analyses were based on the remaining nine stations. Diversity indices varied across stations with the highest values generally found at the western stations (East River) (Figure 13).

The number of species per sample averaged 18.9 and ranged from 7 to 30. Margalef's species richness (d) ranged from 1.5 to 4.7; diversity (H') ranged from 1.1 to 2.7; Fisher's alpha ranged from 2.1 to 7.5. Evenness measured with Pielou's J average was 0.72 and ranged from 0.57 to 0.86.

The ten most abundant species sampled are shown in Table 26. These species collectively account for 73.5 percent of the infaunal abundance recorded for this segment. Numerically dominant species include eight polychaete annelids, one arthropod, and one mollusk. The top species included *Polycirrus eximius* (19.0 percent), *Heteromastus filiformis* (12.0 percent), *Streblospio benedicti* (9.6 percent), and *Unciola serrata* (7.6 percent) contributed over 50 percent of the 1,915 individuals identified to species. Spatial patterns of abundance for these ten taxa are shown in Figure 14. Patterns of spatial aggregation were evident over the sampling stations. The polychaete, *Streblospio benedicti* occurred in eight of ten stations while *Heteromastis filiformis* was found in six of the nine sampling stations. The numerically dominant species, *Polycirrus eximius*, and two other polychaete species (*Glycinde multidens* and *Eumida sanguinea*) were present at five of the ten stations. The polychaete, *Tharyx acutus*, was collected at a single station.

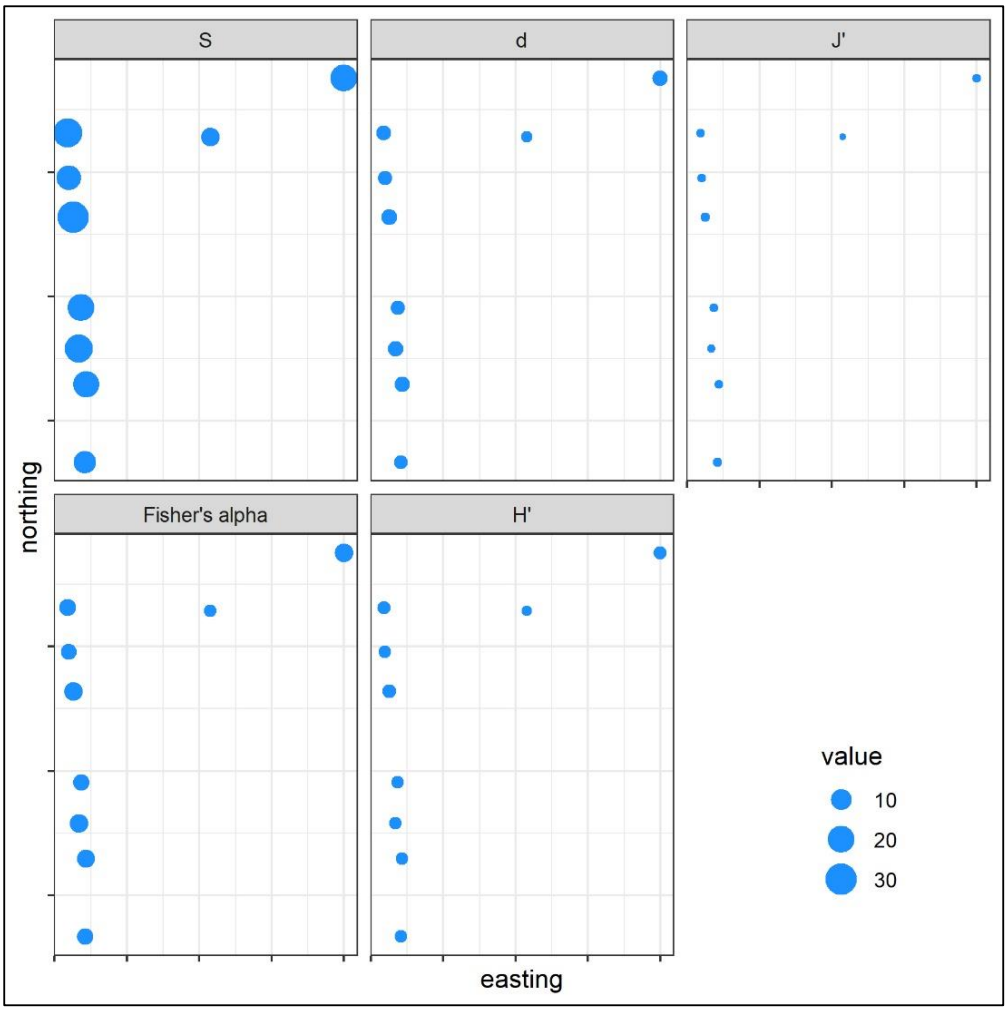


Figure 13 Number of taxa (S), Margalef's species richness (d), Fisher's alpha, evenness (J'), and species diversity (H') plotted on the station positions along Segment 1.

Table 26 Numerically dominant species collected in grab samples from Segment 1 based on data set with species level identifications from ten stations.

Phylum	Species	Number of Individuals	Percent of Total Individuals	Station Occurrence
Annelida	*Polycirrus eximius*	363	19.0	5
Annelida	*Heteromastus filiformis*	230	12.0	6
Annelida	*Streblospio benedicti*	184	9.6	8
Arthropoda	*Unciola serrata*	146	7.6	4
Annelida	*Eumida sanguinea*	123	6.4	5
Annelida	*Sabellaria vulgaris*	119	6.2	4
Annelida	*Glycinde multidens*	64	3.3	5
Annelida	*Nereis splendida*	64	3.3	3
Mollusca	*Nucula proxima*	64	3.3	4
Annelida	*Tharyx acutus*	50	2.6	1

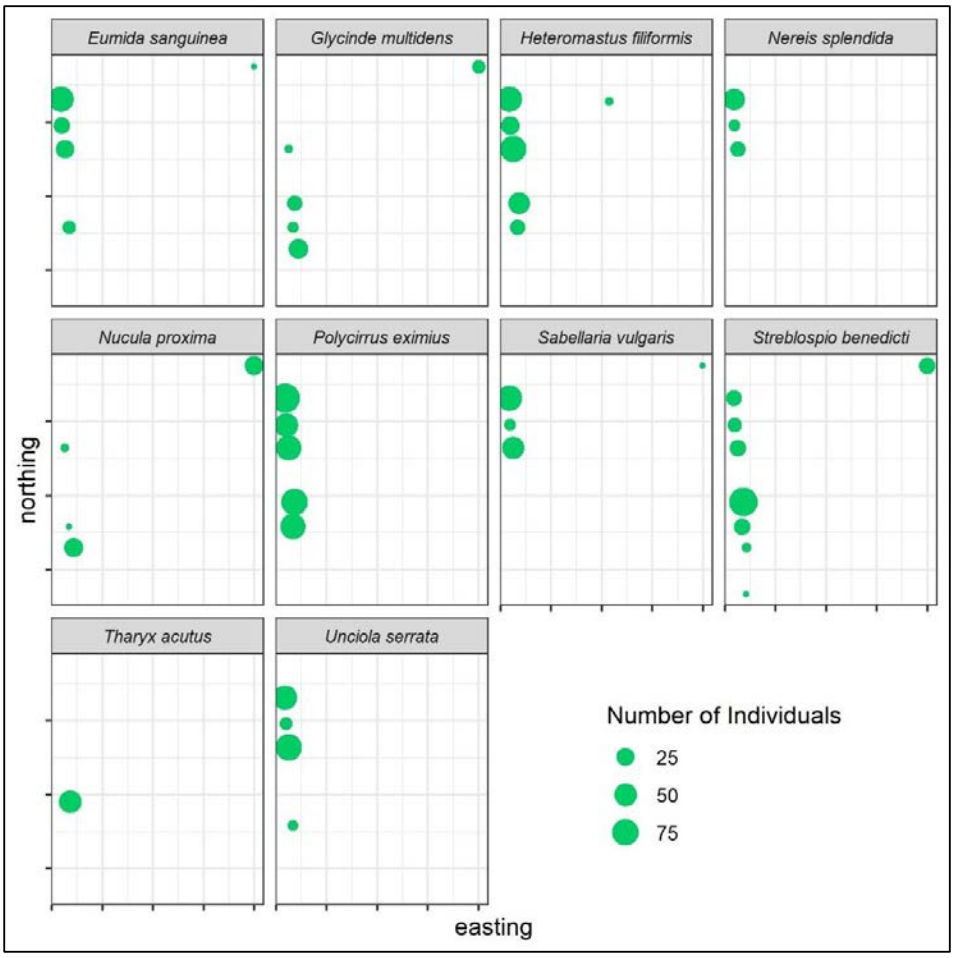


Figure 14 Number of individuals of the ten most abundant species in the samples plotted on the station positions along Segment 1.

5.1.5.3| MULTIVARIATE STATISTICAL ANALYSES

The cluster analysis of stations coupled with the SIMPROF routine identified six groups of stations with significantly similar species compositions (Figure 15). Because samples from one station (ECR-B-1158) only contained LPIL taxa it was removed from the data set analyses presented are based on the remaining nine stations. Three of these groups (Groups a, b, and e) were single stations showing little compositional affinity with other groups. The other three groups consisted of two stations each (Groups c, d, and f). Cluster groups generally reflect the presence and abundance of particular species in the samples. Group a was characterized by the presence and abundance of two polychaetes, *Marenzillaria viridis* and *Caulleriella* sp. Group b separated from all other stations because of the unique occurrence of *Tharyx acutus.* Group c was represented by *Unciola serrata*, *Eumida sanguinea*, and *Sabellaria vulgaris.* Group d by *Heteromastus filiformis*, *Polycirrus eximius.* Group e was characterized b polychaetes *Goniadella gracilis* and *Hyperteone heteropoda*, and the bivalve *Acteon candens,* and Group f was characterized by abundance and occurrence of the bivalve, *Nucula proxima* and the polychaete, *Glycinde americana*.

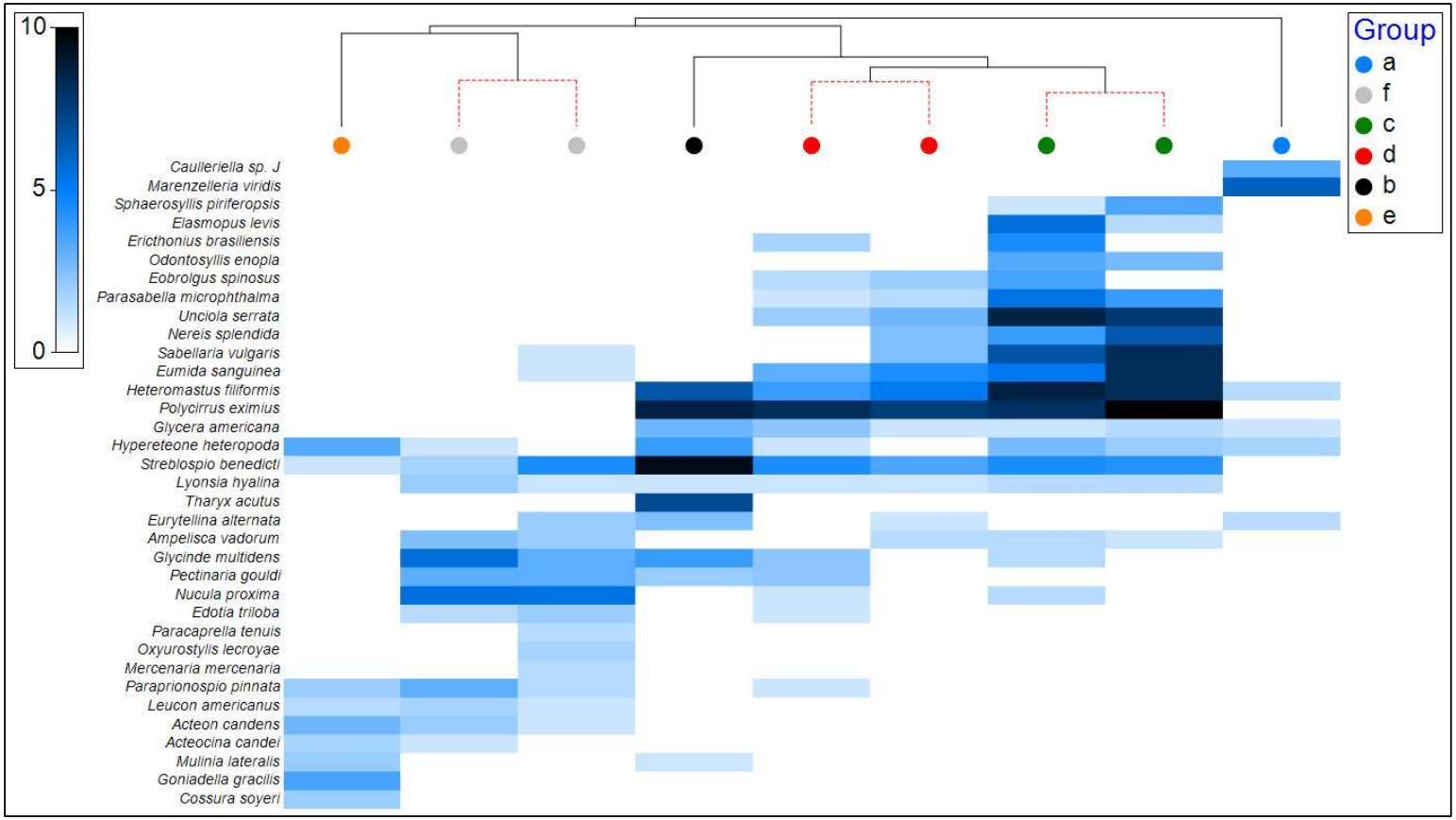


Figure 15 Results of normal cluster analysis of Segment 1 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in the Segment 1 samples.

5.1.5.4| ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

NMDS showed a wide distribution of station groups over the ordination plot (Figure 16). The vector representing correlations between NMDS axes and percent sediment composition overlying the ordination plot indicate that SIMPROF Groups e and f were associated with higher percent fine sediments than Groups a to d. Although vectors for percent gravel and percent sand point to the left of the plot, there is no significant correlation between SIMPROF groups and these two sedimentary variables.

A plot of the SIMPROF groupings, based on infauna species composition, at the station coordinates showed patchy spatial structuring of the various groups (Figure 17). For example, each of the two-station groups (c, d, and f) were separated along the segment. Fine sediments (silt and clay) were prevalent at stations along most of the segment.

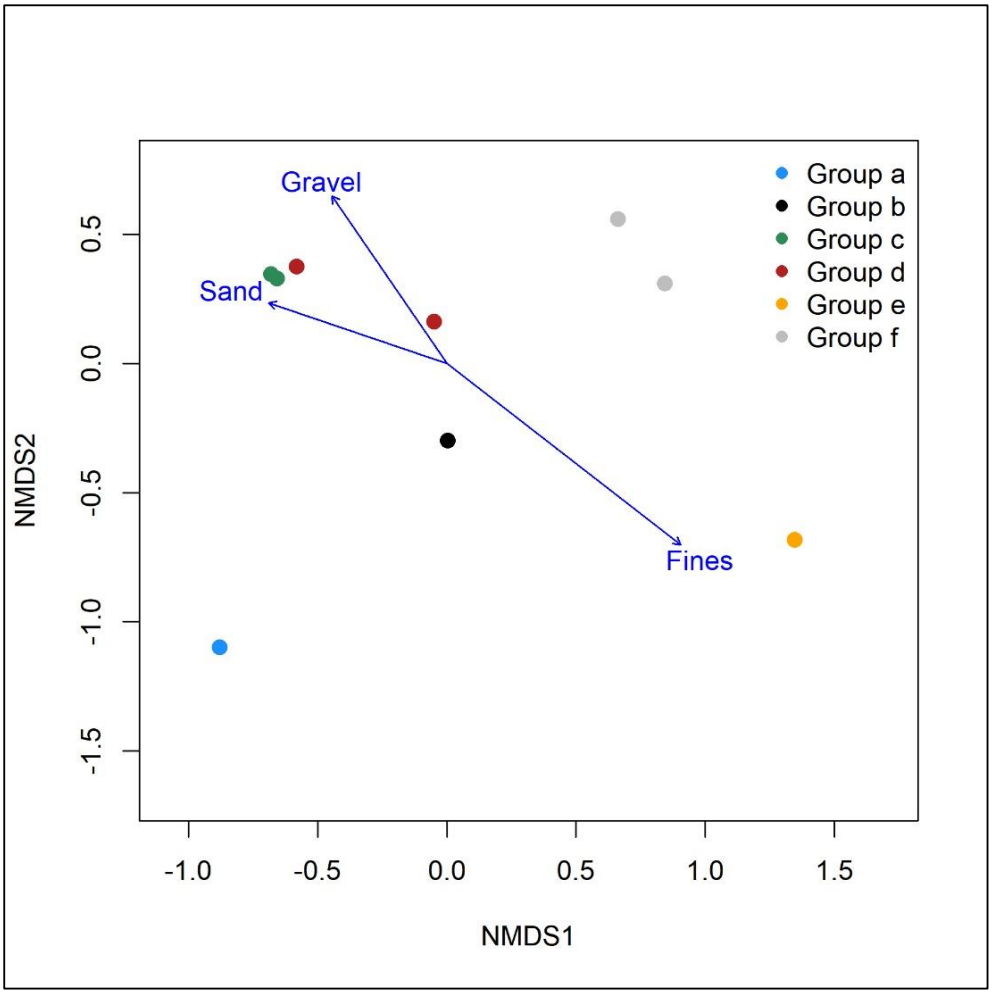


Figure 16 Non-Metric Multidimensional Scaling (NMDS) ordination plot of Segment 1 stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand, gravel, and fine sediments in the samples.

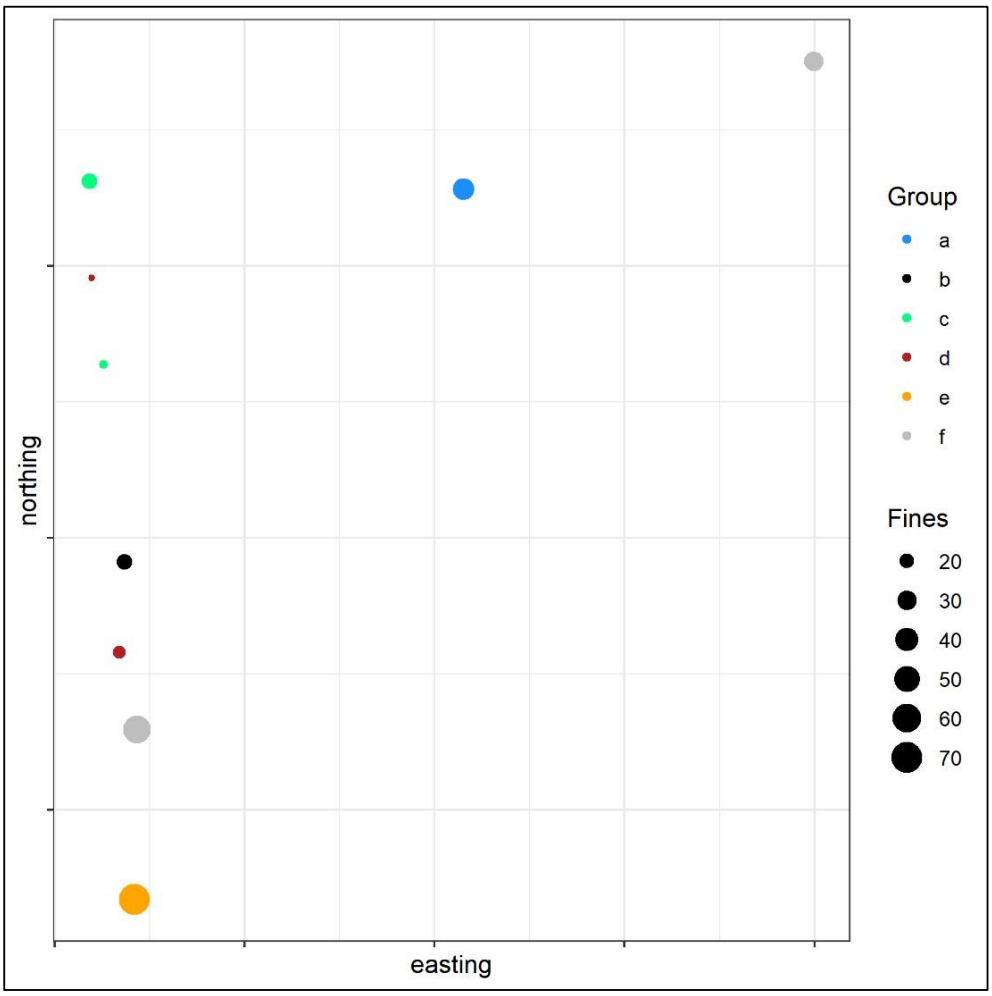


Figure 17 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 1. The size of the symbols is proportional to percent fines (silt and clay sediment components).

5.1.6| SPI RESULTS

SPI images were collected at a total of 11 stations along Segment 1; SPI images were not collected at station ECR-101-A due to the presence of semi-consolidated substrate. The results for the SPI image analysis are found in Attachment H. The SPI sampling parameters for Segment 1 are plotted in Figure 18 (grain size, penetration, and surface boundary roughness) and Figure 19 (aRPD, infauna succession, and organism sediment index).

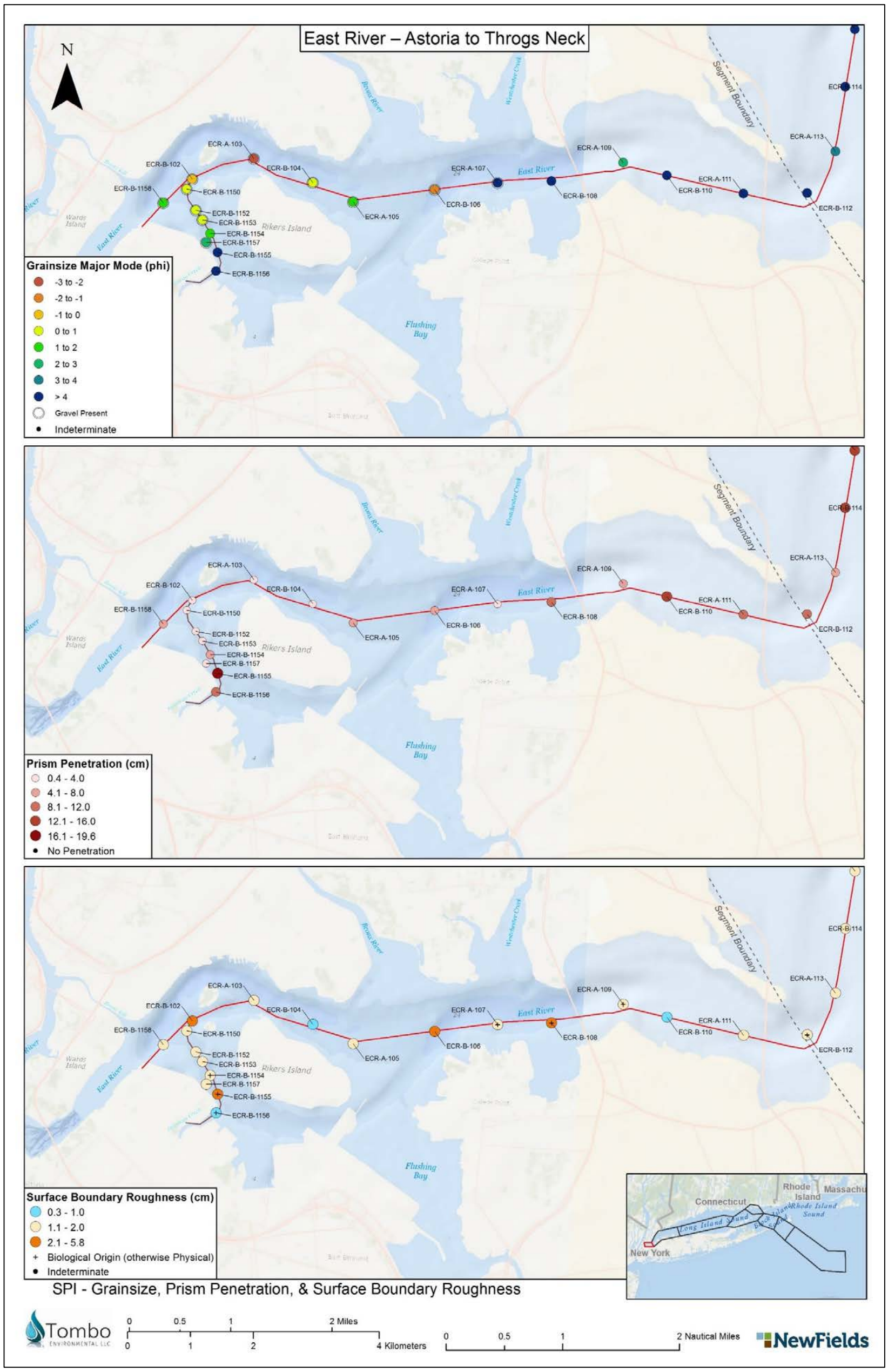


Figure 18 Sediment Profile Imaging (SPI) results for grain size, prism penetration, and surface boundary roughness along Segment 1. Segment 1 stations are along the red line corridor west of the Segment Boundary.

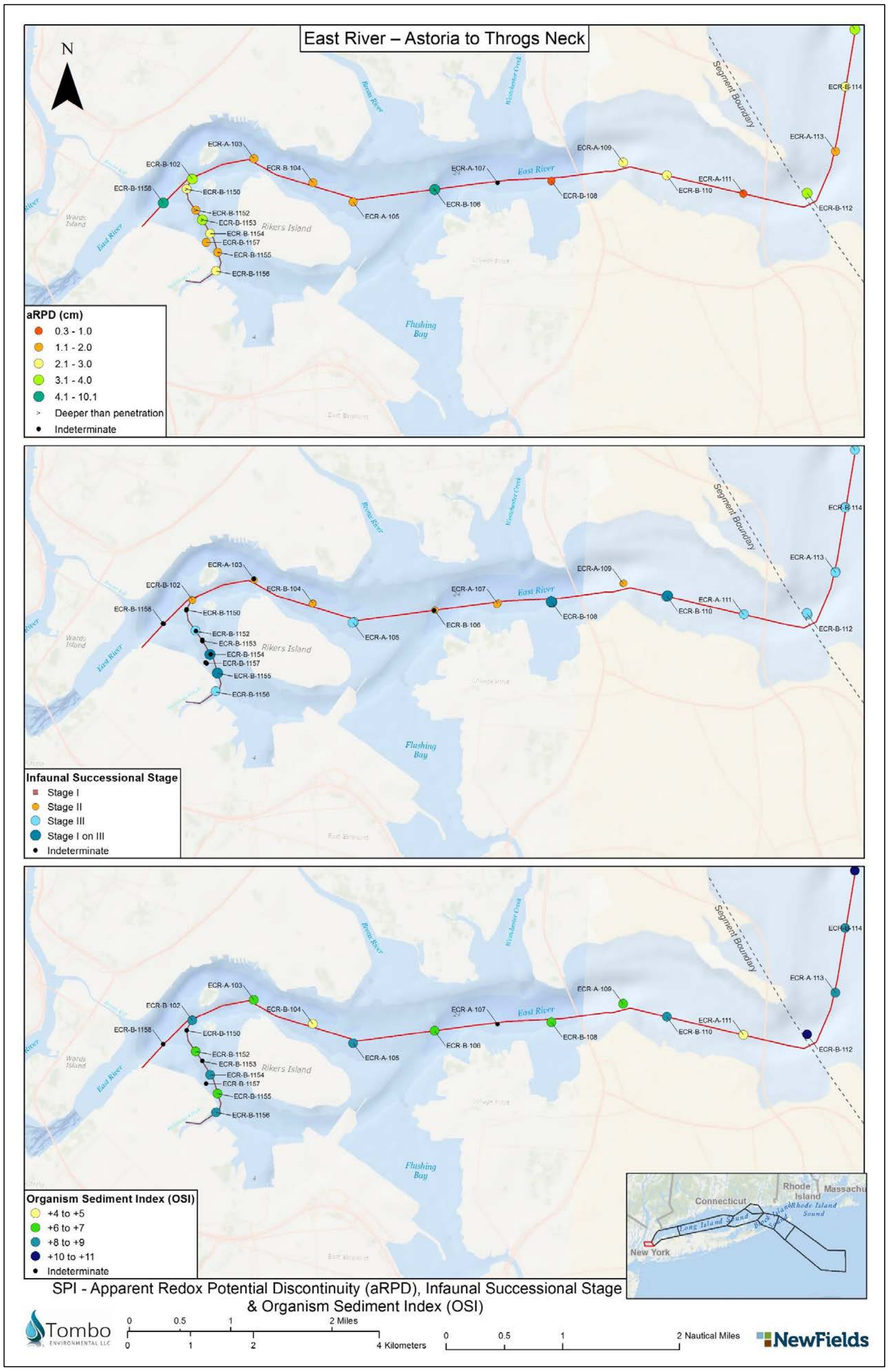
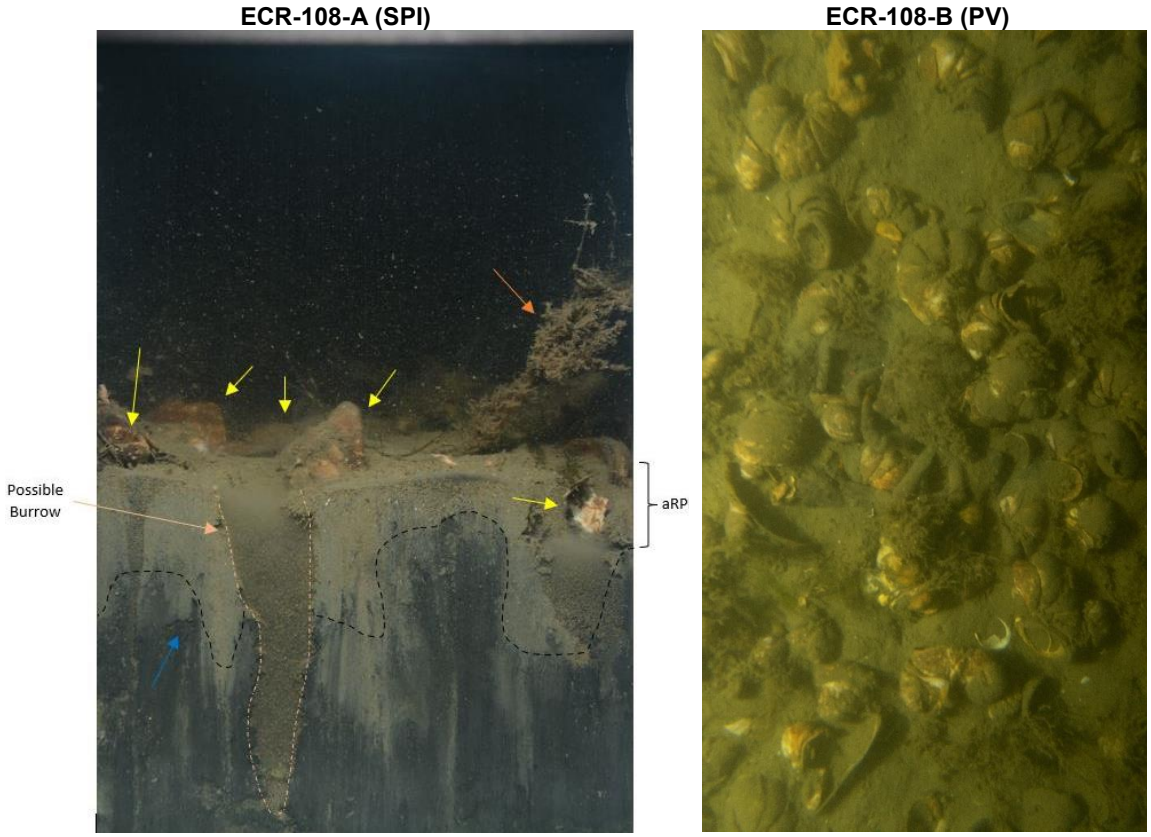


Figure 19 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 1. Segment 1 stations are along the red line corridor west of the Segment Boundary.

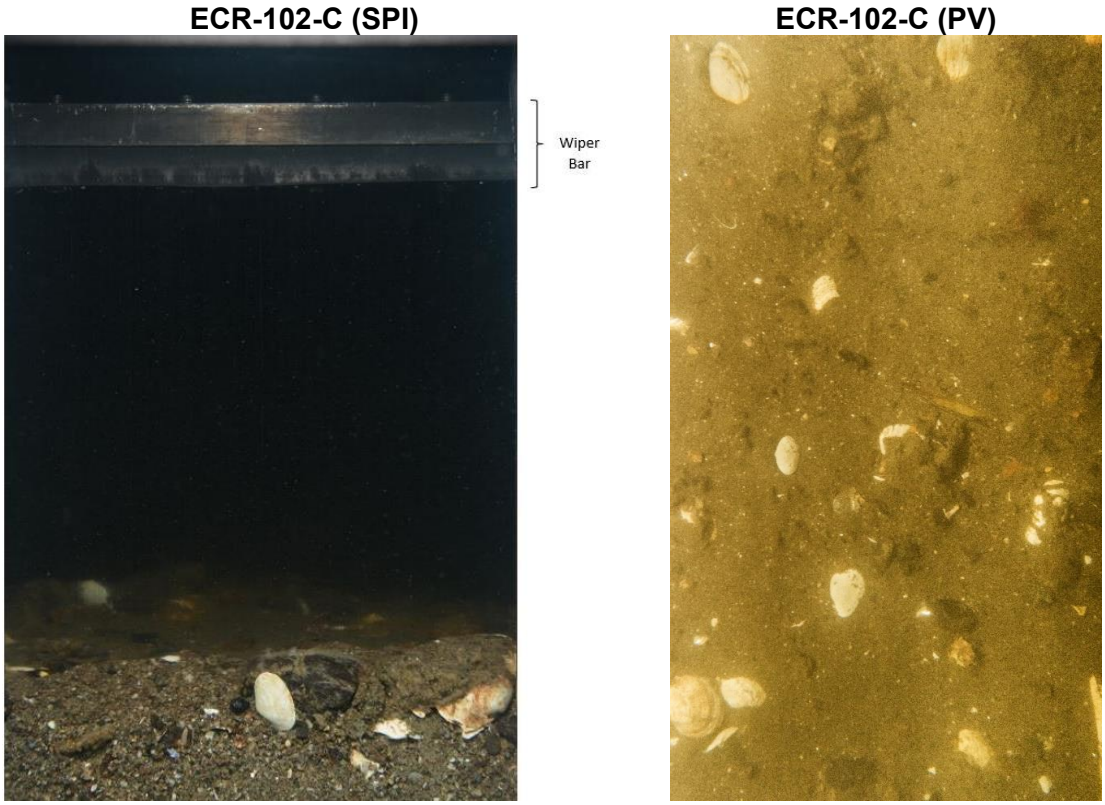
5.1.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode (i.e., the dominant grain size) of surface sediments determined using SPI in Segment 1 ranged from coarse sands, gravels, and small pebbles in the western portion of the segment, grading to silt and clay (≥4 phi) to the east (Figure 18). Example SPI/PV images showing typical silt/clay sediments in Segment 1 are provided in Image 10. Example SPI/PV images showing coarse-grained surface sediments in Segment 1 are provided in Image 11.



The SPI image from station ECR-108 showed surface sediments consisting of silt/clay (≥4 phi) and a relatively well-developed aRPD. A possible surface burrow was present in the left center of the SPI image. A small feeding void (blue arrow) indicated the presence of a Stage III organism (head-down deposit feeder). *Crepidula fornicata* shells (yellow arrows) and a hydroid (orange arrow) were present on the sediment surface. The plan view (PV) image showed numerous *C. fornicata* shells and hydroids covering the sediment surface. SPI image width = 15cm. PV image area = 0.18 m².

Image 10 Representative SPI and PV showing typical silt/clay sediments in Segment 1 station ECR-108.



The SPI image from station ECR-102 showed low prism penetration due to the presence of coarse sand and shells in surface sediments. The wiper bar from the SPI camera was visible in the image. The PV image appeared to show coarse sand with gravels (gravelly sand) with shell particles on the sediment surface. SPI image width = 15cm. PV image area = 0.10 m^2 (estimated).

Image 11 Representative SPI and PV Images showing coarse-grained surface sediments in Segment 1 station ECR-102.

5.1.6.2| PRISM PENETRATION DEPTH

The distribution of average SPI camera prism penetration (in centimeters) in Segment 1 surface sediments is presented in Figure 18. Mean penetration depth is the distance that the SPI camera prism penetrates the sediment providing a relative measure of sediment water content and shear strength of surface sediments. In general, prism penetration depths were relatively shallow throughout Segment 1, with an average of 5.5 cm (±3.7 cm, n = 22) which is just over one-quarter of the maximum prism penetration of 20 cm. Lower prism penetration was observed throughout Segment 1 and generally coincided where surface sediments consisted of coarse-grained materials. Penetration depths in Segment 1 ranged from 0.8 cm at station ECR-104 to 13.2 cm at station ECR-110.

5.1.6.3| SURFACE BOUNDARY ROUGHNESS

Mean small-scale boundary roughness, or surface relief, is the difference between the highest and lowest penetration depths measured in an SPI image and can be present on the seabed because of physical and/or

biological processes. Boundary roughness in Segment 1 ranged from 0.4 to 8.2 cm with a segment average of 1.9 cm (±1.7 cm, n = 22) (Figure 18). The highest mean boundary roughness values (3.2 to 8.2 cm) were measured at stations ECR-102, ECR-106, and ECR-108, (Figure 18) due predominantly from sloped surfaces related to surface ripples (physical roughness) (Image 11); physical roughness was predominant across Segment 1. Station ECR-108 roughness was due to the presence of surface burrows and pits (biological roughness).

5.1.6.4| APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. The overall trend in aRPD depths in Segment 1 was variable due to the range of surface sediment types from fine-grained silt/clay to gravels and pebbles (Figure 19). As discussed in Section 4.3.4.1, the aRPD in coarse-grained surface sediments can be relatively deep, but difficult to measure due to the lack of optical contrast between oxidized and reduced particles (absence of silt/clays and organic matter). The aRPD depths in Segment 1 ranged from 0.1 to 6.9 cm with a segment average of 2.27 cm (±1.8 cm, n = 20). The aRPD depth at station ECR-107 was considered indeterminate due to low SPI prism penetration and the presence of shell hash.

5.1.6.5| INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 1 sediments was predominantly Stage II, a transitional successional stage between I and III where shallow and tube-dwelling deposit feeding organisms were present. Stage II succession was observed at 5 of the 11 Segment 1 stations. Evidence of Stage III infauna (feed voids, burrows, or organisms at depth) was observed at two of the Segment 1 stations (Figure 19). A few (3 of 22) images showed Stage I communities coexisting with the Stage III communities. Stage I succession only, the initial pioneering stage, was observed at one Segment 1 station. The successional stage was indeterminate in 18 percent of the images (4 of 22).

5.1.6.6| SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high sediment oxygen demand (SOD) in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies (e.g., *Beggiatoa*). Sediment conditions with high organic matter loading (and subsequently high SOD) may result in methanogenesis with methane bubbles in the sediment column. These conditions may also lead to sulfate-reducing bacterial colonies on the sediment surface. Indicators for high SOD were not observed in the surface sediments at Segment 1.

5.1.6.7| ORGANISM-SEDIMENT INDEX CALCULATION

The OSI provides a measure of general benthic habitat quality and considers dissolved oxygen concentrations within the upper sediment column, presence or absence of sedimentary methane, the depth of the aRPD, and the infaunal successional stage. The OSI ranges from −10 to +11 and is useful for showing gradients of sediment disturbance (Rhoads and Germano, 1986). OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. The mean OSI values for Segment 1 as presented in Figure 19 range from +2 to +9.

The majority of OSI values in Segment 1 (81 percent) were +6 or higher while OSI values of +2 and+5 were measured at stations ECR-111 and ECR-104, respectively (Figure 19). Those two locations where OSI was

less than +6 showed the presence of medium or fine pebbles and/or a shallow aRPD, which is a habitat type that can often remain in an earlier infaunal successional stage.

5.1.7| PV RESULTS

The PV images were collected from 12 stations along the East River – Astoria to Throgs Neck Segment 1 (Figure 9). Along Segment 1, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.1 m^2 (± 0.04 m^2) (Attachment G).

5.1.7.1| BEDFORMS

Physical bedforms were observed at seven of the 12 Segment 1 sampling stations. Bedform ripples representative of mobile sediment beds were observed extending east from ECR-102. Ripples were present primarily in muddy sand bottoms but were also observed in sandy gravel (ECR-B-102) (Image 12) and gravelly sand bottom (ECR-A-107) (Attachment G).

Biological bedforms were observed at five of the 12 Segment 1 sampling stations (Attachment G) and were composed of live clams interspersed with gravel and live *Crepidula* reef substrate (Image 13). Live clam beds were observed in the navigational channel located between Rikers Island and Hunts Point (Figure 9).

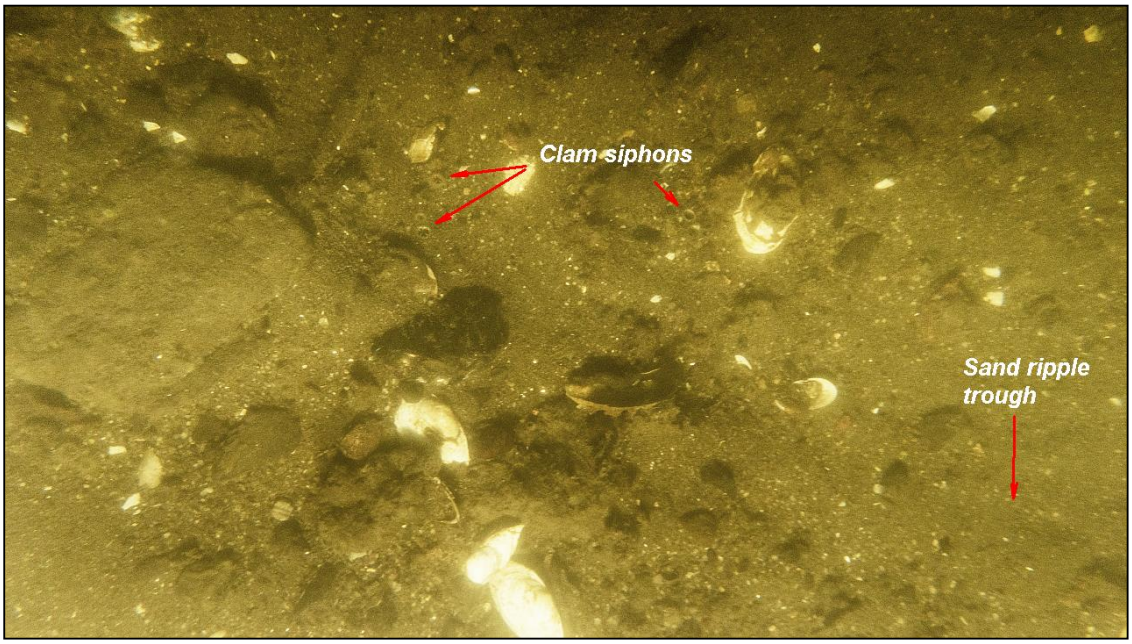


Image 12 Sand ripple trough, medium sand, gravel, shell hash and cobble substrate, and clam siphons at Segment 1 station ECR-B-102.

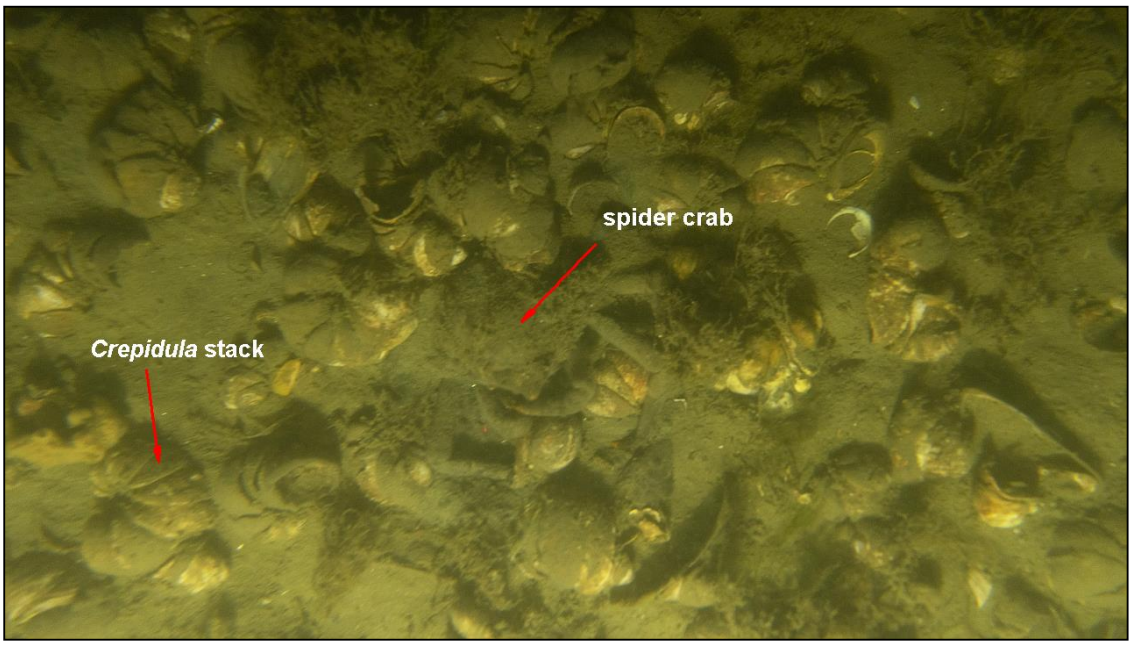


Image 13 Crepidula reef with hydroids attached to Crepidula shells and a spider crab at Segment 1 station ECR-B-108.

5.1.7.2| FLORA AND FAUNA PRESENCE

CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 1 stations are provided in Attachment G-1. PV image assessment showing distribution of Potentially Vulnerable Species (PVS) and CMECS biotic and substrate subclasses for Segment 1 stations is shown in Figure 20. No marine macrophytes or seagrasses were observed in Segment 1. The faunal assemblage observed in PV images from Segment 1 stations had a relatively patchy distribution and was not considered diverse. Faunal percent coverage from PV images ranged from 0 to 50% with the densest coverages associated with mollusk beds and *Sertularia* hydroids. Dominant fauna observed at stations along Segment 1 are as follows:

- Colonial tunicates (family Didemnidae) were the only attached fauna observed on the surface of individual boulders only at station ECR-B-101 (Image 14);
- Clam beds were observed at 3 out of 12 sampling stations with the highest faunal cover of 50 percent at station ECR-A-103 (Image 15). An estimated 266 individuals were counted from the Segment 1 PV images;
- *Sertularia* hydroids were observed at 8 of the 12 stations with the highest faunal cover of 50 percent at station ECR-B-106 (Image 16);
- *Crepidula fornicata* beds were observed at 3 of the 12 stations with the highest faunal cover of 50 percent at station ECR-B-108. A total of 238 individual *Crepidula* live shells were counted from the Segment 1 PV images; and
- Other observed fauna included a single Ceriantharian burrowing anemone, two small attached anemones, a spider crab, a rock crab (*Cancer* sp.), isopods, a hermit crab, and a shrimp.

Image 14 Colonial tunicates encrusted on boulder and cobble (red arrows) at station ECR-A-101.

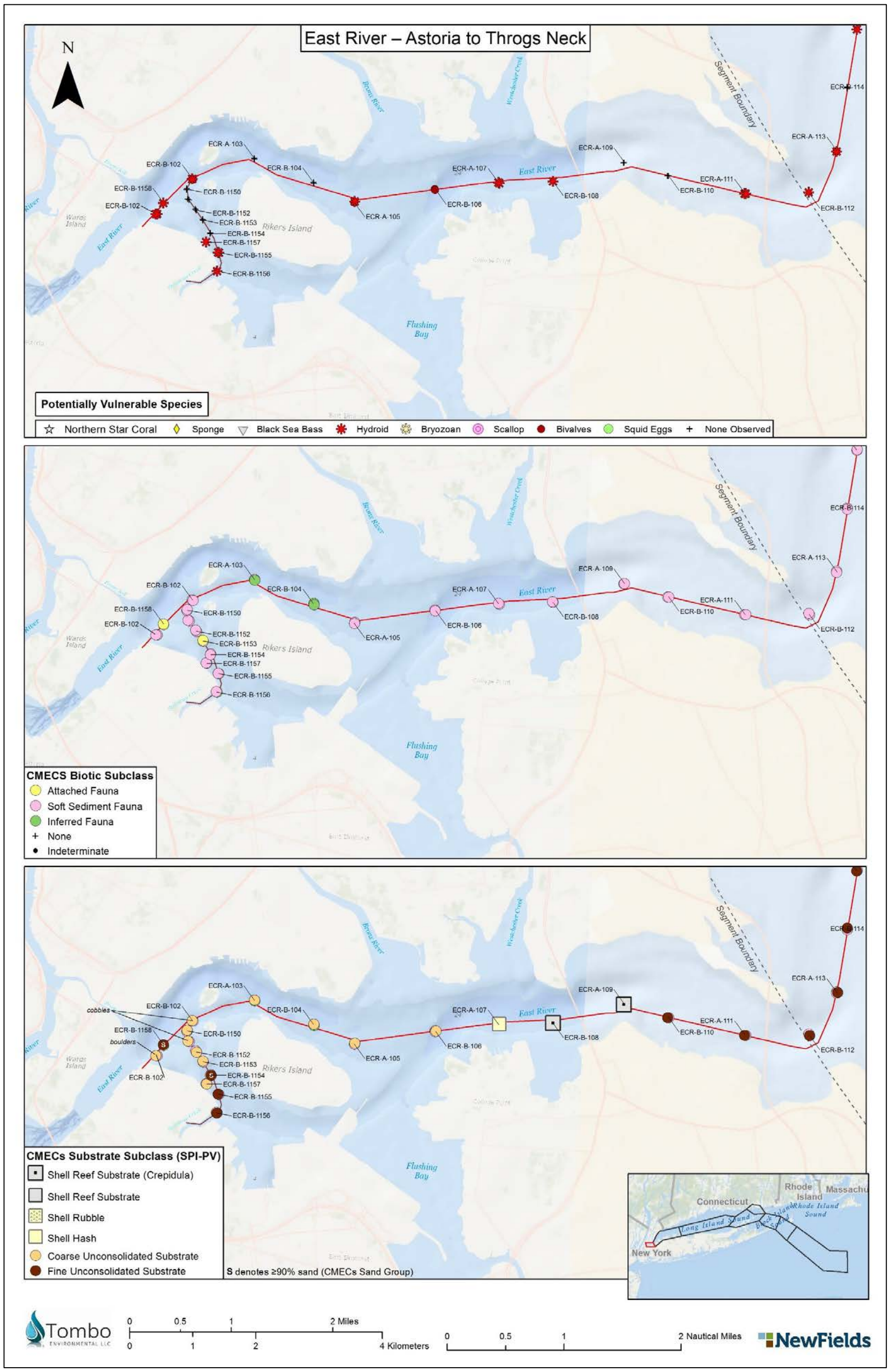


Figure 20 Plan View (PV) imaging results along Segment 1. Segment 1 stations are along the red line corridor west of the Segment Boundary.

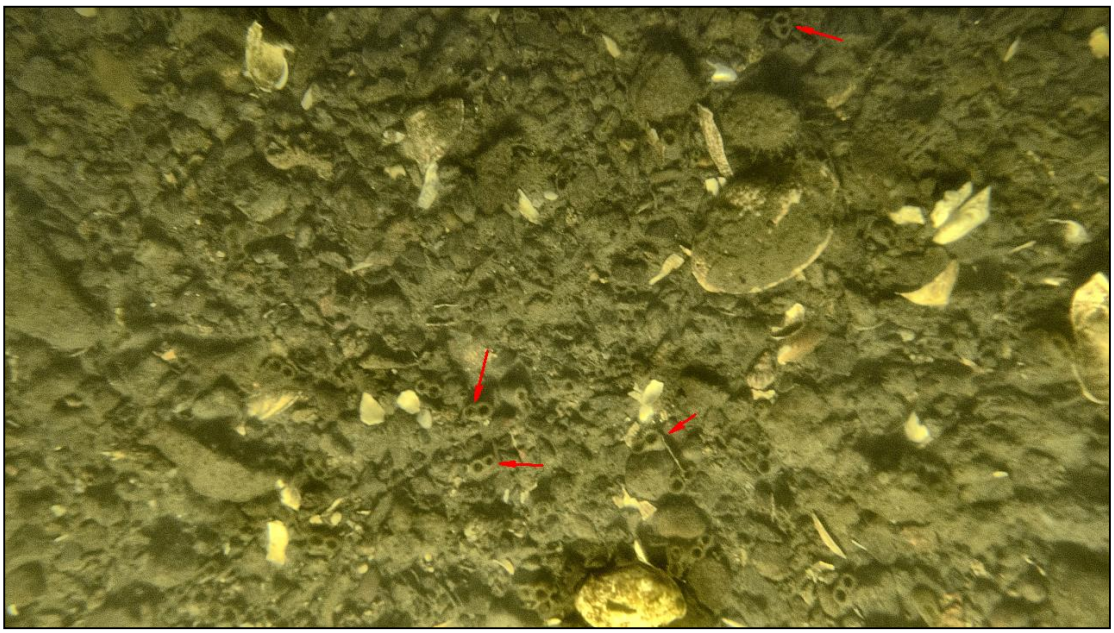


Image 15 Clam bed showing clam siphons (red arrows) at Segment 1 station ECR-A-103.

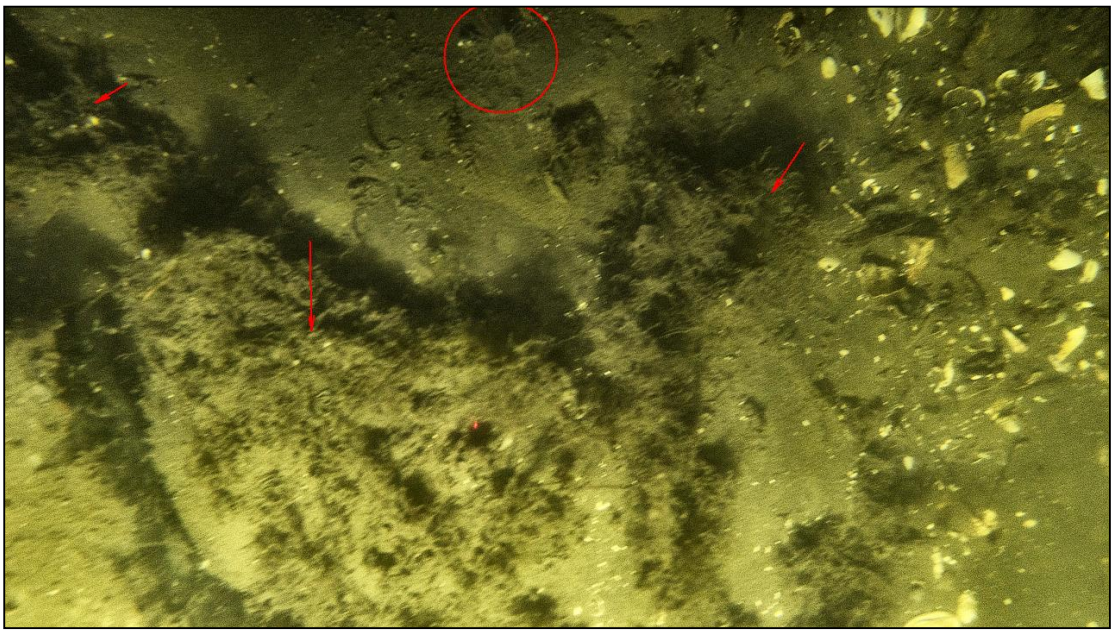


Image 16 Sertularia hydroids (arrows) and a single Ceriantharia burrowing anemone (red circle) at Segment 1 station ECR-A-107.

5.1.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

Bivalves were the most commonly observed organism that may be considered as a PVS found in the East River – Astoria to Throgs Neck Segment 1. The detection of bivalves present in sediments was limited to observations of the presence of inhaling and exhaling siphon openings at the sediment surface in PV images (Image 15) and it was not possible to identify the species from the exposed siphons alone. Therefore, it was not possible to determine if an observed bivalve was a commercially managed species such as the ocean quahog clam (Guida et al., 2017). The taxonomic data obtained from sieved sediment samples from nearby locations identified the razor clam (*Ensis directus*) and the clam *Eurytellina alternata*. The distribution of observed bivalves is plotted in Figure 20, PVS panel.

For purposes of this assessment, there were no PVS observed at Segment 1 stations.

5.1.7.4| NON-NATIVE TAXA

The only possible non-native species observed in Segment 1 was a colonial tunicate of the family Didemnidae (station ECR-B-101, Image 14). The observed tunicate could possibly be *Didemnum vexillum* a species thought to be native to Japan that has been reported from waters of the western North Atlantic.

5.1.8| CMECS CLASSIFICATIONS

5.1.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop /towed video camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. The Physiographic Setting, for Segment 1 within Long Island Sound, was classified as Sound.

Both Geoform Levels 1 and 2 were taken into account for the classifications of each station along the ECR, with modifications made in certain instances. The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and level 2 represents features smaller than 0.4 mi^2 (1 km^2). (Mittermayr, 2020).

Segment 1 had a flat overall seafloor topography consisting of unconsolidated substrate (ranging in size from silt to boulders) and stations were classified as Level 1 Flat geoform, a general term for a level (or nearly level) surface or area marked by little to no vertical relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

At the smaller scale (less than 0.4 mi^2 [1 km^2] in size), the Geoform Level 2 classification consisted of three categories. The first two categories are of geologic origin, and these included 1) Flat and 2) Boulder Field geoforms. The Flat geoform is as described above and was seen at 10 of the 19 stations in this segment. The second classification is the Boulder Fields geoform, observed at and applied to six stations in Segment 1, and described as an area dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. It should be noted that Boulder Fields classification is listed as a Level 1 Geoform, meant for regions greater than 1 km^2 in size. However, due to the relatively small scale at which video observations were made during the benthic study, it was deemed appropriate to apply the Boulder Field geoform

classification as Level 2 to best characterize the presence of boulders and boulder-composite substrates with hardbottom associated biological assemblages along the ECR, as observed within areas less than 0.4 mi^2 [1 km^2] in size.

The remaining three stations in this segment, located on the west side of the segment and generally close to shore have the Geoform Level 2 classification of Burrow/Bioturbation geoform of biogenic origin).

The Burrow/Bioturbation geoform consists of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna. Geoform classifications for the stations along Segment 1 are summarized and illustrated in Table 27 and Figure 21.

Table 27 Geoform components based on drop/towed video for Segment 1.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sound	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-B-1156, ECR-B-1157, ECR-B-1158
				Geologic	Boulder Field	ECR-B-1151, ECR-B-1153, ECR-C-1107, ECR-C-1108, ECR-C-1110, ECR-C-1113
					Flat	ECR-A-101-A, ECR-B-102, ECR-B-104, ECR-B-106, ECR-B-108, ECR-B-110, ECR-B-1150, ECR-B-1152, ECR-B-1154, ECR-1155

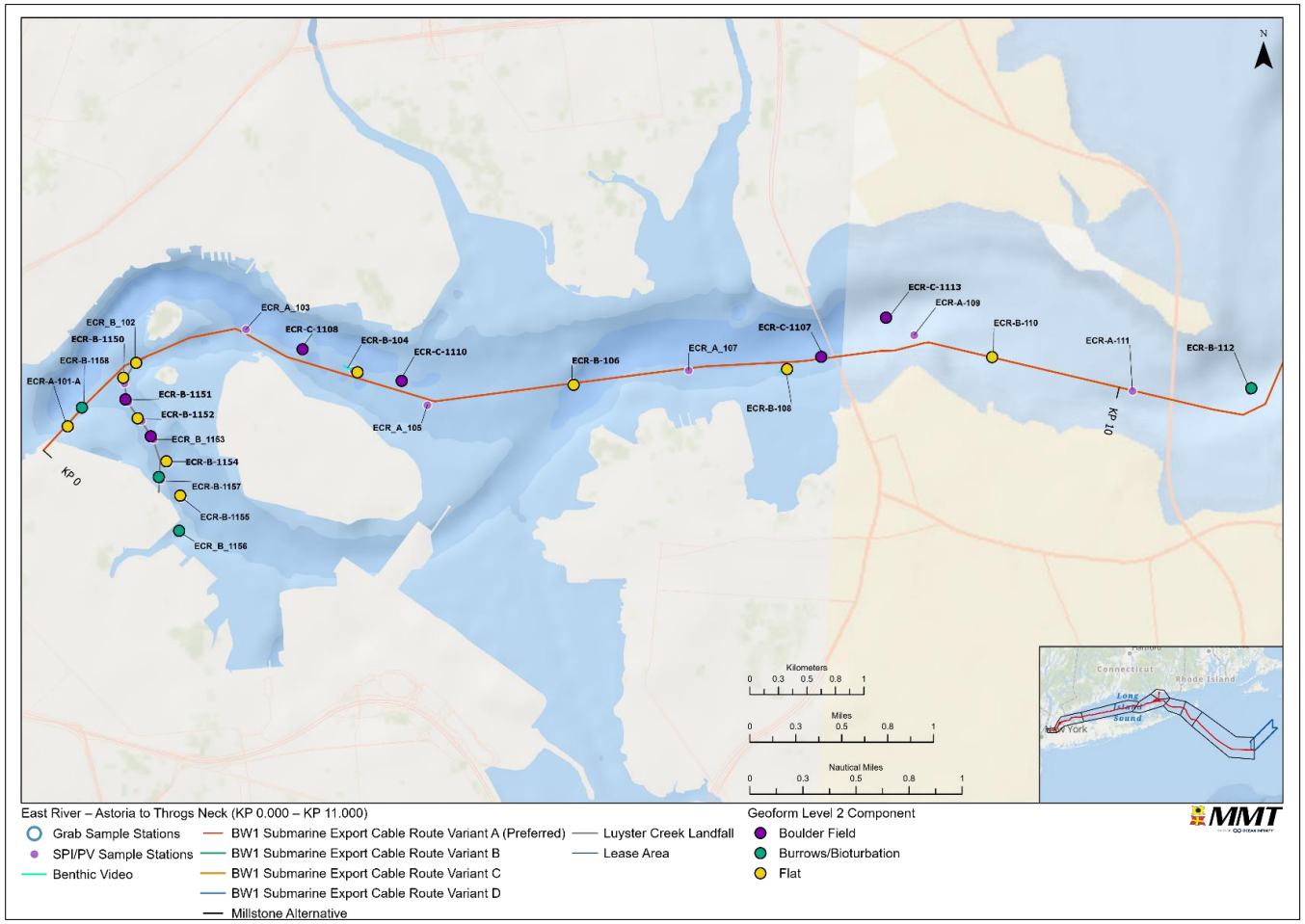


Figure 21 Overview of classified CMECS Geoform Level 2 Component based on drop/towed video along Segment 1.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/towed camera benthic video data (Table 28 and Figure 22). The entire Segment 1 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Thirteen (13) of the 19 stations in Segment 1 were associated with Soft Sediment Fauna (the same as those with the Burrows/Bioturbation and Flat Level 2 Geoform). There did not appear to be any dominant macrofauna at these stations.

The other six stations were classified as Attached Fauna that coinciding with stations classified as Boulder Field Level 2 Geoform. Attached Fauna was further categorized into the Biotic Group, Diverse Colonizers and Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders present: sponges, hydroids, bryozoans, tunicates, and occasionally northern star corals (*Astrangia poculata*). It is worth noting that the star coral was present on boulders at stations, ECR-C-1108 and ECR-C- 1113. Additional details are provided in Attachment B – Field Sampling Log.

Table 28 CMECS Biotic components based on towed video for Segment 1.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-A-101-A, ECR-B-102, ECR-B-104, ECR-B-106, ECR-B-108, ECR-B-110, ECR-B-1150, ECR-B-1152, ECR-B-1154, ECR-1155, ECR-B-1156, ECR-B-1157, ECR-B-1158
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-B-1151, ECR-B-1153, ECR-C-1107, ECR-C-1108, ECR-C-1110, ECR-C-1113

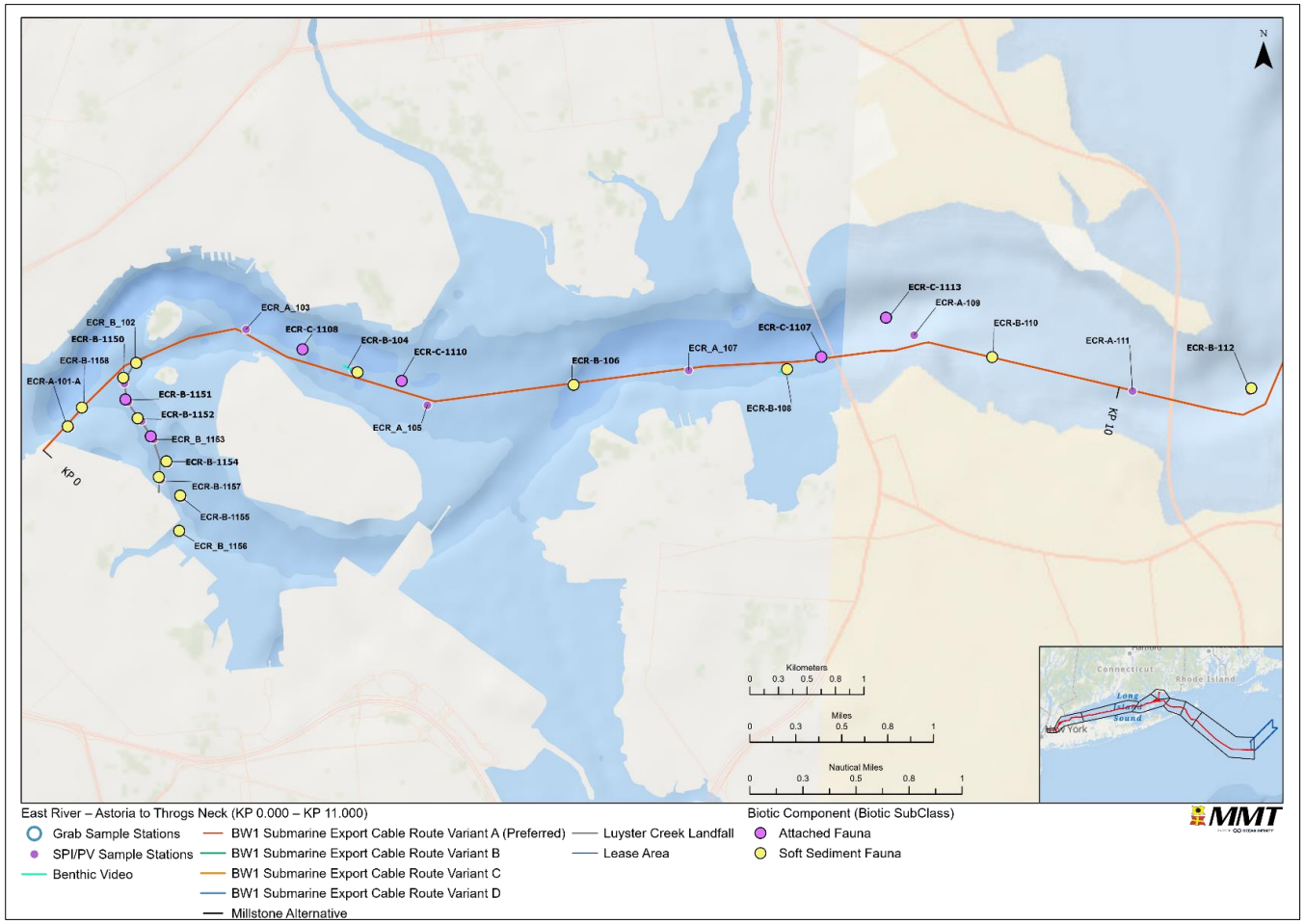


Figure 22 Overview of classified CMECS Biotic Component based on drop/towed video along Segment 1.

5.1.8.2| CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Fifteen (15) benthic grab stations were sampled along Segment 1 (including the Luyster Creek landfall corridor). Three stations (ECR-B-102, ECR-B-104 and ECR-B-1153) yielded no successful grabs after multiple attempts due to interference with cobble/gravel substrates. Therefore, rather than deriving their NMFS-modified CMECS substrate classifications from PSD data, the classifications for stations ECR-B-102, ECR-B-104 and ECR-B-1153 were derived from SPI and PV imagery – see Section 5.1.8.3 and Attachment F and Attachment G.

CMECS and NMFS-modified substrate classifications were derived from PSD results for 10 of 12 stations where benthic grab samples were successfully collected. After a review of benthic grab content imagery (Image 9), stations ECR-B-108 and ECR-B-1151 were determined to consist of substantial surficial (>50 percent) biogenic (shell) material and were therefore classified using grab sample content and grab-mounted video imagery rather than PSD data.

CMECS substrate component classifications for benthic grab stations sampled along Segment 1 (including the Luyster Creek landfall corridor) are presented in Table 29 and shown in Figure 23; NMFS-modified CMECS substrate component classifications are presented in Table 30 and shown in Figure 23. Benthic sampling stations within Segment 1 yielded benthic grab samples which contained biogenic (n=2), coarse unconsolidated (n=5) and fine unconsolidated (n=5) substrate types. Substrate types included Shell Rubble/Hash, Muddy Sandy Gravel, Gravelly Mud, Gravelly Muddy Sand and Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS) substrates (Image 9). There was no discernible spatial pattern concerning the distribution of course vs. fine substrates along Segment 1.

Coarse unconsolidated substrates and biogenic substrates are considered indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. Grab samples obtained at seven sampled stations were identified as consisting of coarse unconsolidated or biogenic substrates. Coarse unconsolidated Gravel Mixes and Gravelly substrates contained primarily pebble/granule as the gravel component. Samples taken from the other five (5) sampled stations consisted of fine unconsolidated substrates which are typically indicative of soft-bottomed habitats (NOAA Fisheries 2021).

a. Shell (*Crepidula*) Rubble/Hash (ECR-B-108)	b. Shell (Mussel) Hash (ECR-B-1151)	c. Gravelly Mud (ECR-B-1156)
d. Muddy Sandy Gravel (ECR-B-1150)	e. Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS; ECR-B-1154)	f. Slightly Gravelly Sandy Mud (CMECS)/Sandy Mud (NMFS-modified CMECS; ECR-B-1155)

Image 17 Grab content images showing representative substrate types encountered at benthic grab sampling stations along Segment 1.

Table 29 CMECS substrate component classifications for benthic grab stations sampled along Segment 1. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: alternate Luyster Creek landfall corridor stations are denoted with blue shading).

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	**Substrate Class**	**Substrate Subclass**	**Substrate Group**	**Substrate Subgroup**
ECR-B-108	Biogenic	Shell	Shell Rubble/Hash[1]	*Crepidula* Rubble/Hash[1]	N/A
ECR-B-1151	Biogenic	Shell	Shell Hash	Mussel Hash	N/A
ECR-B-1151-QC	Biogenic	Shell	Shell Hash	Mussel Hash	N/A
ECR-B-1150	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel
ECR-B-1156	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-101-A	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-1152	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-1157	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-106	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-110	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-1154	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-1158	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-1155	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud

[1] Substrate subclass and group modified to better convey the substrate present. N/A: Not Applicable; QC: Quality Control.

Table 30 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 1. Substrate classifications are grouped by substrate origin/class or subclass separated by horizontal grey bars. Note: Luyster Creek landfall corridor stations are denoted with blue shading).

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-108	Shell	Shell Rubble/Hash[1]	N/A	N/A	N/A
ECR-B-1151	Shell	Shell Hash	N/A	N/A	N/A
ECR-B-1151-QC	Shell	Shell Hash	N/A	N/A	N/A
ECR-B-1150	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	Granule/Pebble
ECR-B-1156	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-101-A	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-1152	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-1157	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-106	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-110	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-1154	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-1158	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-1155	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A

[1] Substrate subclass modified to better convey the substrate present. N/A: Not Applicable; QC: Quality Control.

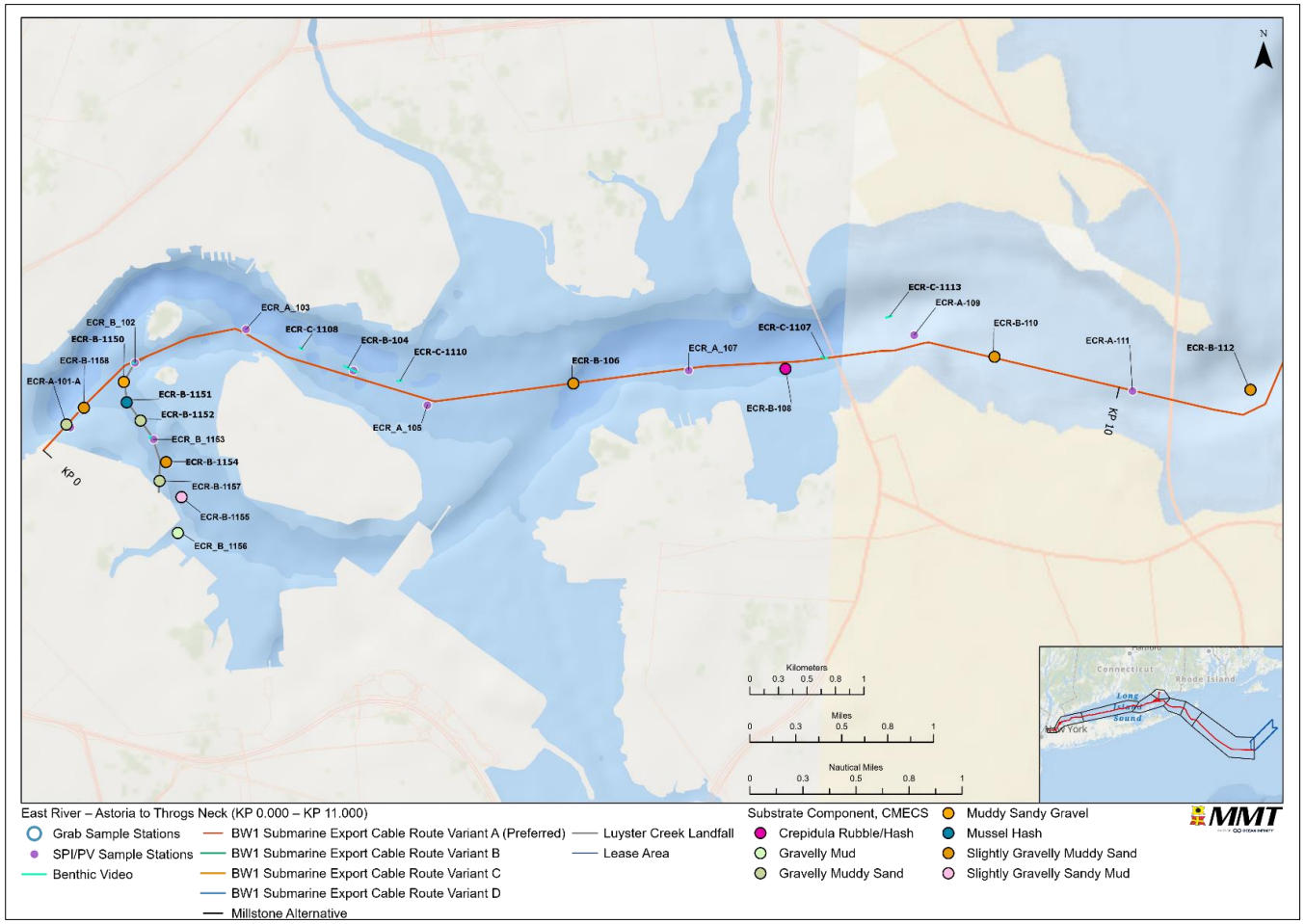


Figure 23 CMECS substrate component classifications for benthic grab stations sampled along Segment 1.

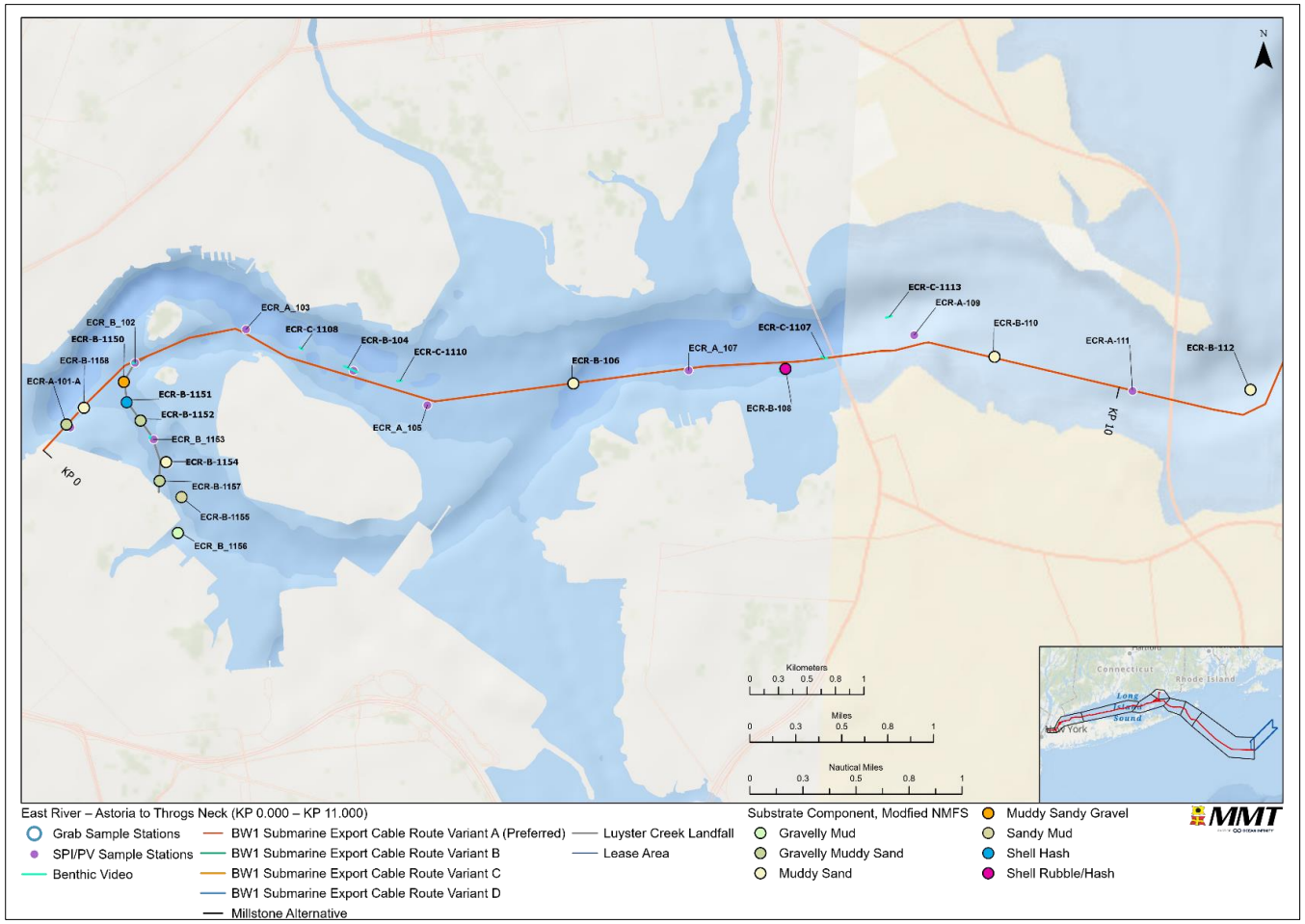


Figure 24 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 1.

5.1.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). CMECS Unconsolidated Mineral Substrate was present at nine of the 12 Segment 1 stations while the CMECS Shell Substrate class type was observed at three of the 12 stations (Table 31).

Segment 1 was composed of 25 percent CMECS Fine Unconsolidated Substrate subclass (Table 31). CMECS Fine Unconsolidated Substrate was composed of medium sand, and sandy mud. Fine Unconsolidated Substrate was observed nearshore Luyster Creek, within the alternate landfall corridor, centrally at ECR-B-106 and along the eastern end of Segment 1 (Figure 20, CMECS Substrate Subclass panel) (Table 31).

CMECS Coarse Unconsolidated Substrate subclass was observed at six of the 12 Segment 1 stations (50 percent) (Table 31 and Figure 20, CMECS Substrate Subclass panel). Individual boulders were observed at station ECR-B-101 (Table 31) on a bed of fine muddy sand and cobbles.

CMECS Shell Reef Substrate subclass, *Crepidula* Reef Substrate group was observed at two Segment 1 stations (ECR-B-108 and ECR-A-109) on each side of the Whitestone Bridge (Figure 20, CMECS Substrate Subclass panel). CMECS Shell Hash subclass was observed at one of the 12 Segment 1 stations.

Table 31 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 1.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	9	75%	Fine Unconsolidated Substrate	3	25%	Sand	1	8%	Fine/Very Fine Sand	0	0%
									Medium Sand	1	8%
									Very Coarse/Coarse Sand	0	0%
						Muddy Sand	0	0%	--	--	--
						Sandy Mud	2	17%	--	2	17%
						Mud		0%	--	--	--
			Coarse Unconsolidated Substrate	6	50%	Gravels	2	17%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	2	17%
									Gravel Pavement	0	0%
						Gravel Mixes	3	25%	Sandy Gravel	1	8%
									Muddy Sandy Gravel	1	8%
									Muddy Gravel	1	8%
						Gravelly	1	8%	Gravelly Sand	1	8%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	3	25%	Shell Reef Substrate	2	17%	*Crepidula* Reef Substrate	2	17%	--	2	17%
			Shell Rubble	0	0%	--	--	--	--	--	--
			Shell Hash	1	8%	--	1	8%	--	1	8%

5.1.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Soft Sediment Fauna subclass biotic component was observed at 11 of the 12 Segment 1 stations and Attached Fauna subclass was observed at the other Segment 1 station. The Soft Sediment Fauna subclass stations featured burrowing and attached anemones, clam beds, *Sertularia* beds, and *Crepidula* reefs. The CMECS Attached Fauna subclass stations featured *Metridium* anemone communities and Didemnidae colonial tunicates (Attachment G-1 and Figure 20, CMECS Biotic Subclass panel).

No CMECS Aquatic Vegetation Class or Inferred Fauna subclass biotic component were observed in Segment 1.

5.2| LONG ISLAND SOUND - THROGS NECK TO EATONS NECK

Segment 2 includes sampling stations along the BW1 Variant A submarine export cable corridor from Throgs Neck to Eatons Neck and includes additional stations along an alternate Variant B route north of Variant A (Figure 25).

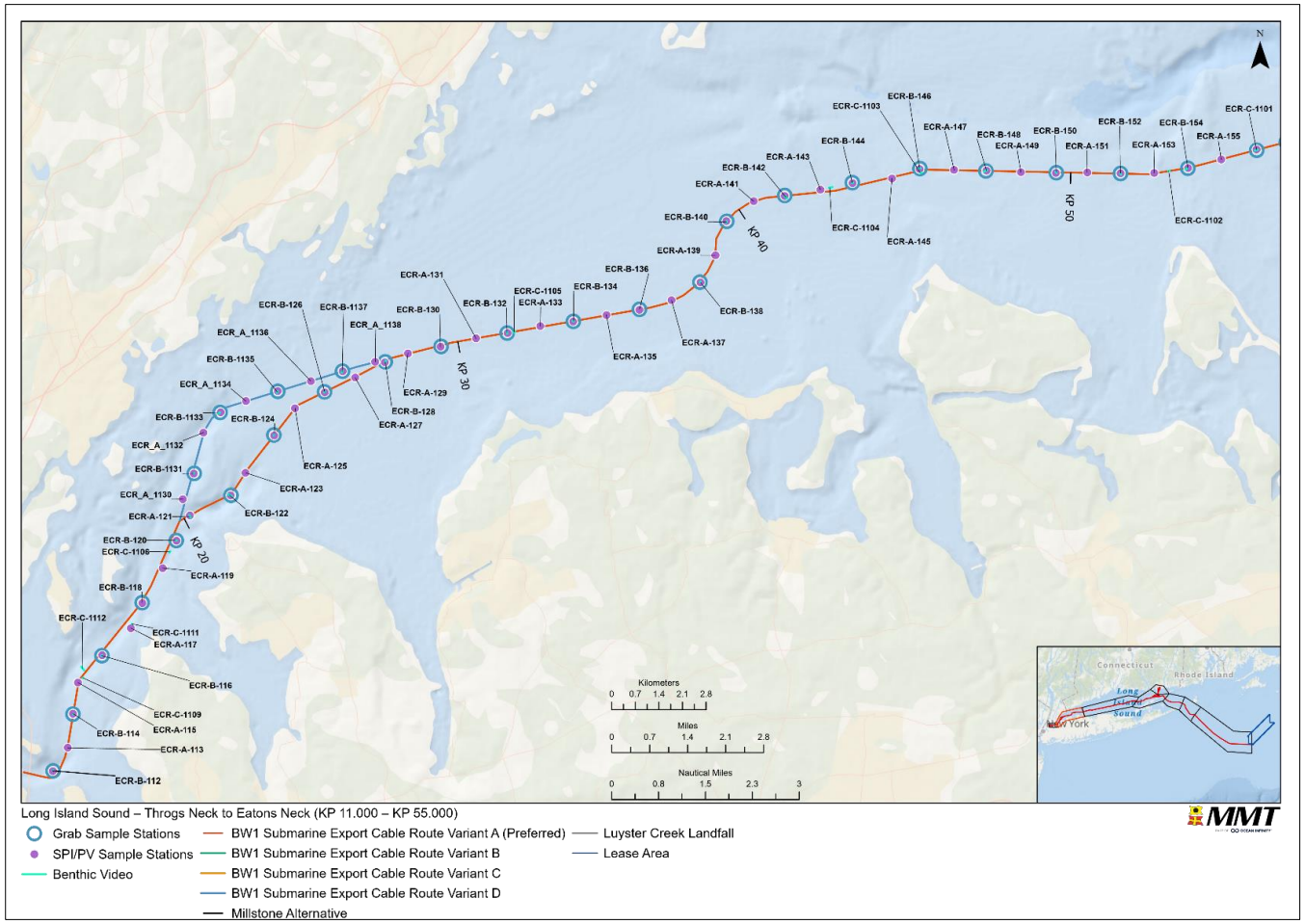


Figure 25 Overview of the Segment 2 sampling stations.

5.2.1| BENTHIC VIDEO

The Long Island Sound Throgs Neck to Eatons Neck Segment 2 seabed along the corridor within Segment 2 was characterized by a range of substrates, from fine sandy silt to coarser sand substrate, with areas of cobble and boulder present. There were areas of concentrated shells (some consisting of *Crepidula* spp., shell fragments and shell hash). There were also areas of fine sediments observed where bioturbation, in the form of tracks and burrows, was evident and included the presence of tube-building amphipods and polychaetes, and *Chaetopterus* polychaete tubes protruding from the sediment. The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitats are provided in Image 19 , Image 19 and Image 20.

No consolidated hard substrates were observed within Segment 2. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately (3.3 ft) 1 m within the water column.

Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed along Segment 2. Observed macroinvertebrates included various mollusks - slipper snails (*Crepidula* spp.*),* whelks (*Busycotypus* sp. and/or *Busycon* spp.); some crustaceans including hermit crabs (*Pagurus* spp.), mantis shrimp (*Squilla empusa*), and blue crabs (*Calinectes sapidus*); and the horseshoe crab (*Polyphemus limulus*). Observed attached taxa included bryozoans, colonial tunicates, hydroids, and various sponges. The northern star coral (*Astrangia poculata*) was observed growing on boulders at six stations: ECR-A-121,ECR-B-122, ECR-B-146, ECR-B-148, ECR-B-150, and ECR-C-1133.

Image 18 Representative image from Segment 2 displaying a boulder with attached epifauna including the bright white northern star coral (Astrangia poculata).

Image 19 Representative image from Segment 2 displaying a scup (Stenotomus chrysops) visible over sand sediment where bioturbation (in the form of tracks and depressions) is evident.

Image 20 Representative image from Segment 2 displaying fine sand bottom with a protruding polychaete tube where bioturbation (tracks and depressions) is evident.

5.2.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 2 are provided in Attachment B. Twenty-five (25) of the 27 Segment 2 benthic grab stations yielded sediment samples. Benthic grab samples were not attempted at station ECR-B-121 due to the presence of boulders and hard coral and not successful at ECR-B-154 due to fouling of the grab from cobble substrate.

Twenty-three of the 25 benthic sampling stations had sediment with a distinctive odor (Attachment B). The distinctive odor detected in some samples is the result of some anoxic sediment with subtle pungency differences due to the composition of the sediment primarily the amount of organic material; note that description of odor and degree of pungency is subjective.

Anthropogenic debris was not observed in any of the Segment 2 benthic grabs. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of ≥2.8 in (7 cm).

Several grabs were observed to contain shell and shell fragments (Attachment B; Image 21) and others lacked notable surficial features (Image 22).

Image 21 Representative surficial grab sample from station ECR-B-142 displaying intact slipper snails (Crepidula spp.) shells and shell fragments in silty sand.

Image 22 Representative surficial grab sample from station ECR-B-144 displaying medium to fine sand with some shell fragments.

5.2.3| PARTICLE SIZE DISTRIBUTION

A total of 25 sediment samples from Segment 2 stations as shown in Figure 25 were analyzed for PSD; additional QC sediment samples were collected at two stations. The PSD for these sediment samples is based on the Wentworth scale (Table 21), as presented in Table 32 for Segment 2. All 25 samples collected in this Segment had some type of gravel – combined Pebbles or Granules. Samples from 19 stations had a gravel component greater than 5 percent; 11 of these stations had samples with a total gravel fraction of 10 percent or more.

Five (5) of the 25 stations had sediment compositions that were predominantly sand (>50 percent), of which 2 stations, ECR-B-144 and ECR-B-146, exceeded 75 percent total sand. Sixteen (16) of the 25 stations had combined Silt and Clay fractions that exceeded 50 percent of the sediment composition for those stations, of which two (2) stations exceeded 75 percent, ECR-B-118, and ECR-B-1135. The Silt and Clay fraction at the Segment 2 stations ranged from 6.5 to 79.6 percent.

To aid in the NMFS-modified CMECS classification, the total gravel, total sand, and silt + clay was calculated and are presented in Figure 26 and Figure 27.

Numerous stations in Segment 2 had a majority silt + clay fraction, but there was no clear spatial pattern associated with these high amounts of silt and clay. Figure 26 and Figure 27 illustrate the TOC results, as more thoroughly presented in Section 5.2.4, relative to the percentage of total gravel, total sand, and silt + clay. A general correlation between increased TOC levels and greater percent fine fraction of silt and clay was evident.

Table 32 Percentages of particle size classes according to Wentworth (1922) from Segment 2. Note: stations within the Variant D corridor offline of the Variant A submarine export cable corridor are shaded in blue. Grayed columns show where sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-112	--	--	--	1.6	1.6	7.8	7.4	11	17.8	8.3	52.3	27.5	18.6	46.1
ECR-B-114	--	--	2.4	3.2	5.6	4.1	2.4	1.8	3.7	12.4	24.4	58.4	11.6	70.0
ECR-B-116	--	--	3.1	7.6	10.7	7.6	3	2.2	2.4	5.5	20.7	55.2	13.4	68.6
ECR-B-118	--	--	0.9	6.7	7.6	5.2	2.9	2.4	1.5	2.7	14.7	59.3	18.4	77.7
ECR-B-120-QC	--	--	0.7	12.6	13.3	18	10.7	5.7	2.8	3	40.2	36.7	9.8	46.5
ECR-B-120	--	--	4.9	15.9	20.8	30.2	6.1	3.7	1.7	1.6	43.3	24.3	11.6	35.9
ECR-B-122	--	--	3.7	24.3	28.0	21.2	11.7	5.7	3.5	3.7	45.8	19.8	6.4	26.2
ECR-B-124	--	--	4.4	18	22.4	17.4	6.8	4.8	3.4	4.8	37.2	35	5.4	40.4
ECR-B-126	--	--	2.1	12.2	14.3	19.4	11.2	6.2	3.9	4.3	45.0	32.2	8.5	40.7
ECR-B-128	--	--	1.6	11.9	13.5	14.2	10	6.1	3.1	1.7	35.1	42.6	8.8	51.4
ECR-B-130	--	--	1.8	12.9	14.7	9.7	6	3.6	2.8	2.4	24.5	52.8	8	60.8
ECR-B-132	--	--	8.3	9.8	18.1	7.1	4.6	3.2	2.8	3.2	20.9	52.9	8.1	61.0
ECR-B-134	--	--	0.6	5	5.6	8.7	6.1	5.4	4.1	3.5	27.8	54.8	11.8	66.6
ECR-B-136	--	--	3.4	8.5	11.9	7.1	5.7	10.2	9.2	2.1	34.3	44.2	9.6	53.8
ECR-B-138	--	--	2.2	10.5	12.7	9.9	6.5	5.5	4	2.7	28.6	45.8	12.9	58.7
ECR-B-140	--	--	0.9	3.4	4.3	7.1	7	8.3	7.6	3.2	33.2	51.3	11.2	62.5
ECR-B-140-QC	--	--	0.7	4.1	4.8	9	7.3	8.7	7.9	3.4	36.3	45.8	13.1	58.9
ECR-B-142	--	--	2.6	2.6	5.2	7.1	30.9	22.8	3.4	2.2	66.4	24.7	3.7	28.4
ECR-B-144	--	--	0.7	1.9	2.6	3.7	7.8	49.4	23.8	6.2	90.9	5.4	1.1	6.5
ECR-B-146	--	--	0.7	0.6	1.3	1.8	6.3	32.4	37	3.6	81.1	14.5	3.1	17.6
ECR-B-148	--	--	--	4	4.0	8.6	6.8	9.9	7.6	4.3	37.2	45.8	13	58.8
ECR-B-150	--	--	0.8	8.5	9.3	11.2	10.8	7.8	4.7	3.8	38.3	40.8	11.6	52.4
ECR-B-152	--	--	0.1	1.3	1.4	3.1	9.6	25.2	22.3	6.7	66.9	25.4	6.3	31.7
ECR-B-1131	--	--	0.3	9.5	9.8	10.9	5.6	2.4	1.6	1.2	21.7	58.3	10.2	68.5

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-1133	--	--	3.4	3	6.4	8.3	7.1	6.9	6.8	1.6	30.7	51.4	11.5	62.9
ECR-B-1135	--	--	-- (0.100)	1.1	1.1	7.9	5.8	2.9	1.5	1.2	19.3	62.9	16.7	79.6
ECR-B-1137	--	--	16.8	10.9	27.7	7.9	4.3	2.1	1.3	1.6	17.2	46.5	8.6	55.1

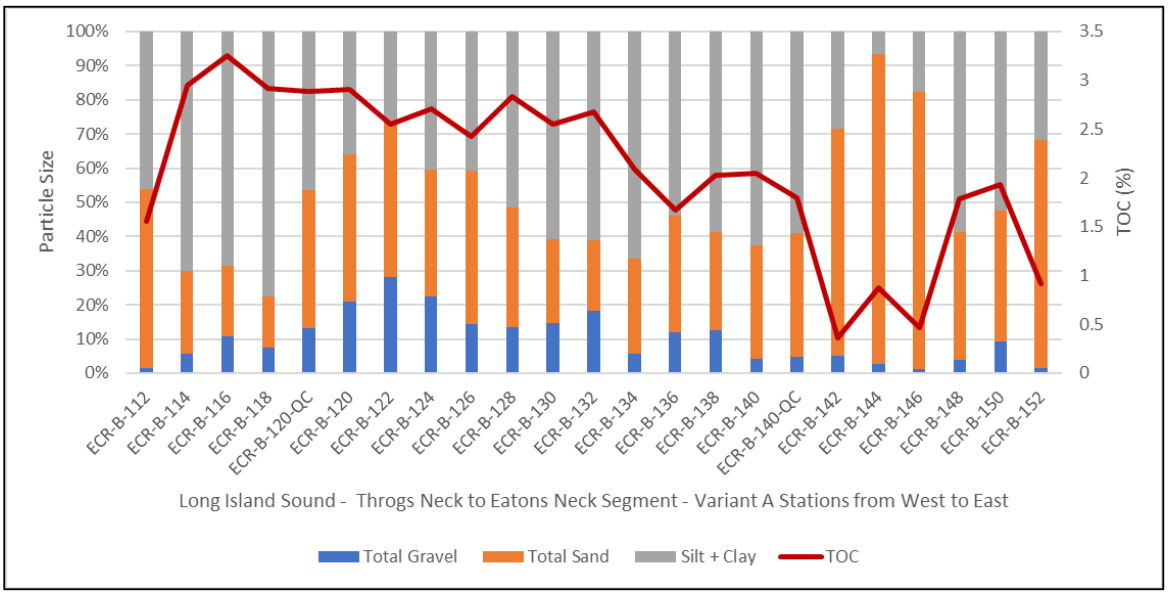


Figure 26 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples collected at Segment 2 stations within the Variant A corridor presented West to East.

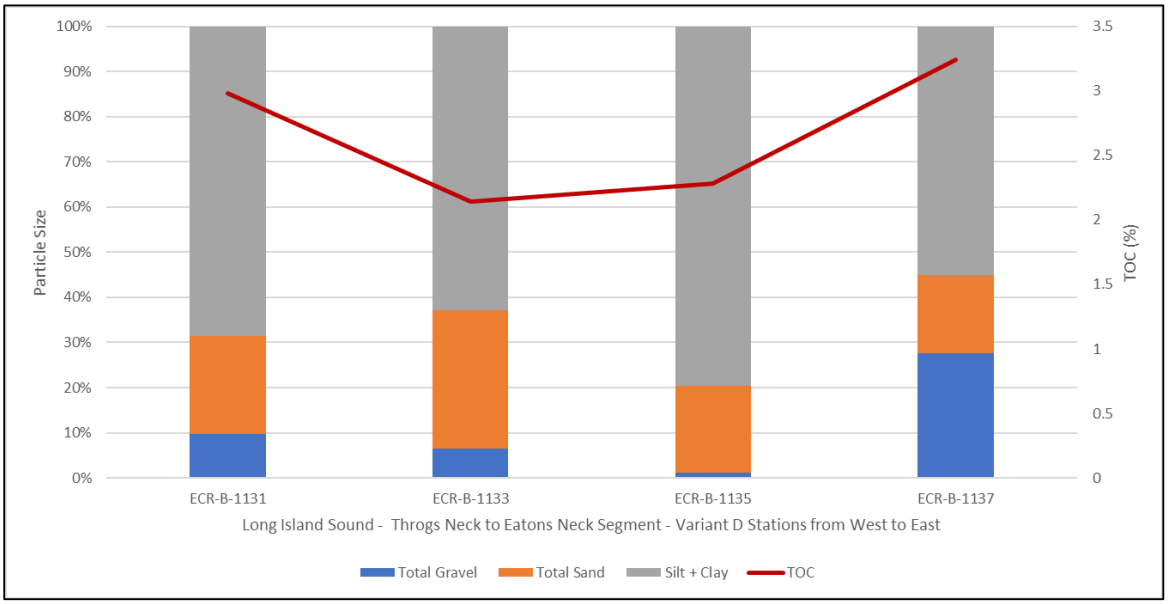


Figure 27 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples collected within the Variant D corridor presented West to East.

5.2.4| TOTAL ORGANIC CARBON

Sediment TOC concentrations (exclusive of QC replicates) from benthic grab stations along Segment 2 were within the general expected range of 0.36 to 3.25 percent (mean: 2.17 percent; SE: 0.16; Table 33). Mean sediment TOC concentration in Segment 2 was substantially higher than the mean TOC concentration (0.83 percent) for all sampled stations within the study area.

Table 33 Total organic carbon (TOC) concentrations from benthic grab stations along Segment 2, including the Variant D corridor (shaded in blue).

Station	TOC (percent)
ECR-B-101-A	0.78
ECR-B-106	0.49
ECR-B-112	1.55
ECR-B-114	2.95
ECR-B-116	3.25
ECR-B-118	2.92
ECR-B-120	2.91
ECR-B-120-QC	2.89
ECR-B-122	2.55
ECR-B-124	2.71
ECR-B-126	2.43
ECR-B-128	2.83
ECR-B-130	2.55
ECR-B-132	2.68
ECR-B-134	2.09
ECR-B-136	1.67
ECR-B-138	2.03
ECR-B-140	2.05
ECR-B-140-QC	1.80
ECR-B-142	0.36
ECR-B-144	0.88
ECR-B-146	0.47
ECR-B-148	1.79
ECR-B-150	1.93
ECR-B-152	0.92
ECR-B-1131	2.98
ECR-B-1133	2.14
ECR-B-1135	2.28
ECR-B-1137	3.24

5.2.5| INFAUNA FROM GRAB SAMPLES

Sixteen (16) of the 25 successful benthic grab samples were selected for infaunal analyses. These 16 Segment 2 stations sampled along Segment 2 yielded 2,391 individuals and 107 total infauna taxa from nine phyla: Annelida, Arthropoda, Chordata, Cnidaria, Hemichordata, Mollusca, Nemertea, Platyhelminthes, and Sipuncula. A total of 64 taxa were identified to species level another 43 to LPIL.

5.2.5.1 | BIOMASS

Biomass was measured for 10 taxonomic classes of infauna present in the samples. Total infauna biomass for the 16 sampling stations was 131 g. The mean biomass per station was (8.7 g ±21.7 SD). Bivalvia contributed 85.8 percent of the total biomass sampled.

Most of this biomass was concentrated at a single station (ECR-B-126), which yielded most of this total (84.9 g) due to two large quahogs *Mercenaria mercenaria* in the sample. Five of the 10 classes including Bivalvia, Gastropoda, Polychaeta, Malacostraca (amphipods), and Nemertea *incertae sedis*, collectively accounted for approximately 99 percent of the total infauna biomass in the samples (Table 34). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 28. Polychaeta biomass exhibited a uniform pattern over stations of Segment 2 with no aggregation observed. Gastropod and Malacostraca biomass were both higher near the eastern end of Segment 2 (ECR-B-142).

Table 34 Summary Statistics for infauna biomass collected Segment 2.

Class	Total (g)	Percent	Mean	SD
Bivalvia	112.50	85.75	7.031	21.050
Gastropoda	8.01	6.11	0.501	1.692
Polychaeta	6.03	4.60	0.377	0.262
Malacostraca	3.91	2.98	0.244	0.765
Nemertea *incertae sedis*	0.61	0.46	0.038	0.144
Sipunculidea	0.03	0.02	0.002	0.005
Anthozoa	0.03	0.02	0.002	0.004
Holothuroidea	0.02	0.02	0.002	0.006
Enteropneusta	0.02	0.02	0.001	0.004
Platyhelminthes (all Classes)	0.02	0.01	0.001	0.002

SD = Standard deviation.

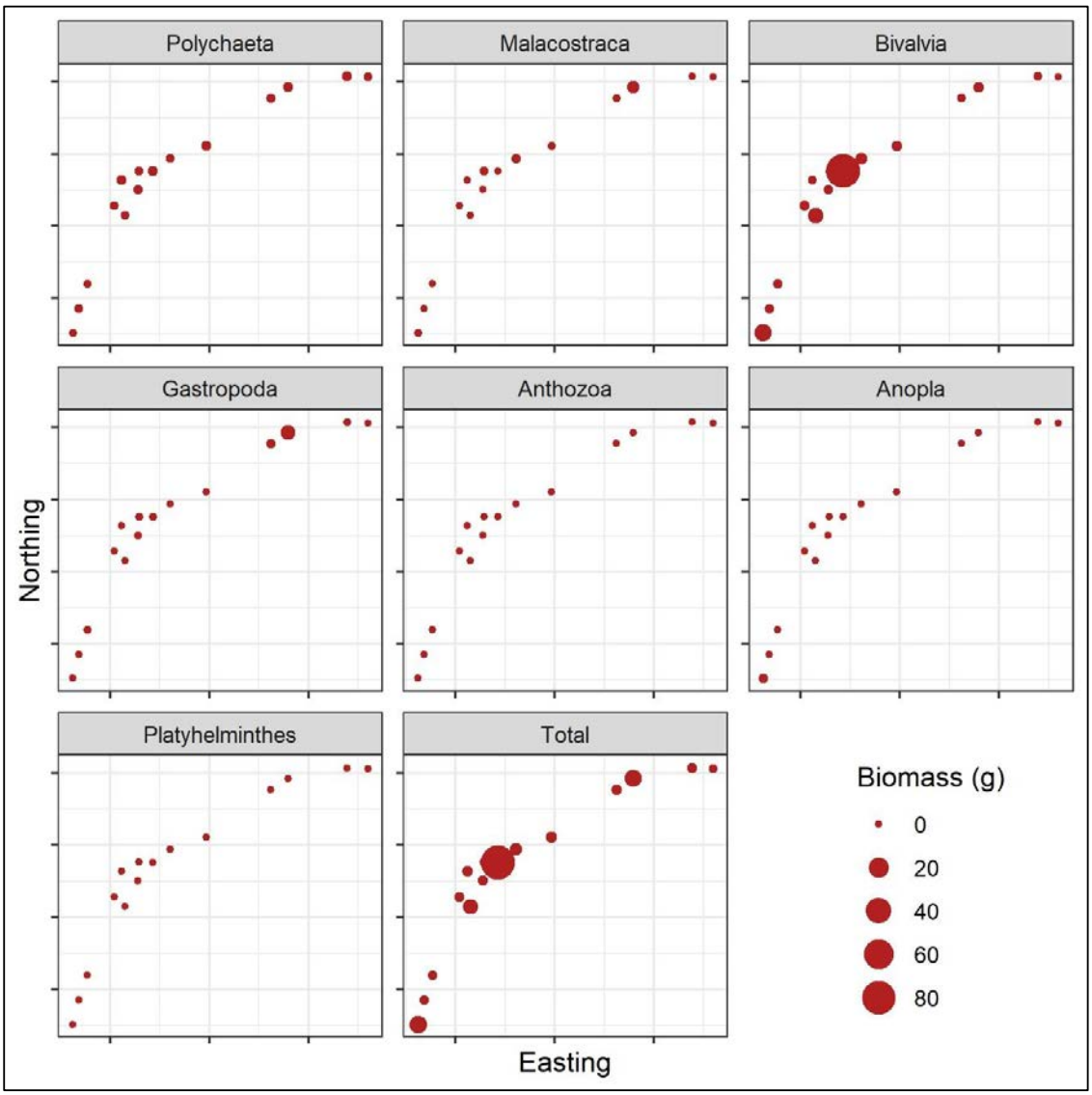


Figure 28 Biomass (g) of infauna organisms plotted along Segment 2.

5.2.5.2| UNIVARIATE STATISTICAL ANALYSES

Species level identifications included 1,426 individuals or 62.2 percent of the 2,291 total. All diversity indices were calculated using the data set with species level identifications. Diversity indices varied little across sample positions Figure 29. The number of species per sample averaged 14.9 and ranged from 7 to 27. Margalef's species richness (d) values ranged from 2.3 to 6.3; diversity (H') ranged from 1.7 to 2.8; Fisher's alpha ranged from 6.1 to 19.8. Evenness measured with Pielou's J was high across all stations averaging 0.93 ranging from 0.87 to 0.96.

The ten most abundant species sampled along Segment 2 are listed in Table 35. These species collectively account for 80.0 percent of the Segment 2 infauna abundance. Numerically dominant species include four polychaete annelids, four arthropods, and two mollusks. The most abundant species, *Nucula proxima* (bivalve mollusk), *Tharyx acutus* (polychaete worm), *Glycinde multidens* (polychaete worm), and *Pectinaria gouldii* (polychaete worm) accounted for 23.9 percent, 16.8 percent, and 11.5 percent, and 7.3 percent of the 1,426 individuals, respectively. Spatial patterns of abundance for these ten taxa are shown in Figure 30.

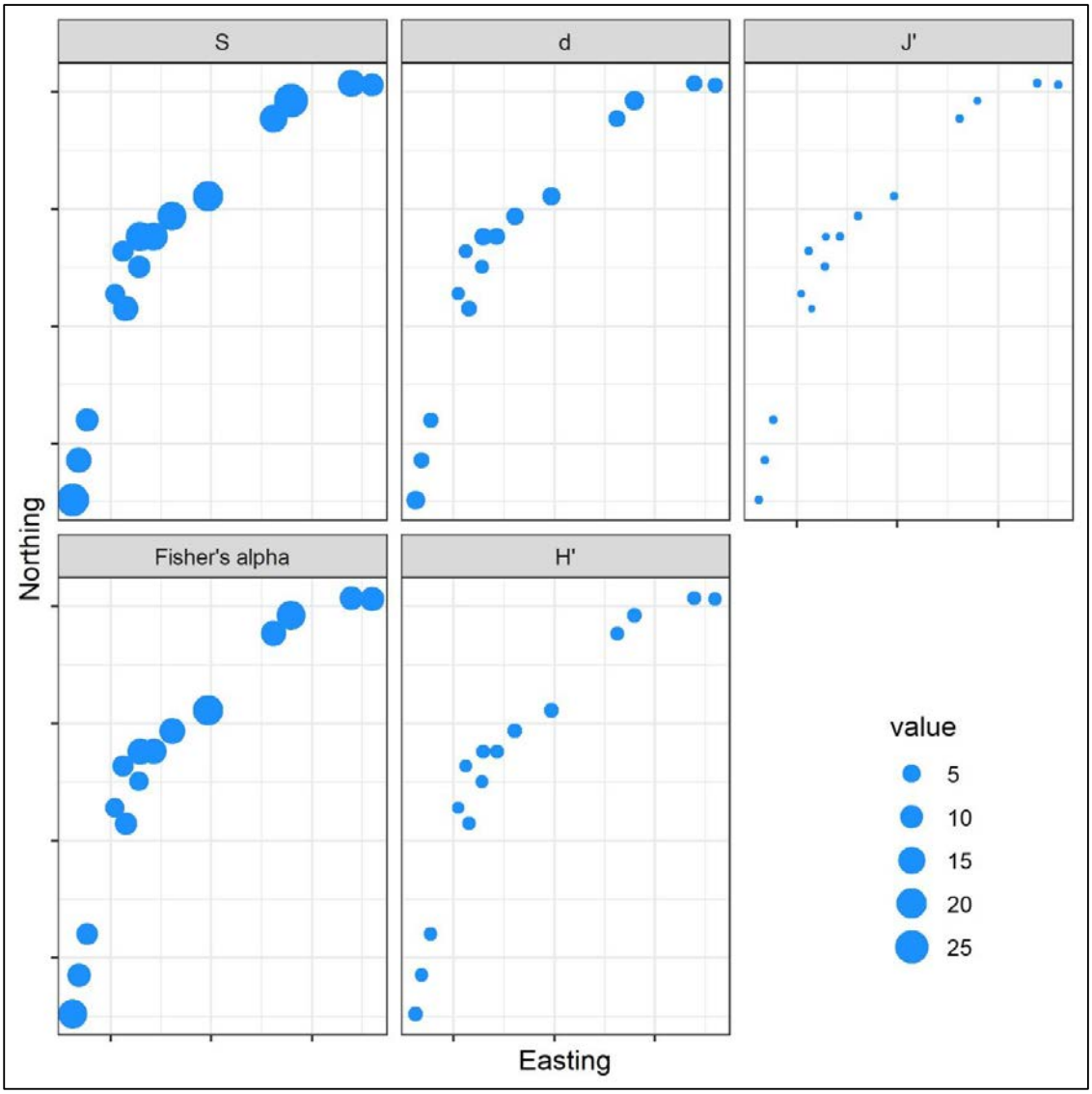


Figure 29 Number of taxa (S), Margalef's species richness (d), Fisher's alpha, evenness (J'), and species diversity (H') plotted along Segment 2.

Table 35 Numerically dominant species collected in grab samples from Segment 2 based on data set with species level identifications from 16 stations.

Phylum	Species	Number of Individuals	Percent of Total Individuals	Station Occurrence
Mollusca	*Nucula proxima*	358	23.5	14
Annelida	*Tharyx acutus*	239	15.7	7
Annelida	*Glycinde multidens*	175	11.5	15
Annelida	*Pectinaria gouldii*	107	7.03	13
Nemertea	*Tubulanus* sp. A	101	6.64	13
Annelida	*Levinsenia gracilis*	60	3.94	6
Mollusca	*Acteocina candei*	54	3.55	11
Annelida	*Nephtys incisa*	42	2.76	12
Annelida	*Streblospio benedicti*	41	2.7	4
Annelida	*Macoma tenta*	36	2.37	9

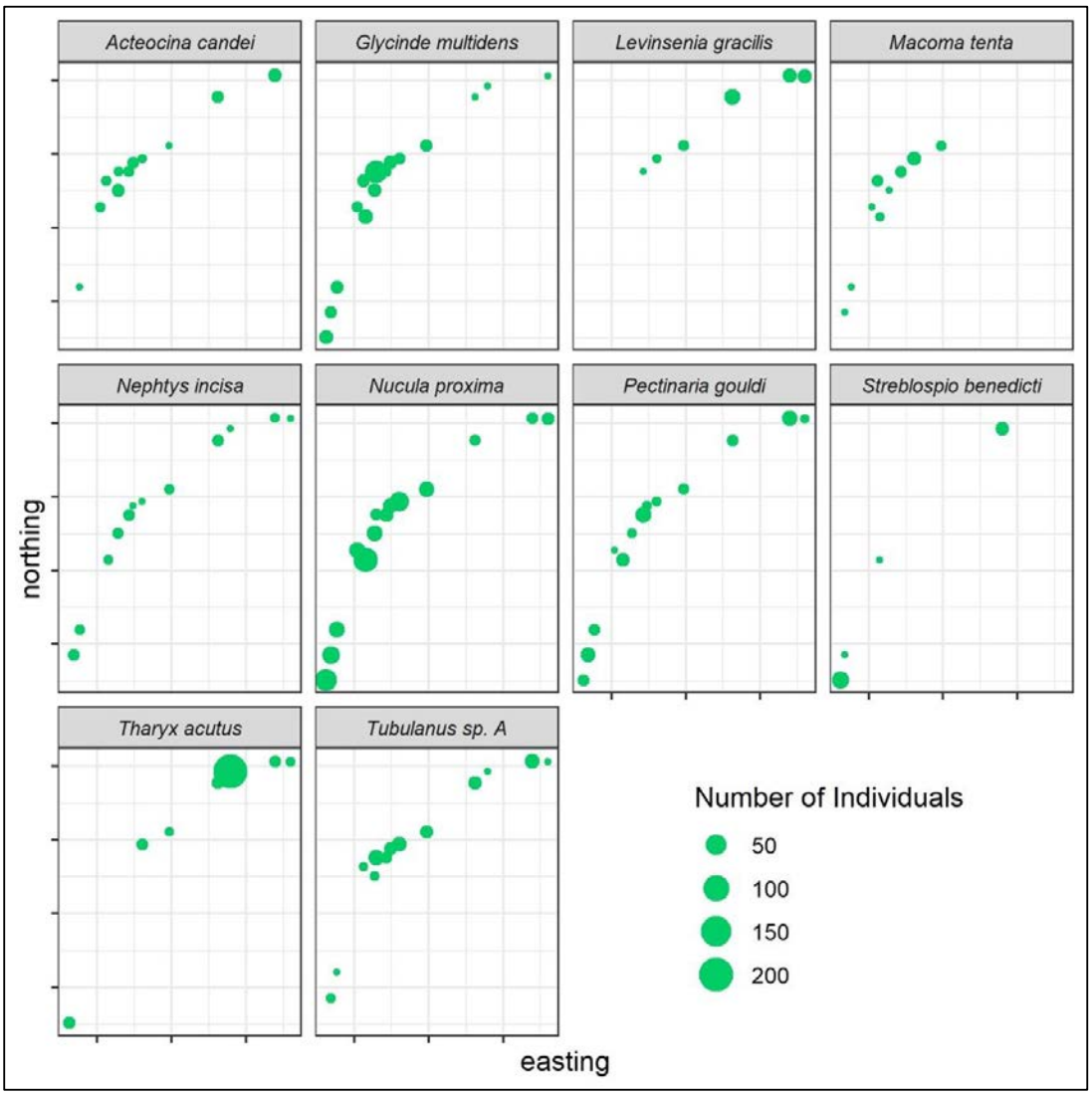


Figure 30 Numbers of individuals of the ten most abundant species in the samples plotted along Segment 2.

5.2.5.3| MULTIVARIATE STATISTICAL ANALYSES

Species composition was similar among most samples with 13 of the 16 stations forming a statistically similar group (Group c) Figure 31. Species contributing to the similarity within this group include *Nucula proxima*, *Pectinaria gouldii*, and *Glycinda multidens*. Another group (Group a) composed of two stations was characterized by the polychaetes *Tharyx acutus* and *Streblospio benedicti.* Group b was an outlier consisting of a single station. Group b was distinguished from the other groups by presence and abundance of the amphipod *Parametopella cypris*, the polychaete worm *Glycinde multidens,*.and the nemertean worn *Tubulanus* sp. A.

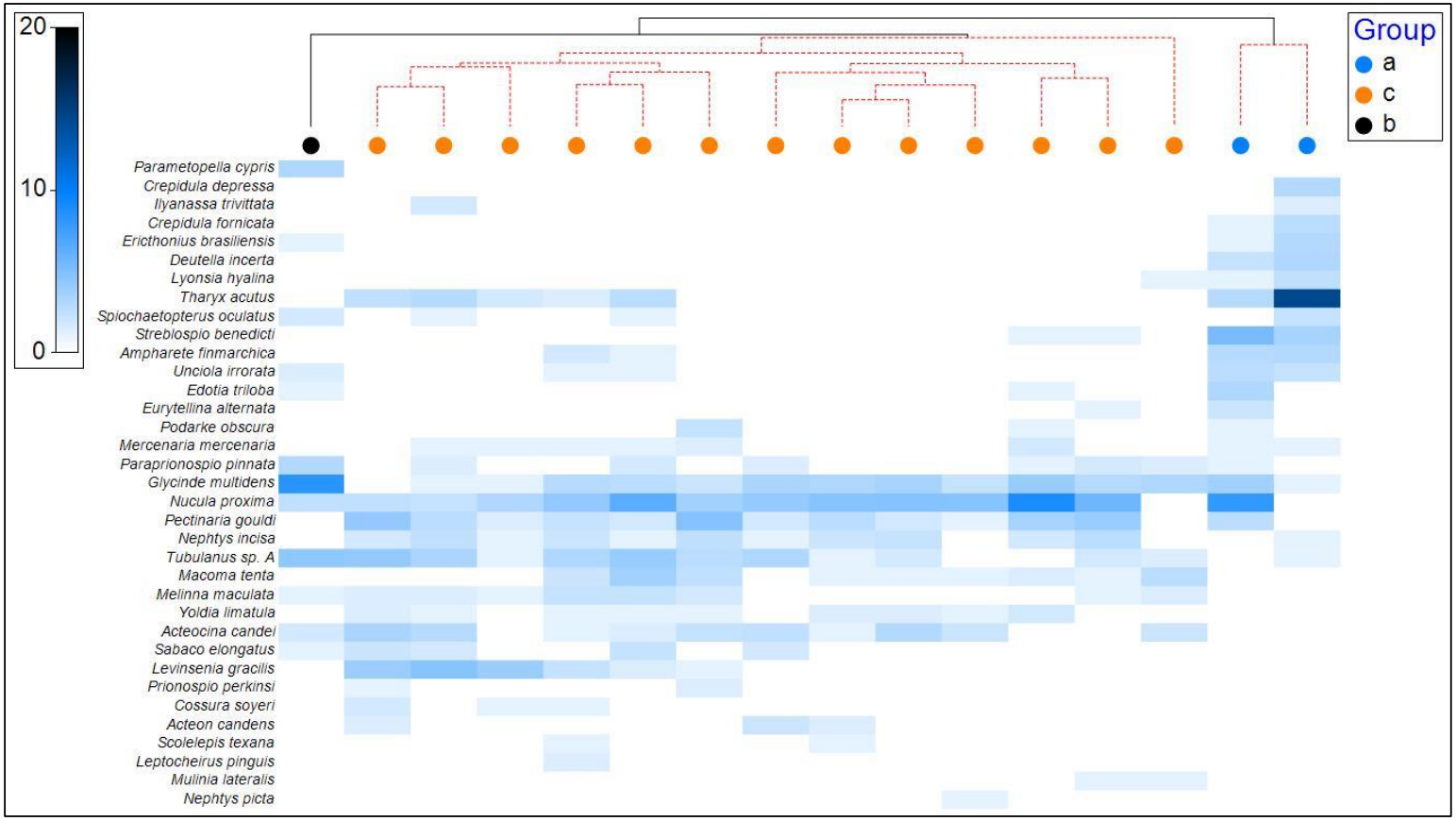


Figure 31 Results of normal cluster analysis of Segment 2 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in the Segment 2 samples.

5.2.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

NMDS ordination displayed Group c as separate from the other sampling stations corroborating the pattern revealed by the SIMPROF test (Figure 32). The vectors for sedimentary variables overlying the NMDS plot indicate percent gravel and TOC were associated with samples in SIMPROF Group c on the right side of the plot. Percent gravel was not significantly correlated (R^2=0.17, p>0.05) but TOC was (R^2=0.68, p<0.05) indicating higher TOC concentrations in Group c samples (>2%). The vector for percent sand indicated Group a samples were significantly correlated (R^2=0.46, p<0.05) with higher percent sand (> 50%) (Figure 32). Group b was not associated with any of the sedimentary variables.

A plot of the SIMPROF groupings, based on infauna species composition, at the station coordinates showed the Group c assemblage covering most of Segment 2 (Figure 33). This spatially consistent assemblage composition results from the relatively uniform fine sediments that characterize Segment 2.

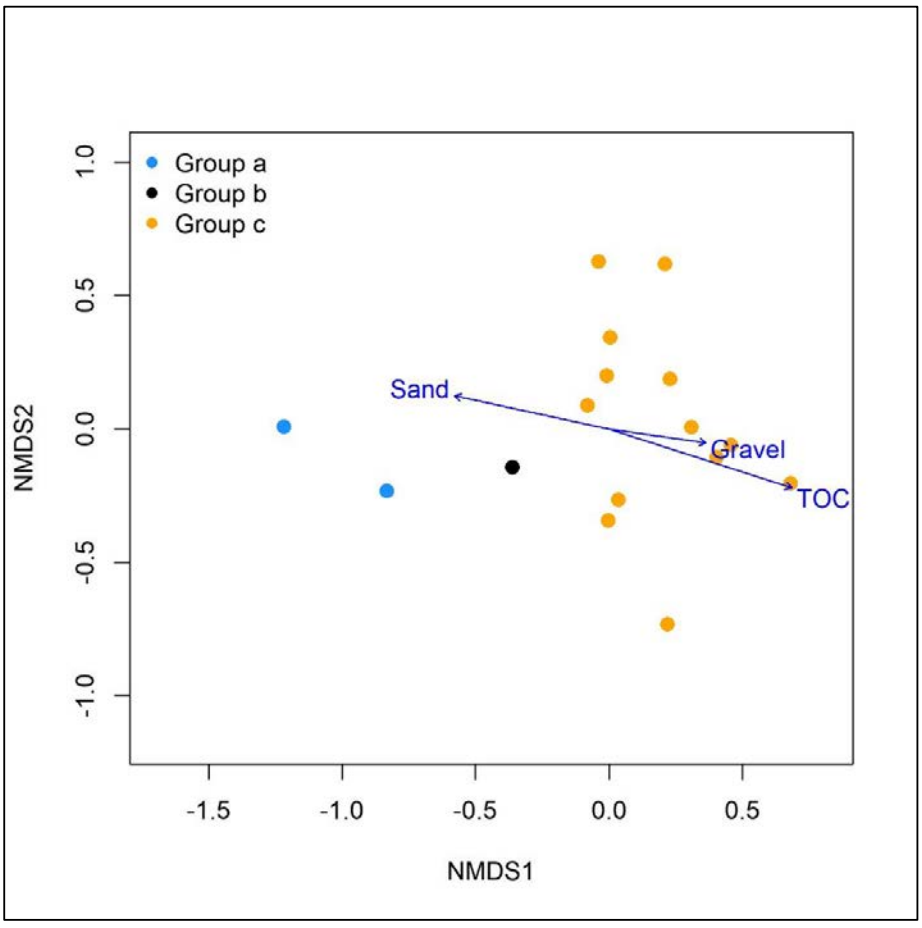


Figure 32 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand and gravel; and TOC (total organic carbon) in the samples.

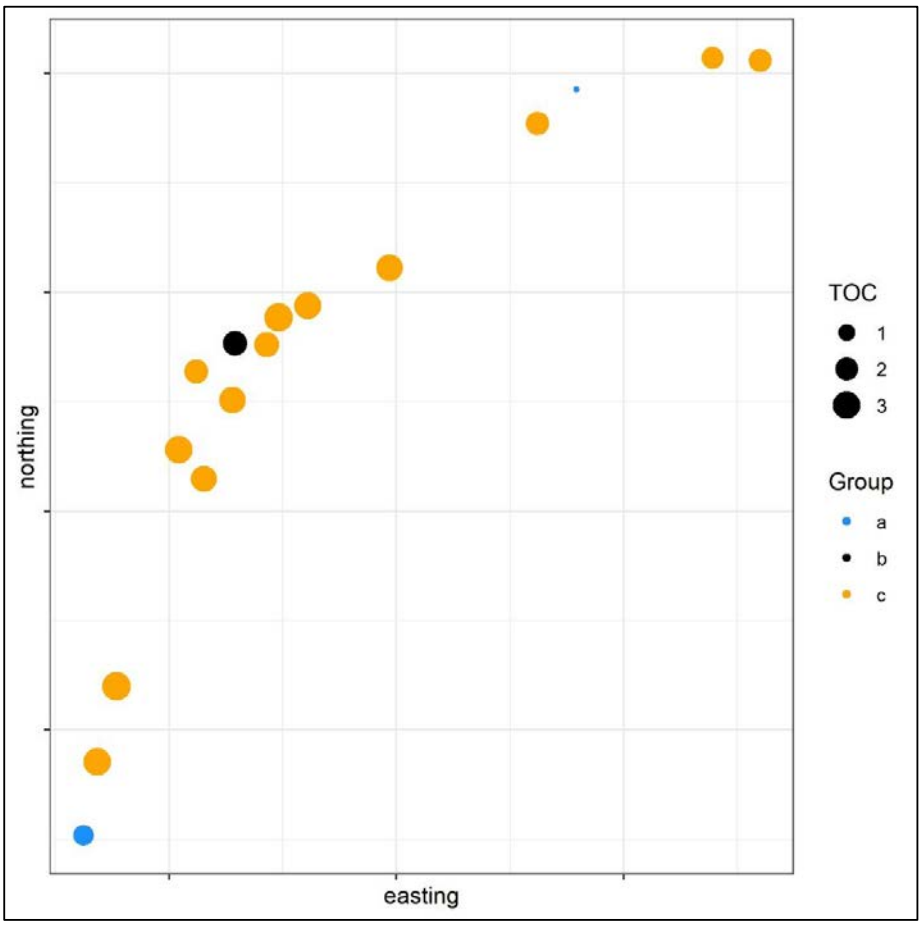


Figure 33 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 2. The size of the symbols is proportional to total organic carbon (TOC) levels (percent weight).

5.2.6| SPI RESULTS

SPI images were collected at a total of 44 stations along Segment 2. The results for the SPI image analysis are found in Attachment H. The SPI sampling parameters for Segment 2 are plotted in Figure 34 (grain size, penetration, and surface boundary roughness) and Figure 35 (aRPD, infauna succession, and organism sediment index).

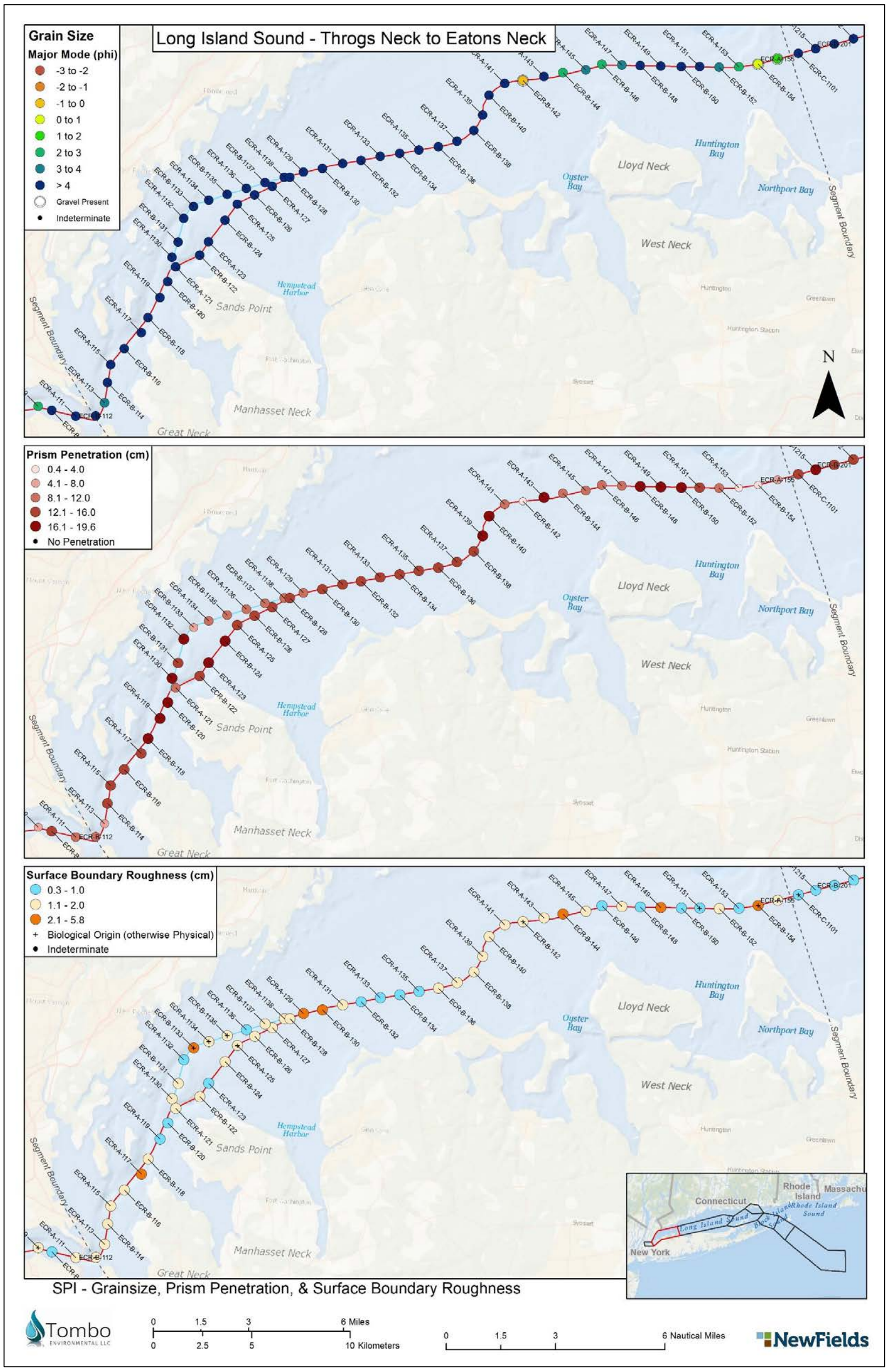


Figure 34 Sediment Profile Imaging (SPI) results for grain size, prism penetration, and surface boundary roughness along Segment 2. Segment 2 stations are along the red line corridor between the Segment Boundaries.

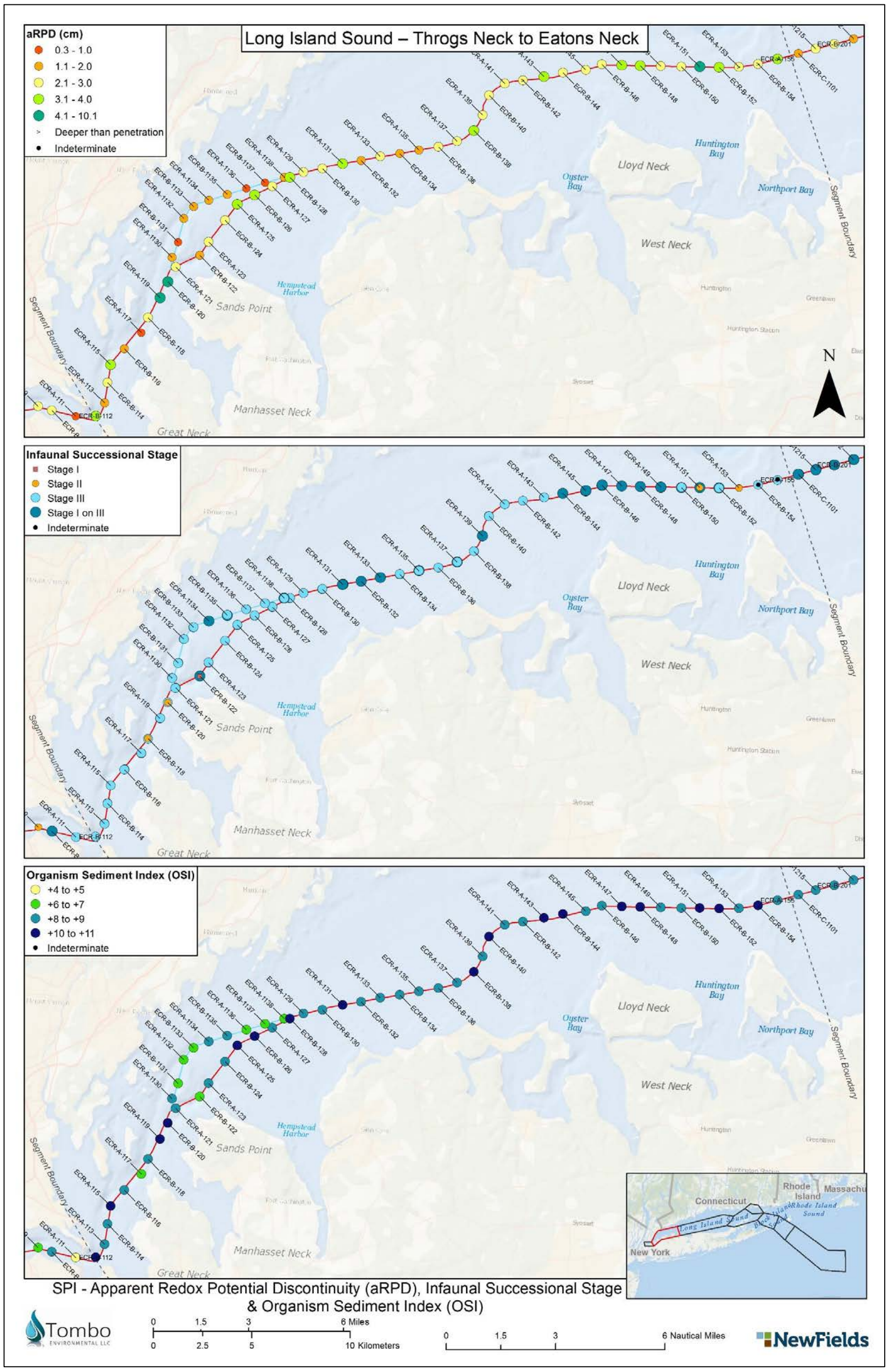
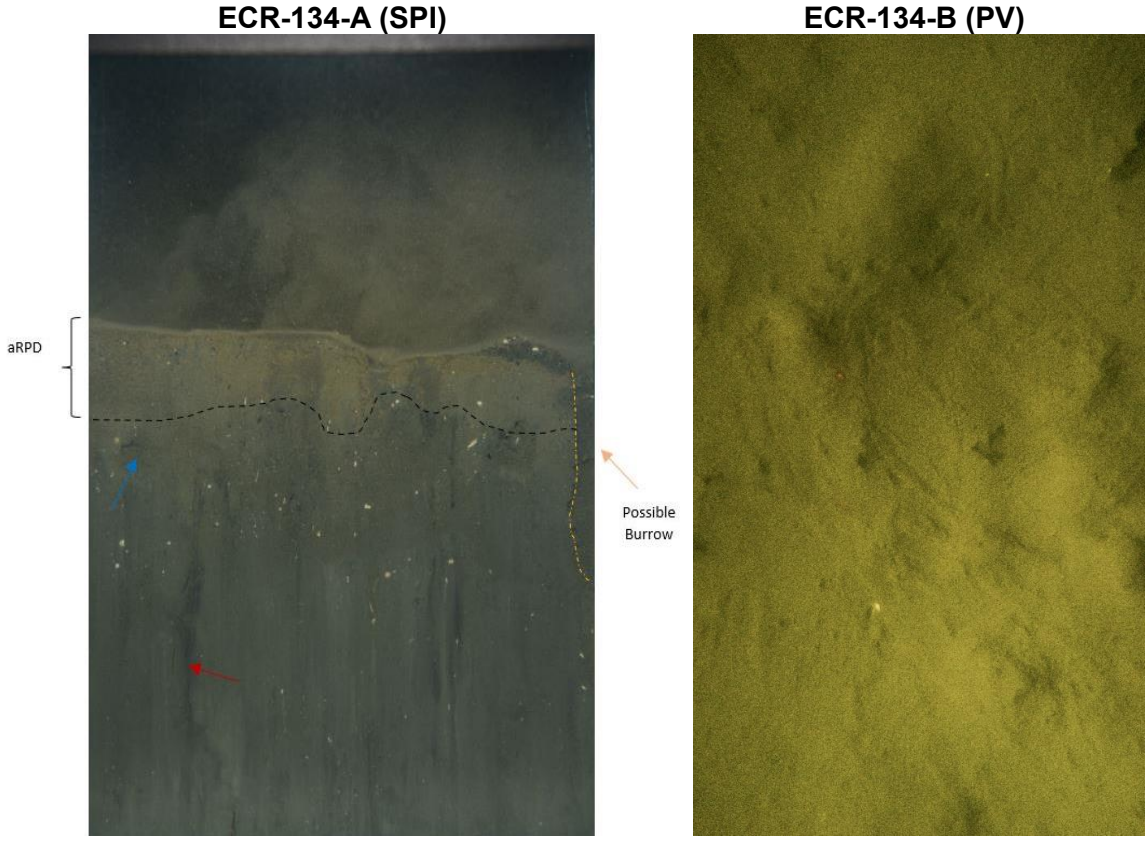


Figure 35 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 2. Segment 2 stations are along the red line corridor between the Segment Boundaries.

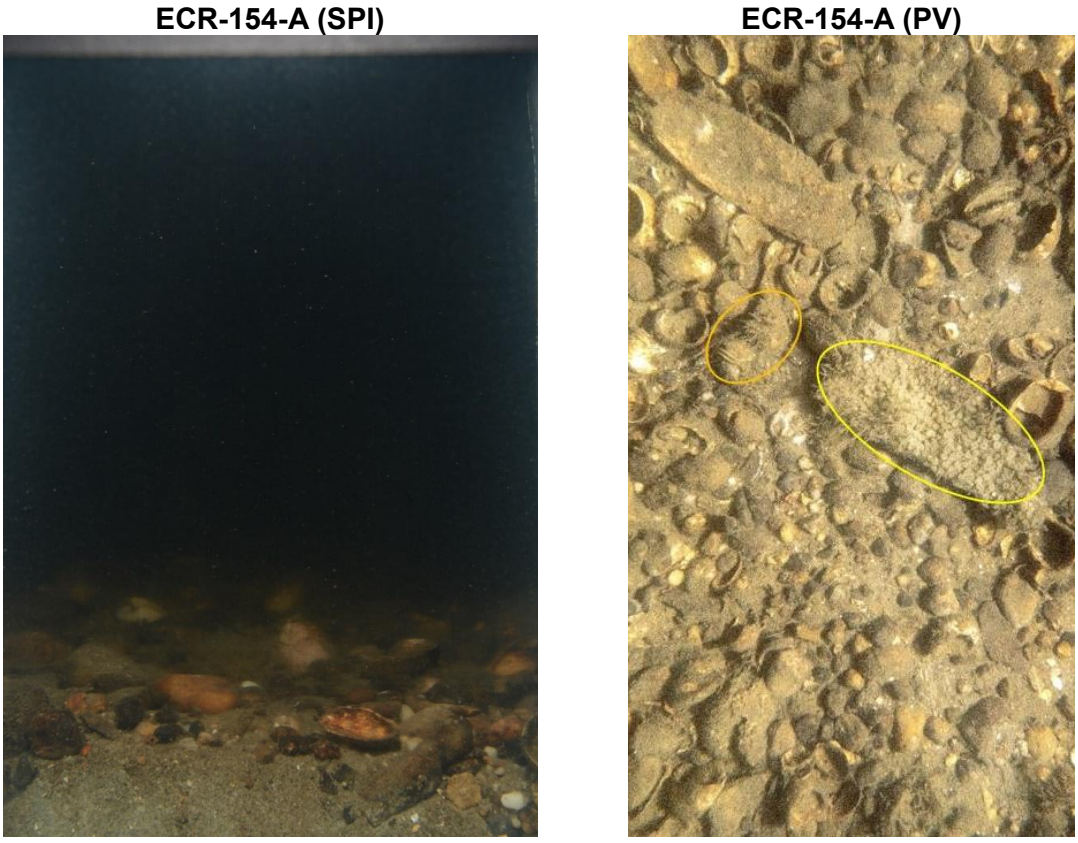
5.2.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode (i.e., the dominant grain size) of surface sediments determined using SPI in Segment 2 was predominantly silt and clay (≥4 phi) (Figure 34). Example SPI/PV images showing typical silt/clay sediments in Segment 2 are in Image 23. Coarse-grained surface sediments were predominantly observed in the eastern portion of Segment 2. Medium sand (2 to 1 phi) and coarse sand (1 to 0 phi) were observed in five percent of the SPI images (Image 24). One SPI replicate at station ECR-142 had a grain size mode of very coarse sand (0 to -1 phi).



The SPI image from station ECR-134 showed surface sediments consisting of silt/clay (≥4 phi) with a mixture of fine shell particles. A possible surface burrow was present along the right image boundary. A small feeding void (blue arrow) indicated the presence of a Stage III organism (head-down deposit feeder). Small polychaetes (red arrows) were visible at depth. The PV image showed a muddy bottom with surface tracks created by gastropods (*Ilyanassa*). SPI image width = 15cm. PV image area = 0.10 m^2.

Image 23 Representative SPI and PV Images from station ECR-134 in Segment 2 showing silt and clay dominated sediments.



The SPI image from station ECR-154 showed low prism penetration and surface sediments consisting of coarse and medium sand with shells and gravels on the surface. The PV image showed numerous *C. fornicata* shells, shell hash, and gravels covering the sediment surface. A dense collection of small anemones (yellow oval) and a clump of hydroids (orange oval) were visible. SPI image width = 15cm. PV image area = 0.10 m^2 (estimated).

Image 24 Representative SPI and PV Images from station ECR-154 in Segment 2 showing more coarse surficial sediments.

5.2.6.2| PRISM PENETRATION DEPTH

The distribution of average SPI camera prism penetration (in centimeters) in Segment 2 surface sediments is presented in Figure 34. The prism penetration depth provided a relative measure of sediment water content and shear strength of surface sediments. In general, prism penetration depths were relatively deep throughout Segment 2 ranging from 2.7 cm at station ECR-154 to 19.7 cm at station ECR-120 with an average of 13.0 cm (±4.2 cm, n = 88). The SPI camera has a maximum prism penetration of 20 cm. Lower prism penetration (less than 6.0 cm) was observed at stations where some areas of surface sediment consisted of medium or coarse sand (Image 24).

5.2.6.3 | SURFACE BOUNDARY ROUGHNESS

Mean small-scale boundary roughness values, or surface relief, in Segment 2 are presented in Figure 34. Boundary roughness in Segment 2 ranged from 0.3 to 4.8 cm with a segment average of 1.4 cm (±0.86 cm, n = 88). The highest mean boundary roughness values (4.1 to 4.8 cm) were measured at stations ECR-117, ECR-129, and ECR-130 in the western half of the segment (Figure 34). The larger boundary roughness (4.1 cm) at station ECR-117 was due to a sloped surface, probably related to surface ripples and referred to as physical roughness which was predominant in Segment 2. The roughness at stations ECR-129 and ECR-130 was due to biogenic surface pits and referred to as biological roughness.

5.2.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth provides a proxy for the degree of biogenic or physical mixing of surface sediments. The mean aRPD depths in Segment 2 as presented in Figure 35 ranged from 0.7 to 6.0 cm with a segment average of 2.7 cm (±1.0 cm, n = 87). The deepest aRPD depths (4.5 to 6.0 cm) were measured at stations ECR-119 and ECR-120 west of Sands Point, in the southwestern portion of Segment 2.

5.2.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 2 sediments was predominantly Stage III, present within 90 percent of the SPI images (Figure 35). Stage III is the advanced successional stage where larger head-down deposit feeding organisms (evidenced by feeding voids) were present. Several images showed Stage I communities coexisting with the Stage III communities. Stage I succession only, the initial pioneering stage, was only observed at one Segment 2 station. Stage II succession only, the transitional stage between I and III, was observed at 9 percent of the SPI images. Stage II succession was typically classified by the presence of amphipod surface tubes.

5.2.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies. Within Segment 2, small methane gas bubbles were only observed at one station, ECR-120; however, the station did not exhibit high SOD due to the relatively deep aRPD (4.5 cm) and presence of a small feeding void (Stage III). Potential indicators for high SOD were lacking at all other Segment 2 stations.

5.2.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The mean OSI values for Segment 2 as presented in Figure 35 range from +4 to +11. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. The vast majority (99 percent) of OSI values in Segment 2 were +6 or higher. Only one SPI image from station ECR-122 indicated some local variability with a lower OSI value of +4. The OSI value of +4 reflected the presence of a shallow aRPD and early Stage I succession.

5.2.7 | PV RESULTS

The PV images were collected at 44 stations along Segment 2 (Figure 25). At the Segment 2 stations, the PV camera was triggered at 0.5 m from the bottom due to high turbidity in the water column.

Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.1 m^2 (± 0.04 m^2) (Attachment G).

5.2.7.1| BEDFORMS

Physical bedform ripples were observed at 40 of the 44 Segment 2 sampling stations (Attachment G-2) primarily in muddy sand bottoms (Figure 25).

Biological bedforms comprised nine percent (4 out of 44 stations) of the Segment 2 stations with muddy sand bottoms bioturbated with burrows and feeding depressions (Image 25). Note that an acceptable PV image at ECR-A-121 was not obtained due to high turbidity in the water column, so a drop/tow video camera still image from the station was used for the bedform assessment (Image 25). A *Crepidula* Reef Substrate, composed of dead *Crepidula* shells was observed at station ECR-B-154 (Image 26).

Image 25 Bioturbated muddy sand bottom with a bed of the gastropod Ilyanassa sp. (red arrows) at Segment 2 station ECR-A-121.

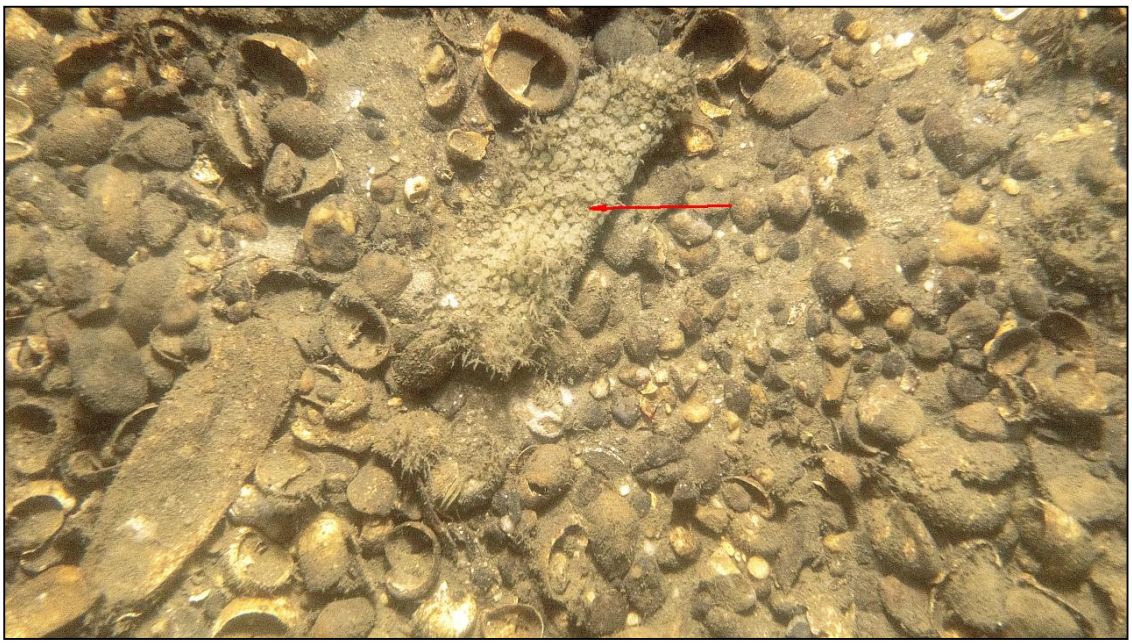


Image 26 Sandy gravel with Crepidula shells and attached anemones (red arrow, 134 individuals) on possible piece of fabric at Segment 2 station ECR-B-154.

5.2.7.2| FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 2 stations are provided in Attachment G-1. PV image assessment of Segment 2 stations for distribution of PVS and CMECS biotic and substrate subclasses is shown in Figure 36. The biological assemblage observed in PV images from Segment 2 stations was not considered diverse with generally low faunal coverage. No marine macrophytes or seagrasses were observed in Segment 2. Dominant fauna observed in Segment 2 are as follows:

- *Sertularia* hydroids attached to *Crepidula* shells were observed at 2 of the 44 Segment 2 stations. The highest faunal coverage of *Sertularia* hydroid stalks was 10 percent at ECR-A-155 with a total of 32 individual stalks;
- Anemones, attached to a probable piece of textile fabric were observed at one Segment 2 station (ECR-B-154, Image 26). The highest faunal coverage of these anemones was eight percent with a total of 134 individuals;
- Mud snails (*Ilyanassa sp.*) were observed at six of the 44 Segment 2 stations with the highest faunal cover of 20 percent at station ECR-A-121 (Image 25). Approximately 166 individuals were counted and individual mud snails were frequently observed between stations ECR-A-131 and ECR-B-136;
- *Sertularia* hydroids were observed in soft sediments at two of the 44 Segment 2 stations with the highest faunal cover of 25 percent at station ECR-B-115 (Image 27);
- Individual tubes of the filter-feeding polychaete, possibly *Chaetopterus* sp. were observed at three of the 44 Segment 2 stations with a total count of six individual tubes; and
- The mantis shrimp (*Squilla* sp.) dug large burrows in soft muddy sand sediments and were observed at two of the 44 Segment 2 stations (Image 28).

Image 27 Sertularia hydroid in muddy sand bottom at Segment 2 station ECR-A-115.

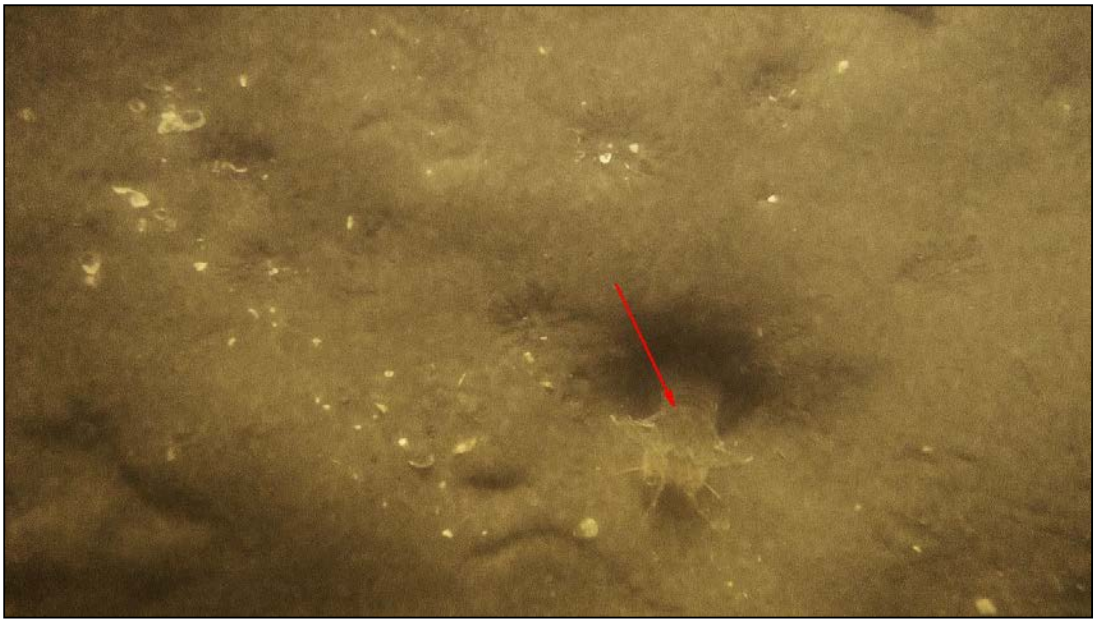


Image 28 Mantis shrimp (Squilla sp.) burrow in soft muddy sand sediment with shell fragments at Segment 2 station ECR-A-125.

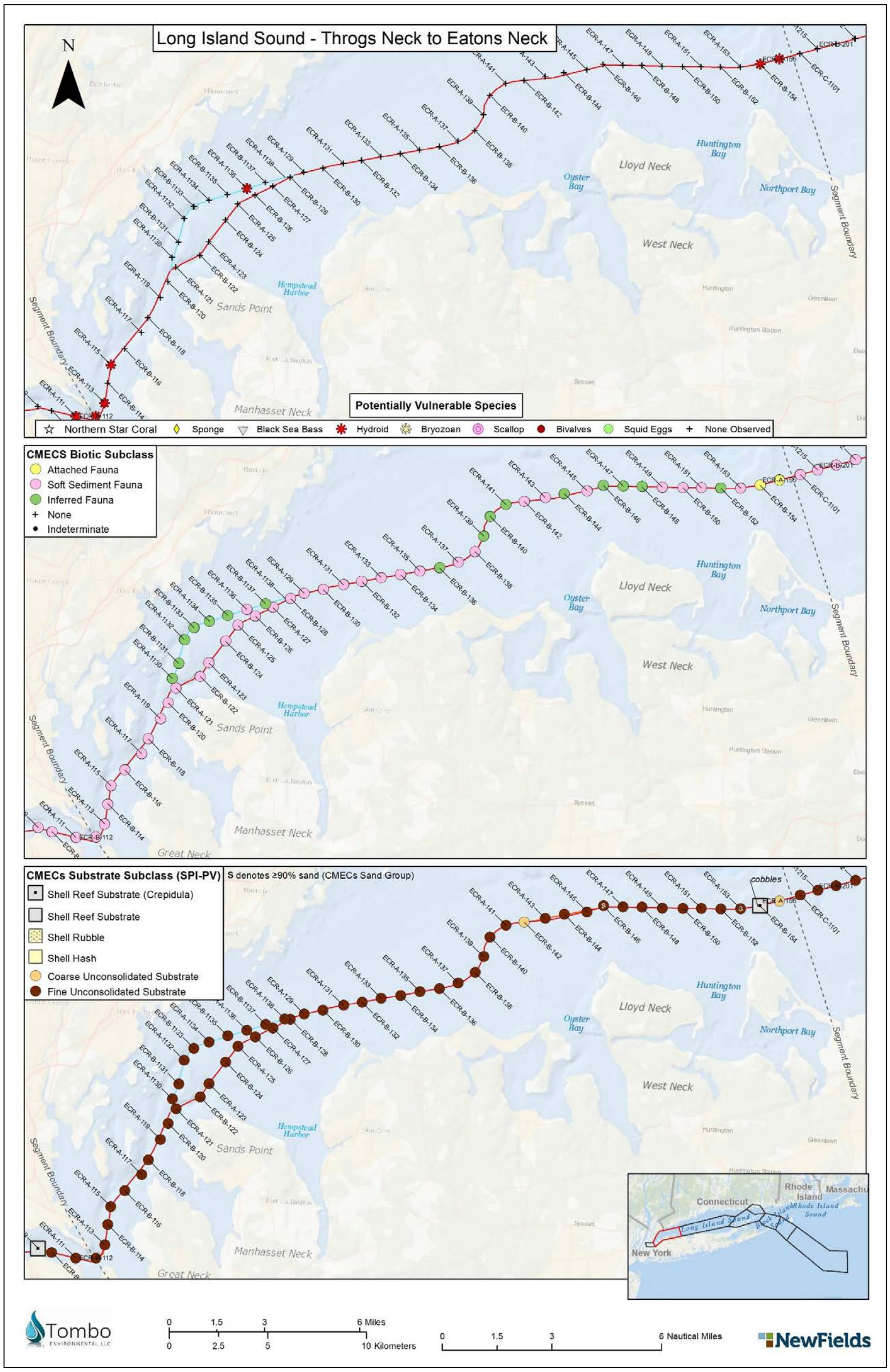


Figure 36 Plan View (PV) imaging results along Segment 2. Segment 2 stations are along the red line corridor between the Segment Boundaries.

5.2.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

A single unidentifiable bivalve at ECR-A-113, (Image 29), was the only organism that may be considered as a PVS to project impacts observed along Segment 2. The detection of bivalves present in sediments was limited to observations of the presence of inhaling and exhaling siphon openings at the sediment surface in PV images which was insufficient for identification (Image 29). The only taxonomic data obtained from sieved sediment samples from nearby locations identified the razor clam (*Ensis directus*) and the clam *Eurytellina alternata*.

For purposes of this assessment, there were no PVS observed at Segment 2 stations (Figure 36).

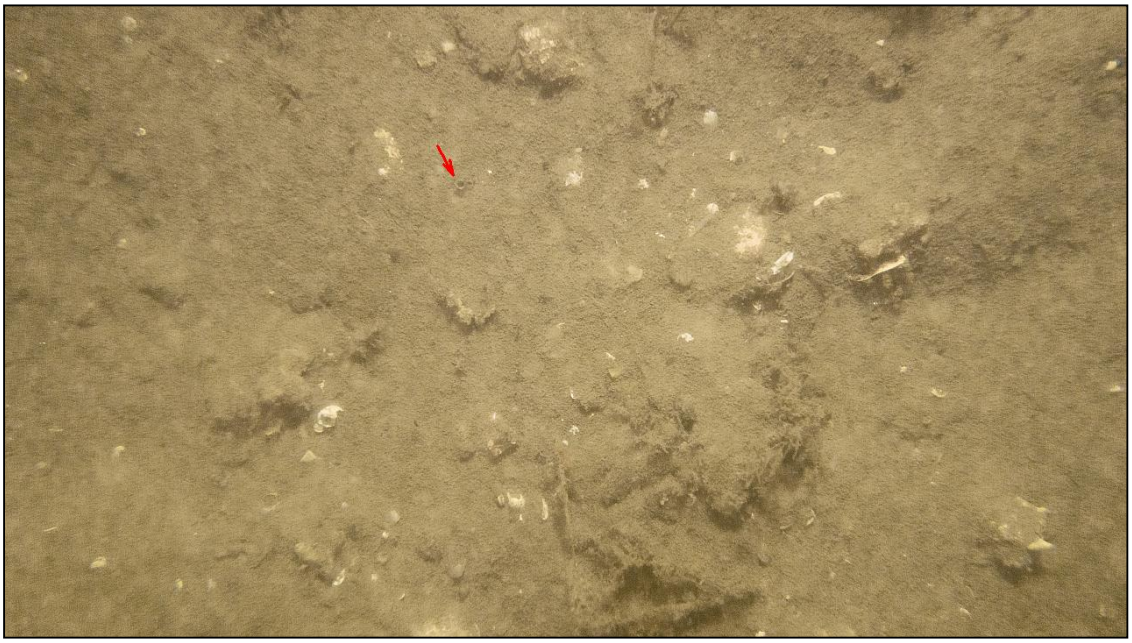


Image 29 Bivalve siphon (red arrow) in soft muddy sand sediment with shell hash at Segment 2 station ECR-A-113.

5.2.7.4| NON-NATIVE TAXA

No non-native species were observed in Segment 2.

5.2.8| CMECS CLASSIFICATIONS

5.2.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/tow camera video system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. The Physiographic Setting, for Segment 2 within Long Island Sound was classified as Sound.

Both Geoform Levels 1 and 2 were taken into account for the classifications of each station along the ECR, with modifications made in certain instances. The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and Level 2 represents features smaller than 0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 2 generally had a flat seafloor topography with soft bottom substrate of geologic origin and stations were classified as Level 1 Flat Geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

At the smaller scale, the Geoform Level 2 classification consisted of a majority of Segment 2 stations as Burrow/Bioturbation Geoform of biogenic origin, and Boulder Fields Geoform, of geologic origin. Burrow/Bioturbation Geoform was observed at 25 of the 35 Segment 2 stations and the Boulder Field Geoform was observed at ten (10) of the Segment 2 stations, six of which just had a few boulders present. Geoform classifications for the Segment 2 stations are summarized and illustrated in Table 36 and Figure 37.

Table 36 Geoform components based on drop/towed camera video for Segment 2.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sounds	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-A-1131, ECR-A-1135, ECR-A-1137, ECR-B-112, ECR-B-114, ECR-B-116, ECR-B-118, ECR-B-120, ECR-B-124, ECR-B-126, ECR-B-128, ECR-B-130, ECR-B-132, ECR-B-134, ECR-B-136, ECR-B-138, ECR-B-140, ECR-B-142, ECR-B-144, ECR-B-146, ECR-B-152, ECR-B-154, ECR-C-1102, ECR-C-1104, ECR-C-1105, ECR-C-1111
				Geologic	Boulder Field	ECR-A-121*, ECR-A-1133, ECR-B-122*, ECR-B-146*, ECR-B-148*, ECR-B-150*, ECR-C-1103*, ECR-C-1106, ECR-C-1109, ECR-C-1112

* Transect was predominantly sand bottom, but isolated boulders were observed and assigned Boulder Field.

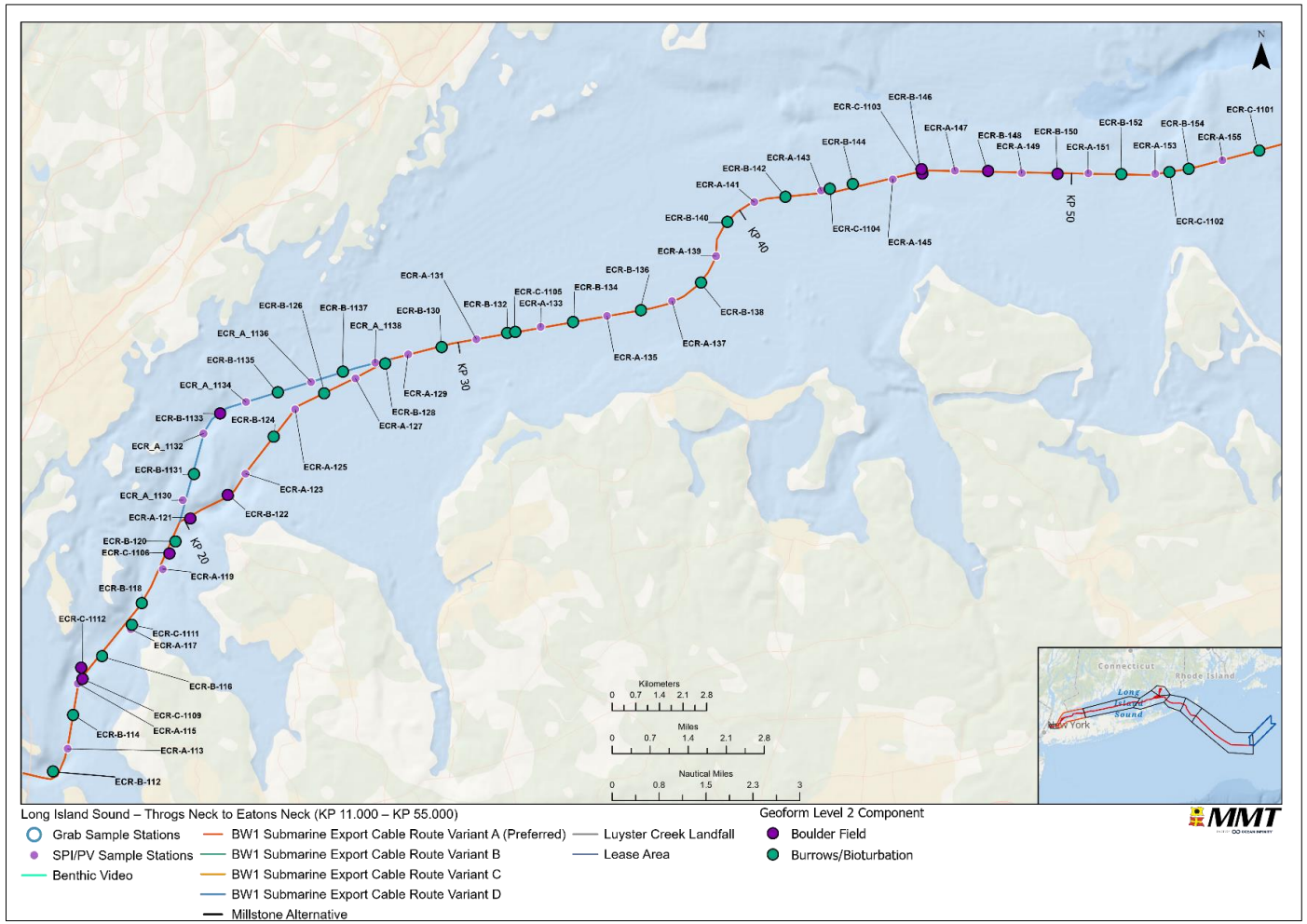


Figure 37 Overview of classified CMECS Geoform Level 2 Component based on drop/towed camera video in Segment 2.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/towed camera benthic video data (Table 37 and Figure 38). Segment 2 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna, with Attached Fauna being present where Boulder Field was the Level 2 Geoform. Twenty-five (25) of the 35 Segment 2 stations were classified as Soft Sediment Fauna (the same as those with the Burrows/Bioturbation Level 2 Geoform). There did not appear to be any dominant macrofauna at these stations.

The ten Segment 2 stations classified as Attached Fauna were further categorized into the Biotic Group, Diverse Colonizers, and Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders including sponges, hydroids, bryozoans, tunicates, and northern star corals, *Astrangia poculata* which was present at all ten stations.

Table 37 CMECS Biotic components based on towed video for Segment 2.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-A-1131, ECR-A-1135, ECR-A-1137, ECR-B-112, ECR-B-114, ECR-B-116, ECR-B-118, ECR-B-120, ECR-B-124, ECR-B-126, ECR-B-128, ECR-B-130, ECR-B-132, ECR-B-134, ECR-B-136, ECR-B-138, ECR-B-140, ECR-B-142, ECR-B-144, ECR-B-146, ECR-B-152, ECR-B-154, ECR-C-1102, ECR-C-1104, ECR-C-1105, ECR-C-1111
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-A-121*, ECR-A-1133, ECR-B-122*, ECR-B-146*, ECR-B-148*, ECR-B-150*, ECR-C-1103*, ECR-C-1106, ECR-C-1109, ECR-C-1112

* Transect was predominantly sand bottom, but isolated boulders were observed with associated attached fauna.

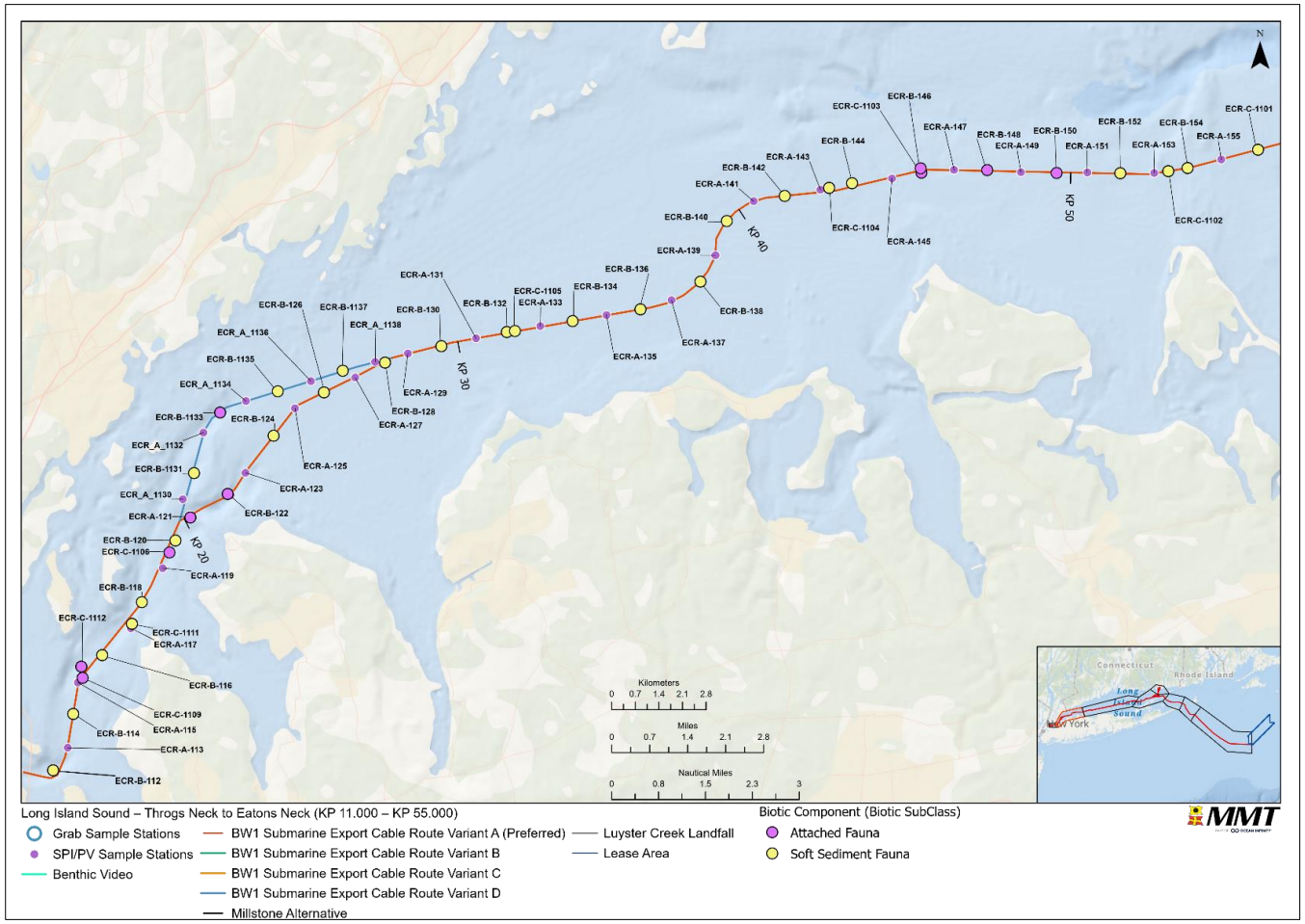


Figure 38 Overview of classified CMECS Biotic Component based on drop/towed video in Segment 2.

5.2.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Twenty-seven (27) benthic grab stations were sampled along Segment 2. Grab samples were successfully obtained at 25 of the 27 stations; station ECR-A-121 was not attempted due to boulders and corals in the area (seen on benthic video) and ECR-B-154 yielded no successful grabs after multiple attempts due to interference from cobbles. NMFS-modified CMECS substrate classifications for ECR-A-121 and ECR-B-154 were derived from SPI and/or PV imagery – see Section 5.2.8.3 and Attachment F and Attachment G.

CMECS and NMFS-modified CMECS substrate classifications were derived from PSD results for the 25 Segment 2 successful grab sampling stations. After a review of benthic grab content imagery, no Segment 2 stations were determined to consist of substantial (>50 percent) biogenic (shell) material.

CMECS substrate component classifications for benthic grab stations sampled along Segment 2 are presented in Table 38 and shown in Figure 39. NMFS-modified CMECS substrate component classifications are presented in Table 30 and shown in Figure 23. Benthic sampling stations within Segment 2 yielded 72 percent of benthic grab samples which contained coarse unconsolidated substrate types (n=18) and 28 percent which contained fine unconsolidated substrate types (n=7). Substrate types included Gravelly Mud, Gravelly Muddy Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sandy Mud (CMECS)/ Sandy Mud (NMFS-modified CMECS) and Slightly Gravelly Sand (CMECS)/Medium Sand (NMFS-modified CMECS) substrates.

Coarse unconsolidated substrates and biogenic substrates are considered as indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. Grab samples obtained at 18 stations were identified as consisting of coarse unconsolidated (Gravelly) substrates containing primarily pebble/granule as the gravel component. Seventeen of these stations were located west of station ECR-B-140. Of the six stations with fine unconsolidated substrates, five were located east of station ECR-B-140. Fine unconsolidated substrates are typically indicative of soft-bottomed habitats (NOAA Fisheries, 2021).

The primary benthic grab sample and QC replicate from station ECR-B-120 were both classified as Gravelly substrates. However, there was a nine percent difference in the percentage of sand in the sand-mud mix between the primary sample (ECR-B-120; 55 percent) and the QC replicate (ECR-B-120-QC; 46 percent). This resulted in the QC replicate being classified differently at the subgroup level than the primary sample counterpart (Table 38 and Table 39).

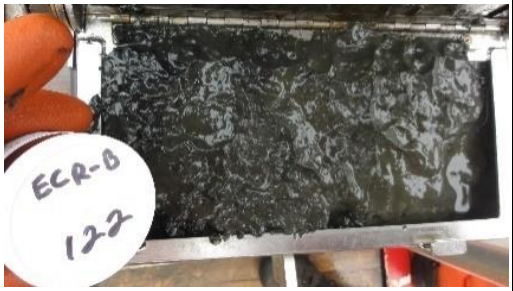
		
a. Gravelly Mud	b. Gravelly Muddy Sand	c. Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS)
d. Slightly Gravelly Sandy Mud (CMECS)/ Sandy Mud (NMFS-modified CMECS)	e. Slightly Gravelly Sand (CMECS)/Medium Sand (NMFS-modified CMECS)	

Image 30 Grab content images showing representative substrate types encountered at benthic grab sampling stations along Segment 2.

Table 38 CMECS substrate component classifications for benthic grab stations sampled along Segment 2. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: Variant B corridor stations are denoted with blue shading.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	**Substrate Class**	**Substrate Subclass**	**Substrate Group**	**Substrate Subgroup**
ECR-B-1131	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-1133	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-1137	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-114	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-116	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-118	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-120-QC	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-124	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-128	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-130	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-132	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-134	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-136	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-138	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-150	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-120	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-122	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-126	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-142	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-112	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-146	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-152	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-144	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-140	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-1135	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-140-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-148	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud

QC = Quality Control.

Table 39 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 2. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: Variant B corridor stations are denoted with blue shading.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-1131	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-1133	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-1137	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-114	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-116	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-118	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-120-QC	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-124	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-128	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-130	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-132	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-134	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-136	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-138	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-150	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-120	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-122	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-126	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-142	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-112	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-146	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-152	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-144	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-140	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-140-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-1135	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-148	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A

N/A: Not Applicable; QC: Quality Control.

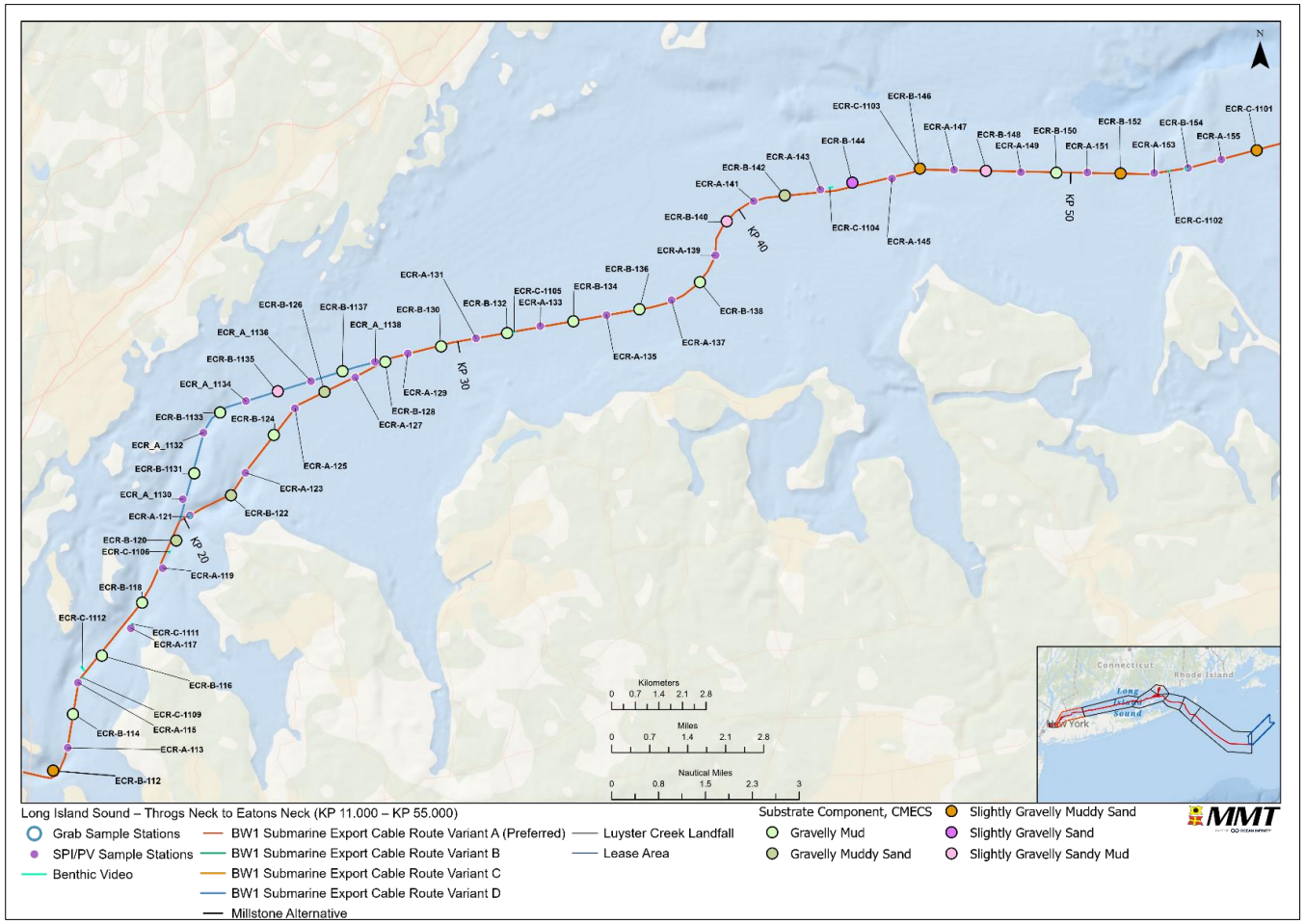


Figure 39 CMECS substrate component classifications for benthic grab stations sampled along Segment 2.

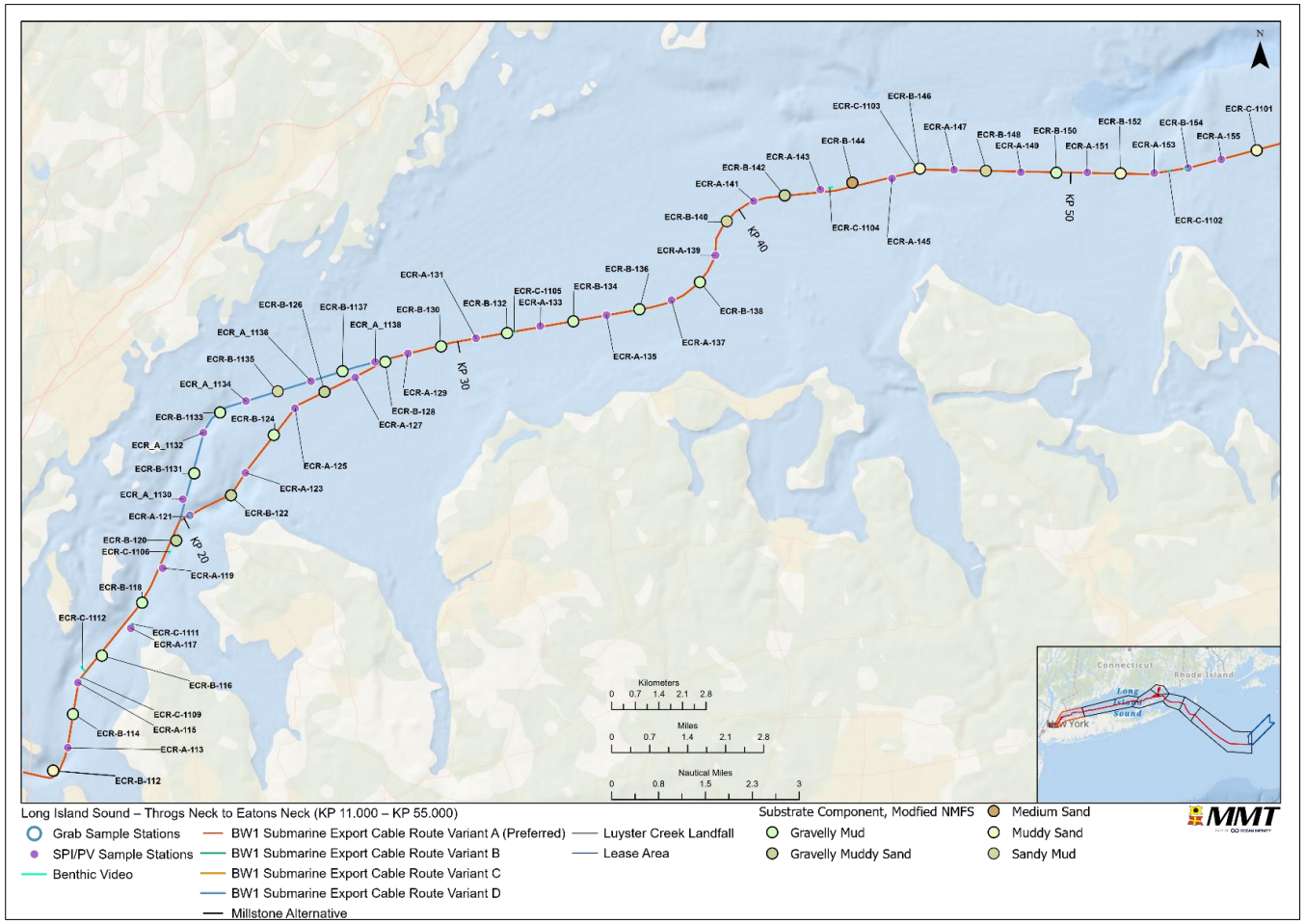


Figure 40 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 2.

5.2.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). Segment 2 was composed of 98 percent CMECS Unconsolidated Mineral Substrate at 43 out of 44 stations while the CMECS Shell Substrate class type was observed at one out of 44 Segment 2 stations (Table 40).

CMECS Fine Unconsolidated Substrate was present at 41 of the 44 Segment 2 stations (Table 39). CMECS Fine Unconsolidated Substrate was composed of fine/very fine sand, medium sand, and very coarse/coarse sand. Fine Unconsolidated Substrate was observed and extended throughout Segment 2 (Figure 36, CMECS Substrate Subclass panel, and Table 40).

CMECS Coarse Unconsolidated Substrate was present at 2 of the 44 Segment 2 stations (Table 40 and Figure 36, CMECS Substrate Subclass panel). CMECS Coarse unconsolidated substrate was composed of gravelly sand and sandy gravel (Table 40).

CMECS Shell Reef Substrate subclass, *Crepidula* Reef Substrate group, was present at one of the Segment 2 stations (Table 40).

Table 40 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 2.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	43	98%	Fine Unconsolidated Substrate	41	93%	Sand	2	5%	Fine/Very Fine Sand	1	2%
									Medium Sand	1	2%
									Very Coarse/Coarse Sand	0	0%
						Muddy Sand	5	11%	--	5	11%
						Sandy Mud	34	77%	--	34	77%
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	2	5%	Gravels	0	0%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	0	0%
									Gravel Pavement	0	0%
						Gravel Mixes	0	0%	Sandy Gravel	0	0%
									Muddy Sandy Gravel	0	0%
									Muddy Gravel	0	0%
						Gravelly	2	5%	Gravelly Sand	1	2%
									Gravelly Muddy Sand	1	2%
									Gravelly Mud	0	0%
Shell Substrate	1	2%	Shell Reef Substrate	1	2%	*Crepidula* Reef Substrate	1	2%	--	1	2%
			Shell Rubble	0	0%	--	--	--	--	--	--
			Shell Hash	0	0%	--	--	--	--	--	--

5.2.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Soft Sediment Fauna subclass biotic component applied to 37 of the 44 Segment 2 stations. The Soft Sediment Fauna classification included clam bed, *Sertularia* bed, *Chaetopterus* polychaete bed, *Squilla* bed, and *Ilyanassa* bed. The CMECS Attached Fauna subclass biotic component applied to two of the 44 Segment 2 stations. The Attached Fauna component included anemone communities and *Sertularia* hydroids. The CMECS Inferred Fauna subclass biotic component applied to 12 out of 44 Segment 2 stations. The Inferred Fauna groups were observed at seven stations with Arenicola castings, one station with decapod tracks, and one station with gastropod trails (Attachment G-1 and Figure 36, CMECS Biotic Subclass panel). No CMECS Class Aquatic Vegetation was observed in Segment 2.

5.3| LONG ISLAND SOUND - EATONS NECK TO CENTRAL LONG ISLAND SOUND

Segment 3 includes sampling stations along the BW1 Variant A submarine export cable corridor from Eatons Neck to Central Long Island Sound (Figure 41).

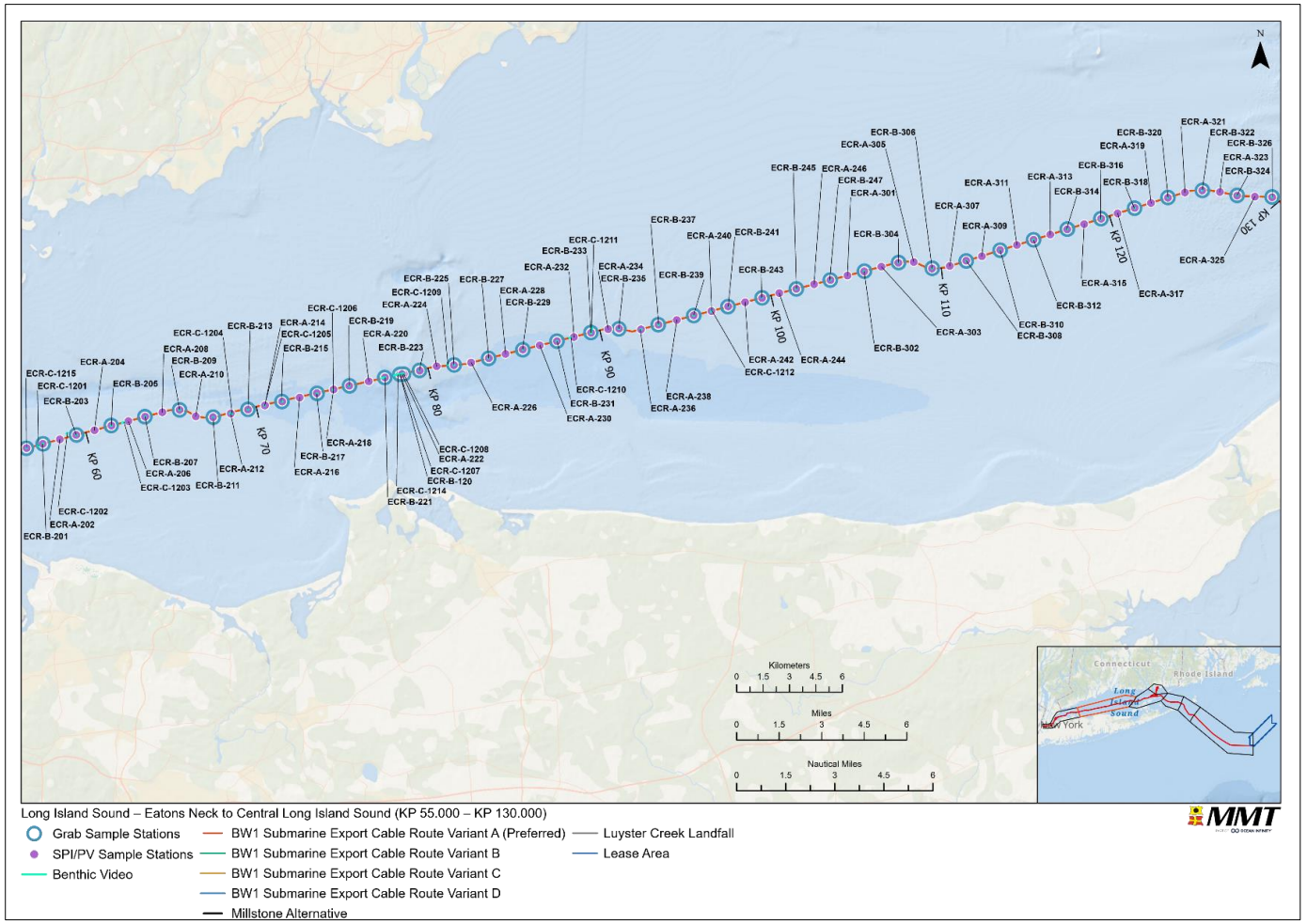


Figure 41 Overview of the Segment 3 sample stations.

5.3.1| BENTHIC VIDEO

The seabed along the corridor within Segment 3 seabed was characterized by a range of substrates, from fine sandy silt to coarser sand substrate, occasional areas of gravel, and areas of cobble and boulder present covered in epiphytic growth. There were also areas of concentrated shell (some consisting of intact bivalve shells, shell fragments and shell hash). There were also areas of fine sediments where bioturbation, in the form of tracks and burrows, is evident and included the presence of tube-building amphipods and polychaetes, and siphons, which were inferred to be bivalves, protruding from the sediment. Various macrobenthic taxa and fish were observed throughout these areas. The sampling video log is presented in representative images of the seabed benthic habitat are provided in Image 31, Image 32 and Image 33.

No consolidated hard substrates were observed within Segment 3. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 1- m within the water column.

Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed along Segment 3. Macroinvertebrates observed included various mollusks - slipper snails (*Crepidula* spp*.),* whelks (*Busycotypus* sp. or *Busycon* spp.); and unidentified bivalves; and some crustaceans including hermit crabs (*Pagurus* spp.). Attached taxa observed included bryozoans, colonial tunicates, hydroids, various sponges and the northern star coral (*Astrangia poculata*) observed growing on boulders at three Segment 3 stations, ECR-B-221, ECR-C-1202, and ECR-C-1208.

Image 31 Representative image from Segment 3 displaying a boulder with attached epifauna including northern star coral (Astrangia poculata) and sediment-laden stalked biota.

Image 32 Representative image from Segment 3 displaying an area of sediment covered bivalve shells and shell fragments.

Image 33 Representative image from Segment 3 displaying an area of sandy silt sediment with bioturbation evident. Suspended particulate matter is evident in the water column.

5.3.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 3 are provided in Attachment B. All 41 benthic grab stations yielded sediment samples within Segment 3.

Eight (8) of the 41 benthic sampling stations had sediment with a distinctive odor as noted in 415 with the garb sample visual observations. The distinctive odor detected in some samples is the result of some anoxic sediment with subtle pungency differences due to the composition of the sediment primarily the amount of organic material; note that description of odor and degree of pungency is rather subjective.

Anthropogenic debris was not observed in any of the Segment 3 benthic grabs. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of ≥2.8 in (7 cm).

Several grabs were observed to contain shell and shell fragments and gravel, (Attachment B; Image 34), polychaete and/or amphipod tubes (Image 35) while others lacked notable surficial features.

Image 34 Representative surficial grab sample from station ECR-BC-1208 displaying some shell and shell fragments and some gravel in coarse sand.

Image 35 Representative surficial grab sample from station ECR-B-316 displaying mostly fine sand to very fine sand with a couple of polychaete or amphipod tubes visibly emerging from the sediment surface.

5.3.3| PARTICLE SIZE DISTRIBUTION

A total of 41 sediment samples from Segment 3 stations as shown in Figure 41 were analyzed for PSD; additional QC samples were collected from three stations. The PSD for these sediment samples is based on the Wentworth scale (Table 21), as presented in Table 41 for Segment 3.

Samples from thirty-nine (39) stations in this Segment had some type of gravel – combined Pebbles and/or Granules. Samples from 20 stations had a gravel component of 5 percent or greater with 11 of those stations having a total gravel fraction of 10 percent or more.

Seventeen (17) of the 41 Segment 3 stations had sediment compositions that consisted of greater than 50 percent of sand, of which seven stations exceeded 75 percent. Twenty-one (21) of the 41 stations had combined Silt and Clay fractions that exceeded 50 percent of the sediment composition with five (5) of those stations exceeding 75 percent sediment composition of silt and clay.

The total gravel, total sand, and silt + clay was calculated and are presented in Figure 42. Figure 42 introduces TOC results, as more thoroughly presented in Section 5.3.4, relative to the percentage of total gravel, total sand, and silt + clay. A general correlation between increased TOC levels and greater percent fine fraction of silt and clay was evident.

Table 41 Percentages of particle size classes according to Wentworth (1922) from Segment 3. Grayed columns show sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-C-1101	--	--	1	1.7	2.7	1.1	10.7	30.6	25.4	3.8	71.6	22	3.7	25.7
ECR-C-1215	--	--	--	3.4	3.4	7.3	10.1	16.1	9.7	4.9	48.1	41	7.5	48.5
ECR-B-201	--	--	--	1.5	1.5	5.4	7.4	13.4	8.4	6.8	41.4	49.1	8	57.1
ECR-B-203	--	--	0.5	7.5	8.0	9.5	7.8	5.9	3.4	2.2	28.8	48.3	14.9	63.2
ECR-B-205	--	--	5.5	20.1	25.6	12.1	7	4.6	3.1	2.4	29.2	37.5	7.7	45.2
ECR-B-207	--	--	4.5	10.3	14.8	7.5	4.4	2.4	1	1	16.3	59.4	9.5	68.9
ECR-B-209	--	--	2.6	7	9.6	8.3	5.4	3.1	1.3	1.3	19.4	57.4	13.6	71.0
ECR-B-211	--	--	0.9	11.3	12.2	1.1	18.5	4.8	2.2	2	28.6	49.3	9.9	59.2
ECR-B-213	--	--	2.7	9	11.7	11.9	6.4	3.9	3.4	3.7	29.3	48.6	10.4	59.0
ECR-B-215	--	--	--	1.1	1.1	4.8	6.6	8.4	15	9.5	44.3	45.3	9.3	54.6
ECR-B-217	--	--	--	0.7	0.7	2.7	7.1	28.8	19.4	4.5	62.5	31.7	5.1	36.8
ECR-B-219	--	--	--	0.3	0.3	2.3	7.1	31.7	22.7	7.3	71.1	23.9	4.7	28.6
ECR-B-219-QC	--	--	--	0.5	0.5	0.6	5.8	31.5	21.5	27.9	87.3	10	2.2	12.2
ECR-B-221	--	--	--	0.6	0.6	3.7	5	5.6	4.5	3.6	22.4	55.9	21.1	77.0
ECR-C-1207	--	--	3.3	2.6	5.9	5.7	23.7	40.1	7.5	0.8	77.8	14.2	2.1	16.3
ECR-C-1208	--	--	16.0	3.2	19.2	4.4	19.9	32.7	7.6	0.7	65.3	13.4	2.1	15.5
ECR-B-223	--	--	3.7	3.4	7.1	5.8	18.8	39.3	17.0	1.6	82.5	9.0	1.4	10.4
ECR-B-225	--	--	1.2	4.9	6.1	5.6	7.0	26.7	25.6	7.1	72.0	18.9	3.0	21.9
ECR-B-227	--	--	5.0	12.0	17.0	9.3	7.3	12.0	17.2	8.8	54.6	23.2	5.2	28.4
ECR-B-229	--	--	0.5	7.8	8.3	10.5	7.5	7.5	10.5	7.2	43.2	37.4	11.1	48.5
ECR-B-231	--	--	0.3	6.7	7.0	10.1	9.1	7.4	8.0	5.5	40.1	38.5	14.4	52.9
ECR-B-233	--	--	1.8	8.9	10.7	11.5	8.5	6.6	6.5	4.5	37.6	38.5	13.2	51.7
ECR-B-235	--	--	3.1	4.7	7.8	9.2	23.9	29.0	9.2	2.1	73.4	16.4	2.4	18.8
ECR-B-237	--	--	2.2	13.3	15.5	10.5	5.9	3.4	3.6	3.2	26.6	45.3	12.6	57.9
ECR-B-239	--	--	4.1	19.2	23.3	10.9	5.9	2.9	2.3	1.8	23.8	43.7	9.2	52.9

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-239-QC	--	--	1.6	11.3	12.9	11.2	6.2	2.9	1.6	1.5	23.4	49.3	14.4	63.7
ECR-B-241	--	--	0.5	8.7	9.2	10.8	7.7	4.5	3.3	2.3	28.6	48.4	13.8	62.2
ECR-B-243	--	--	1.0	11.1	12.1	11.1	6.7	3.7	2.7	2.8	27.0	47.7	13.2	60.9
ECR-B-245	--	--	--	0.2	0.2	1.3	3	3.4	2.1	3.7	13.5	69.4	16.9	86.3
ECR-B-247	--	--	--	--	--	0.1	1.5	1.7	1	2.9	7.2	71.5	21.3	92.8
ECR-B-302	--	--	--	0.4	0.4	1.8	4.4	3.9	2.6	8.3	21.0	64.4	14.2	78.6
ECR-B-304	--	--	--	0.2	0.2	1.6	2.3	1.9	1.7	11	18.5	67.2	14.1	81.3
ECR-B-306	--	--	--	0.9	0.9	2.9	3.6	3.1	3.6	20	33.2	54.5	11.4	65.9
ECR-B-308	--	--	--	0.3	0.3	0.4	1	0.9	2.1	33.5	37.9	53.9	7.9	61.8
ECR-B-310	--	--	--	0.2	0.2	0.3	0.9	0.8	3.2	40.6	45.8	47	7	54.0
ECR-B-312	--	--	--	0.2	0.2	0.1	0.4	0.6	9.6	50.5	61.2	33.6	5	38.6
ECR-B-314	--	--	--	0.2	0.2	0.3	0.6	0.8	27.9	43.6	73.2	22.5	4.1	26.6
ECR-B-316	--	--	--	0.4	0.4	0.2	0.4	1	53	27.7	82.3	15.3	2	17.3
ECR-B-318	--	--	--	0.2	0.2	0.1	0.4	1.4	66.2	17.9	86.0	12.3	1.5	13.8
ECR-B-320	--	--	--	0.1	0.1	0.4	0.9	13.2	62.7	9.7	86.9	11.6	1.4	13.0
ECR-B-322-QC	--	--	--	--	--	--	1.2	73.3	14.3	1.5	90.3	8.9	0.8	9.7
ECR-B-322	--	--	0.3	--	--	0.1	0.8	71.9	16	1.5	90.3	8.6	0.8	9.4
ECR-B-324	--	--	1.2	4.4	5.6	8.5	20	42.1	13	1.4	85.0	8.2	1.2	9.4
ECR-B-326	--	--	6.1	4	10.1	4.9	8.9	18.7	6.9	12.6	52.0	31.2	6.7	37.9

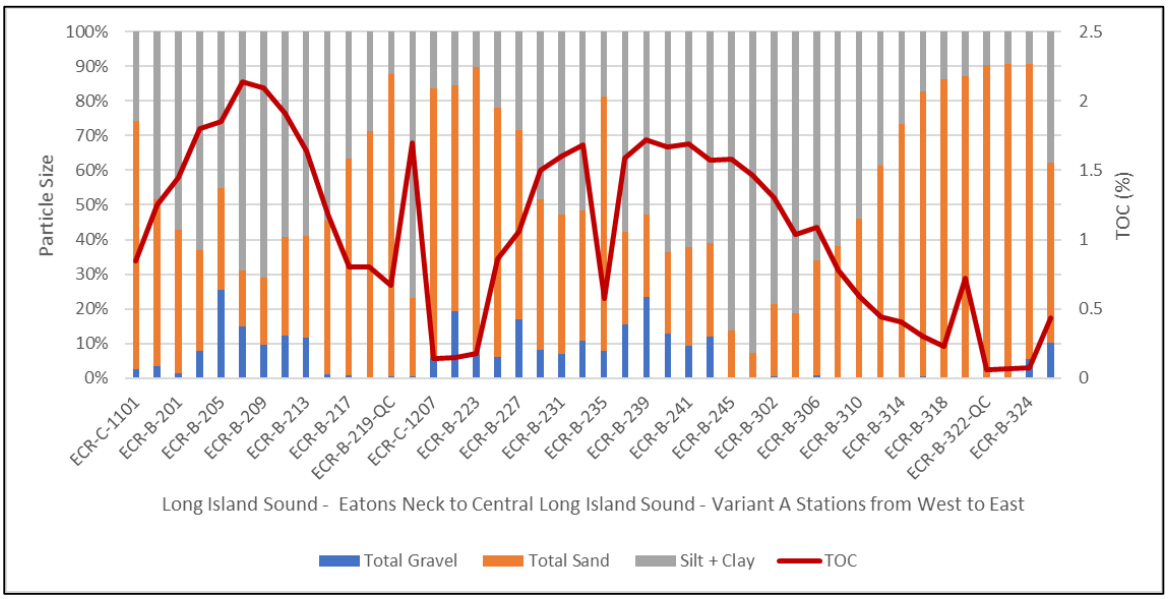


Figure 42 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples collected at benthic grab sampling stations from Segment 3 presented West to East.

5.3.4| TOTAL ORGANIC CARBON

Sediment TOC concentrations (exclusive of QC replicates) from Segment 3 benthic grab stations ranged from 0.07 to 2.14 percent (mean: 1.08 percent; SE: 0.10) (Table 42). The Segment 3 mean sediment TOC concentration was similar to the mean TOC concentration over all sampled sites (0.83 percent). Sediment TOC concentrations from Segment 3 grab samples were lowest towards the eastern end of Long Island Sound and were generally higher in areas where samples contained relatively higher proportions of silt + clay (Figure 42).

Table 42 Total organic carbon (TOC) concentrations from benthic grab stations along Segment 3.

Station	TOC (percent)
ECR-B-201	1.45
ECR-B-203	1.80
ECR-B-205	1.85
ECR-B-207	2.14
ECR-B-209	2.09
ECR-B-211	1.91
ECR-B-213	1.64
ECR-B-215	1.18
ECR-B-217	0.80
ECR-B-219	0.80
ECR-B-219-QC	0.67
ECR-B-221	1.70
ECR-B-223	0.18
ECR-B-225	0.86
ECR-B-227	1.06
ECR-B-229	1.50
ECR-B-231	1.60
ECR-B-233	1.68
ECR-B-235	0.58
ECR-B-237	1.59
ECR-B-239	1.72
ECR-B-239-QC	1.67
ECR-B-241	1.69
ECR-B-243	1.57
ECR-B-245	1.58
ECR-B-247	1.46
ECR-B-302	1.30
ECR-B-304	1.04
ECR-B-306	1.09
ECR-B-308	0.78
ECR-B-310	0.59
ECR-B-312	0.44
ECR-B-314	0.40
ECR-B-316	0.30
ECR-B-318	0.23
ECR-B-320	0.72
ECR-B-322	0.07
ECR-B-322-QC	0.07
ECR-B-324	0.08
ECR-B-326	0.44

Station	TOC (percent)
ECR-C-1101	0.84
ECR-C-1207	0.14
ECR-C-1208	0.15
ECR-C-1215	1.25

5.3.5| INFAUNA FROM GRAB SAMPLES

Nineteen of the 41 successful benthic grab samples were selected for infaunal analyses. These 19 Segment 3 stations yielded 2,574 individuals and 119 total infauna taxa from seven phyla including Annelida, Arthropoda, Echinodermata, Hemichordata, Mollusca, Nemertea, and Sipuncula. A total of 72 taxa were identified to species level another 47 to LPIL.

5.3.5.1| BIOMASS

Biomass was measured for 13 taxonomic classes of infauna present in the Segment 3 samples. Total infauna biomass for the sampling stations was 95.3 g with a mean biomass per station of 4.3 g ±10.2 SD. Gastropods contributed 61.8 percent of the total biomass sampled. Bivalves and polychaetes accounted for 17.1 and 14.8 percent of the biomass. Five of the 13 classes including Gastropoda, Bivalvia, Polychaeta, Malacostraca (amphipods), and Echinoidea, collectively accounted for 99 percent of the total infauna biomass in the Segment 3 samples (Table 43). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 43. Biomass of Polychaeta and Bivalvia was uniformly distributed over Segment 3 stations with no evidence of aggregation. Gastropod biomass was concentrated at the northern end of Segment 3 at stations ECR-B-322 and ECR-B-324, the only Segment 3 stations where the gastropods *Crepidula plana* and *C. fornicata* were collected.

Table 43 Summary Statistics for infauna biomass collected from Segment 3.

Class	Total	Percent	Mean	SD
Gastropoda	58.86	61.76	2.676	10.040
Bivalvia	16.29	17.09	0.740	1.625
Polychaeta	14.09	14.79	0.641	1.015
Malacostraca	4.05	4.25	0.184	0.327
Echinoidea	1.14	1.20	0.052	0.244
Sipunculidea	0.33	0.35	0.015	0.053
Holothuroidea	0.20	0.21	0.009	0.042
Enteropneusta	0.14	0.14	0.006	0.015
Nemertea *incertae sedis*	0.11	0.11	0.005	0.007
Anthozoa	0.08	0.09	0.004	0.018
Ophiuroidea	0.01	0.01	<0.001	0.001
Clitellata	<0.01	<0.01	--	--
Platyhelminthes (all Classes)	<0.01	<0.01	--	--

SD = Standard deviation

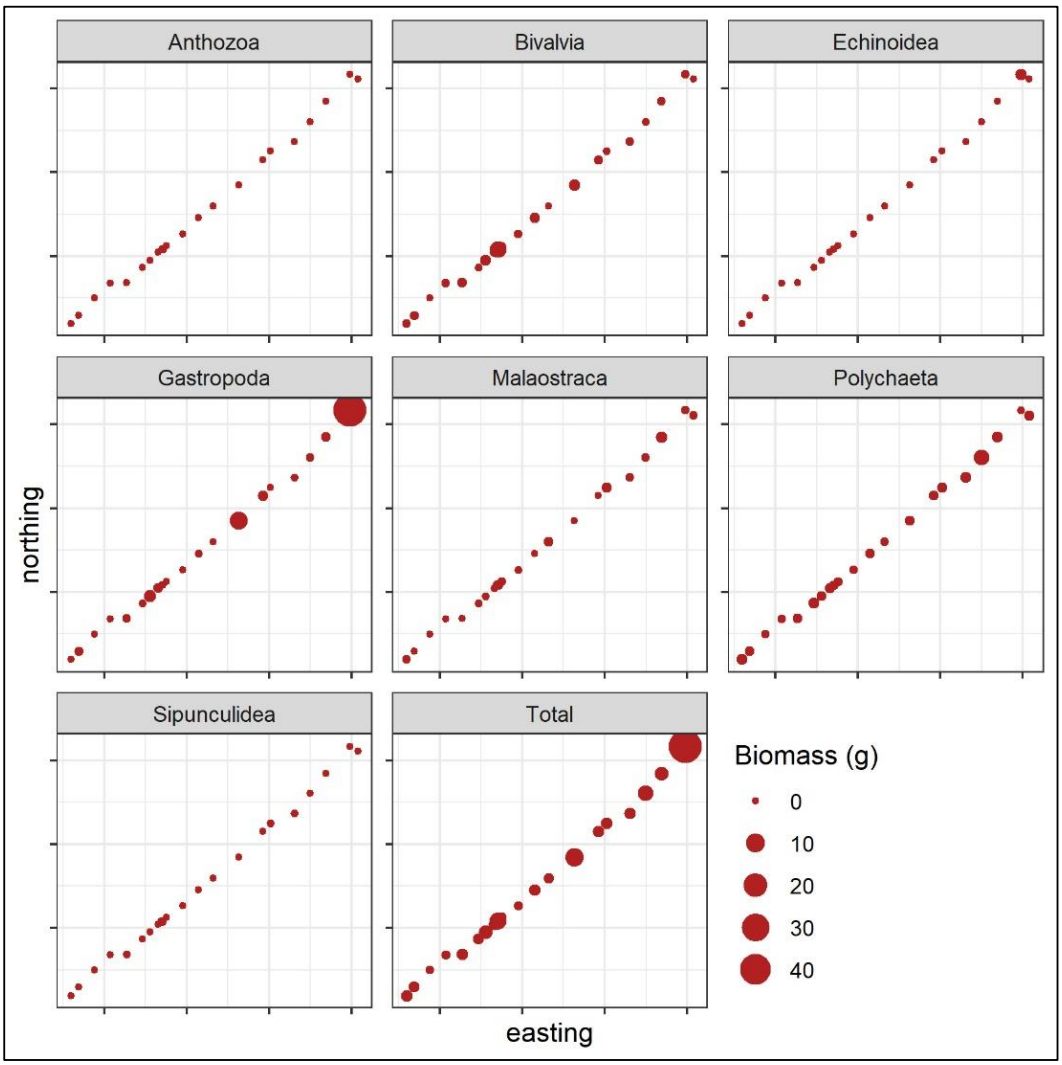


Figure 43 Biomass (g) of infauna organisms plotted along Segment 3.

5.3.5.2| UNIVARIATE STATISTICAL ANALYSES

Species level identifications included 2,574 individuals or 74.0 percent of the 3,478 total. All diversity indices were calculated using the data set with species level identifications. Diversity indices did not vary greatly across samples as depicted in Figure 44. The number of species per sample averaged 15 and ranged from 6 to 20. The Margalef's species richness (d) values ranged from 1.2 to 4.4; diversity (H') ranged from 0.78 to 2.7; Fisher's alpha ranged from 1.6 to 9.6. Evenness measured with Pielou's J was low averaging 0.67 ranging from 0.43 to 0.90.

The ten most abundant species sampled as listed in Table 44**,** collectively account for 78.0 percent of the infauna abundance recorded for Segment 3 samples.

Numerically dominant species include six polychaete annelids, two mollusks, one arthropod, and one nemertean. The most abundant species, *Levinsenia gracilis* (polychaete worm), *Sigambra tentaculata* (polychaete worm), *Prionospio perkinsi* (polychaete worm), and *Tubulanus* sp. A (nemertean worm) contributed 43.7 percent, 7.8 percent, and 4.7 percent, and 3.9. percent of the 2,574 individuals, respectively. Spatial patterns of abundance for these ten taxa are shown in Figure 45.

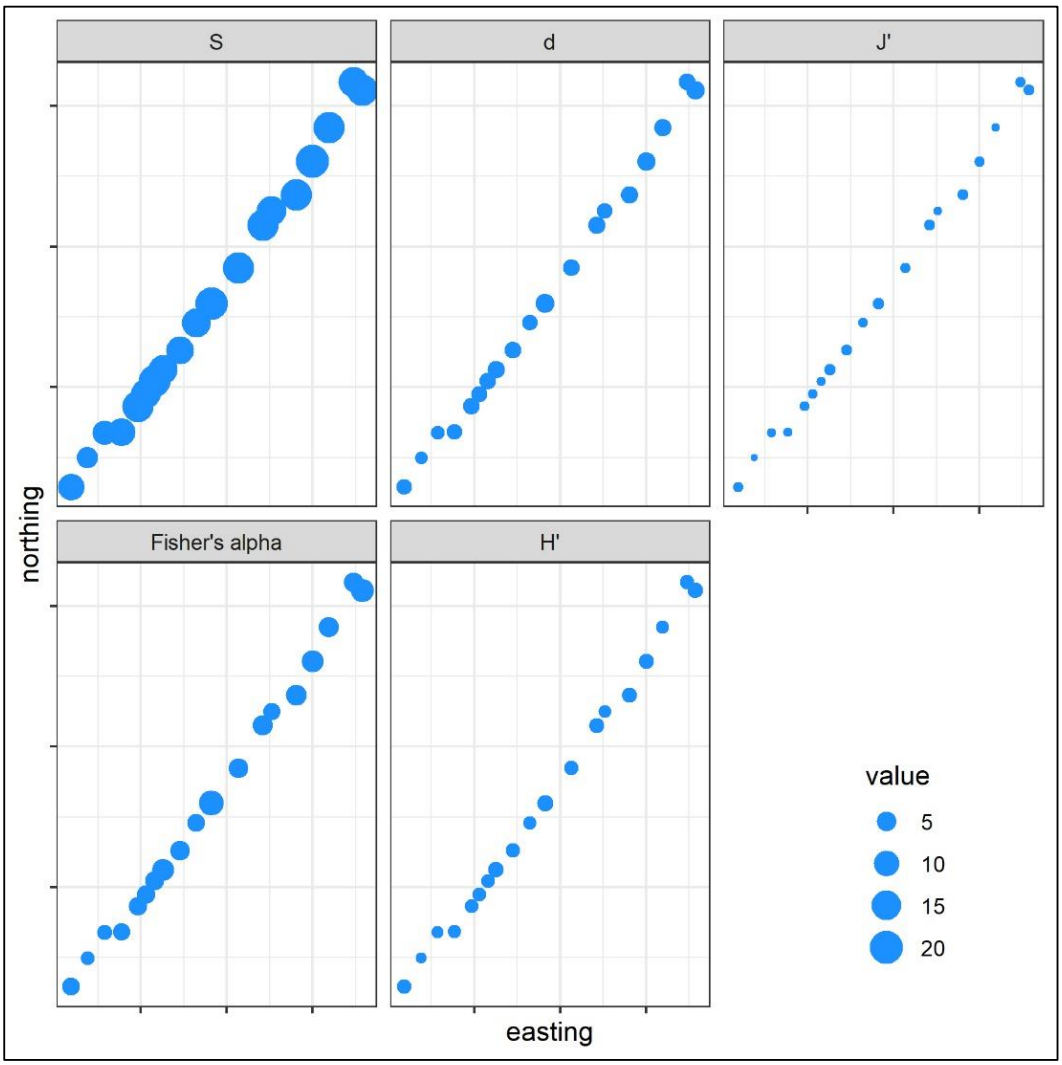


Figure 44 Number of taxa (S), Margalef's species richness (d), Fisher's alpha, evenness (J'), and species diversity (H') plotted on the station positions along Segment 3.

Table 44 Numerically dominant species collected in grab samples from Segment 3 based on data set with species level identifications from 19 stations.

Phylum	Species	Number of Individuals	Percent of Total Individuals	Station Occurrence
Annelida	*Levinsenia gracilis*	1126	43.7	16
Annelida	*Sigambra tentaculata*	201	7.8	15
Annelida	*Prionospio perkinsi*	120	4.7	11
Nemertea	*Tubulanus* sp. A	100	3.9	15
Mollusca	*Acteocina candei*	98	3.8	10
Arthropoda	*Ampelisca* sp. R	89	3.5	1
Annelida	*Melinna maculata*	88	3.4	12
Annelida	*Nephtys incisa*	76	3.0	15
Annelida	*Loimia medusa*	59	2.3	6
Mollusca	*Mercenaria mercenaria*	52	2.0	11

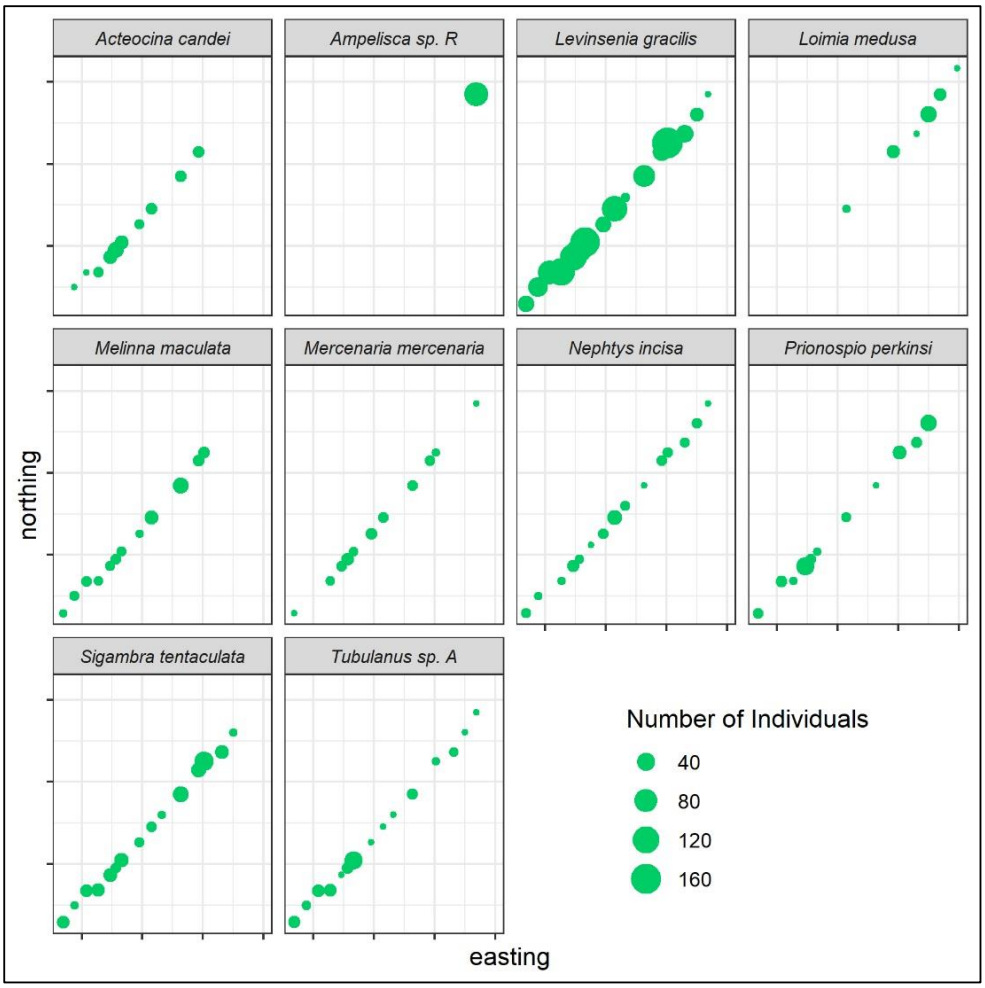


Figure 45 Number of individuals of the ten most abundant species in the samples plotted on the station positions along Segment 3.

5.3.5.3| MULTIVARIATE STATISTICAL ANALYSES

The cluster analysis of stations coupled with the SIMPROF routine identified seven groups of stations with significantly similar species compositions (Figure 46). Two of these groups were single stations differing compositionally from the other multi-station groups. One group (group f) included eight stations, a second (group e) was composed of three stations and three groups had two stations each (groups a, b, and g). The stations-by-species data table was ordered based on cluster analyses of stations and taxa into a 2-way shade plot (Figure 46).

Group f was characterized by the occurrence and abundance of polychaetes (*Levinsenia gracilis*, *Sigambra tentaculate*, *Melinna maculata*), mollusks (*Acteocina candei, Mercenaria mercinaria*), and a nemertean worm (*Tubulanus* sp. A). Group e samples had species composition similar to that of group f but without *Ninoe nigripes* and *Tharyx acutus*. Group a samples contained the only occurrences of the amphipod *Protohaustorius wigleyi*, and gastropods (*Crepidula fornicata* and *C. plana*) within Segment 3.

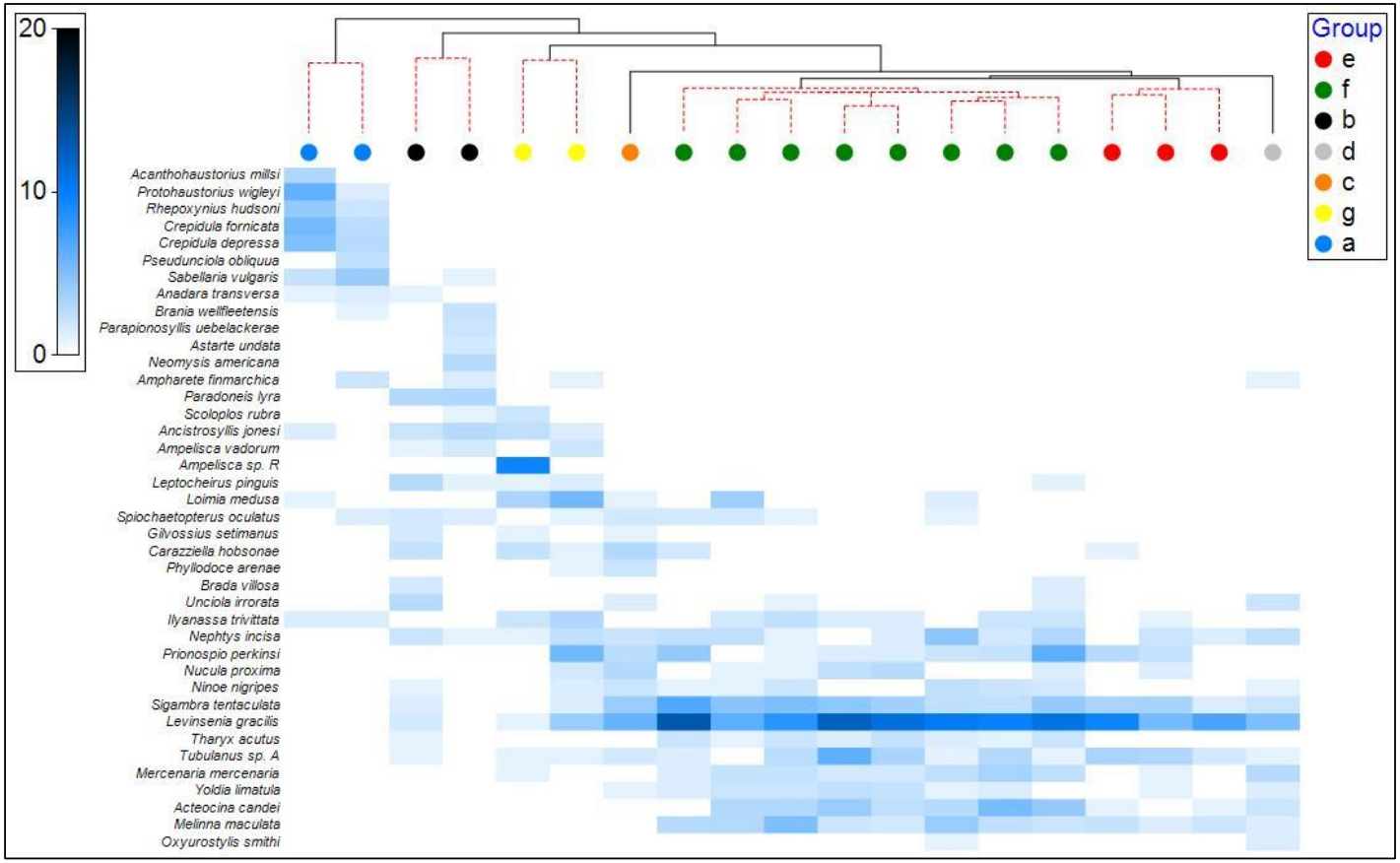


Figure 46 Results of normal cluster analysis of Segment 3 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in the Segment 3 samples.

5.3.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

NMDS ordination displayed station groups detected by the SIMPROF tests (Figure 47). Vectors representing percent TOC and percent sand point to the left and right sides of the ordination, respectively. As shown by the TOC vector, samples in Groups c, d, e, and f contained higher TOC levels than samples from the other SIMPROF groups (R^2=0.77, p<0.05). SIMPROF Groups a, b, and g were correlated with percent sand (62 to 82%) (R^2=0.54, p<0.05). The vector for percent gravel does not show a significant association with any of the SIMPROF groups in the ordination (R^2=0.0.10, p>0.05).

A plot of the SIMPROF groupings, based on infauna species composition, at the station coordinates reveals some small-scale spatial structuring (Figure 48). For example, the three stations in group e were all located at the beginning of Segment 3 and two the group a stations at the end of the Segment 3. Group f stations occurred in clumps of four, one and three stations along the lower two thirds of the Segment 3 extent. With a few exceptions, stations in this lower (southwest) two thirds of Segment 3 had higher TOC concentrations than did the five northernmost stations (Figure 48).

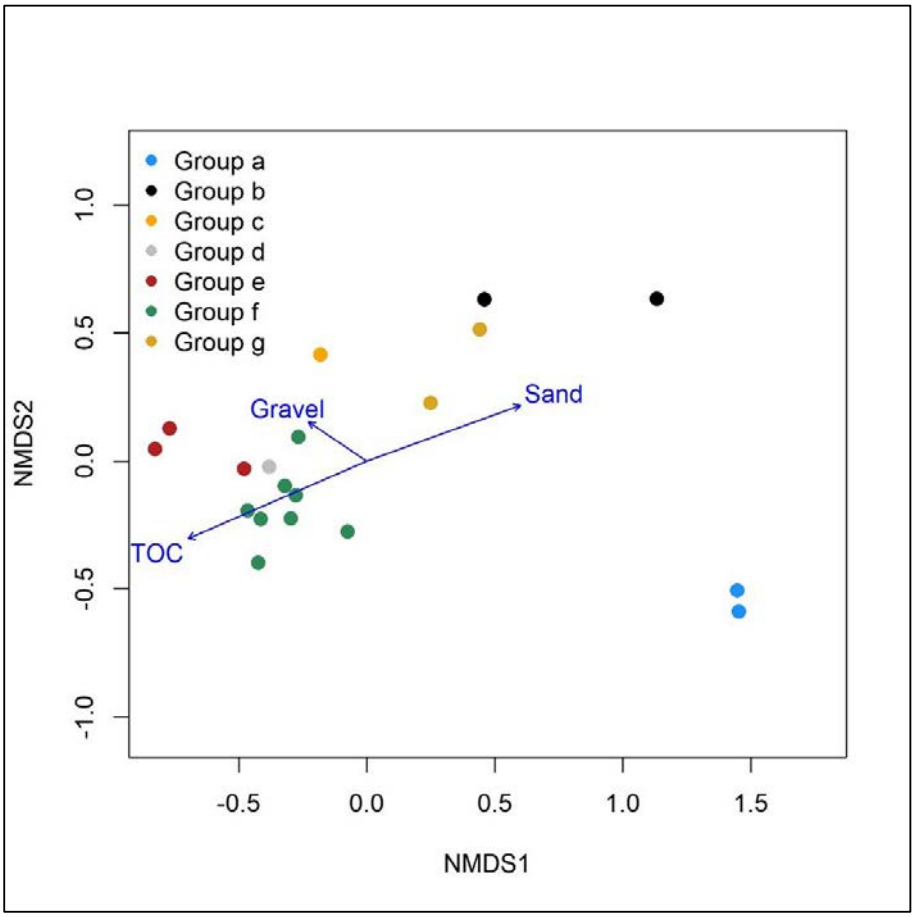


Figure 47 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand and gravel; and total organic carbon (TOC) in the samples.

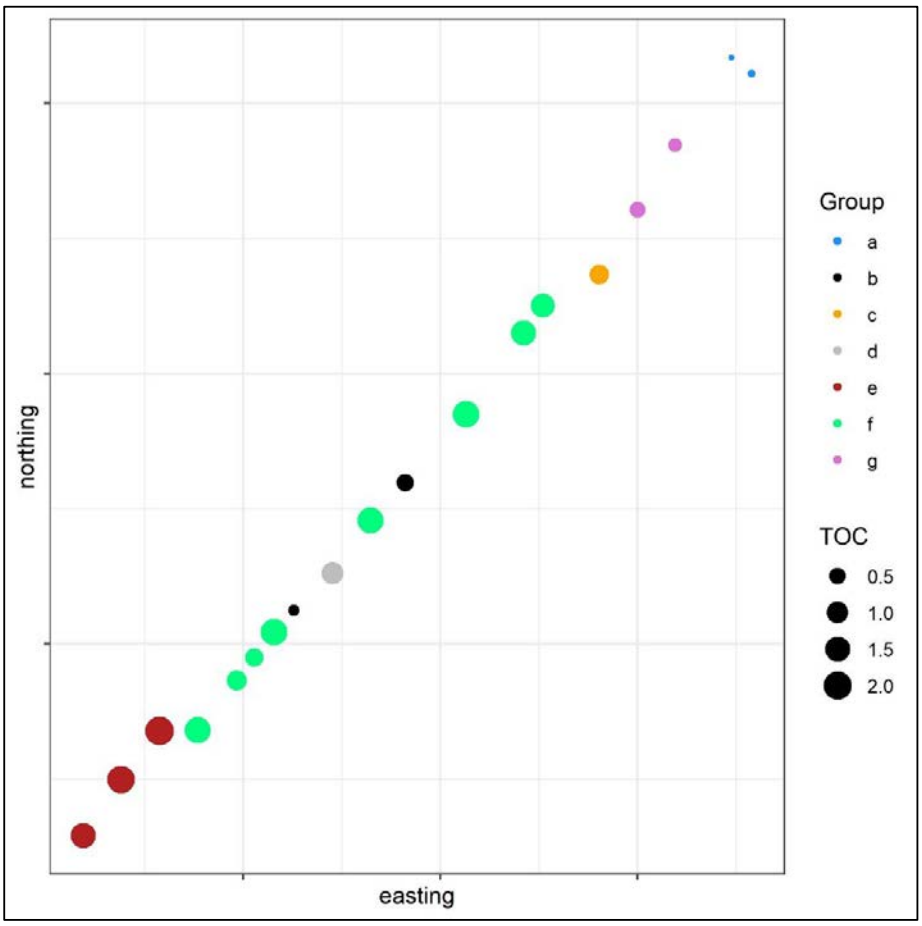


Figure 48 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 3. The size of the symbols is proportional to total organic carbon (TOC) levels (percent weight).

5.3.6| SPI RESULTS

SPI images were collected at a total of 77 stations along Segment 3. The results for the SPI image analysis are found in Attachment H. Selected parameters for Segment 3 are plotted in Figure 49 (grain size, penetration, and surface boundary roughness) and Figure 50 (aRPD, infauna succession, and organism sediment index).

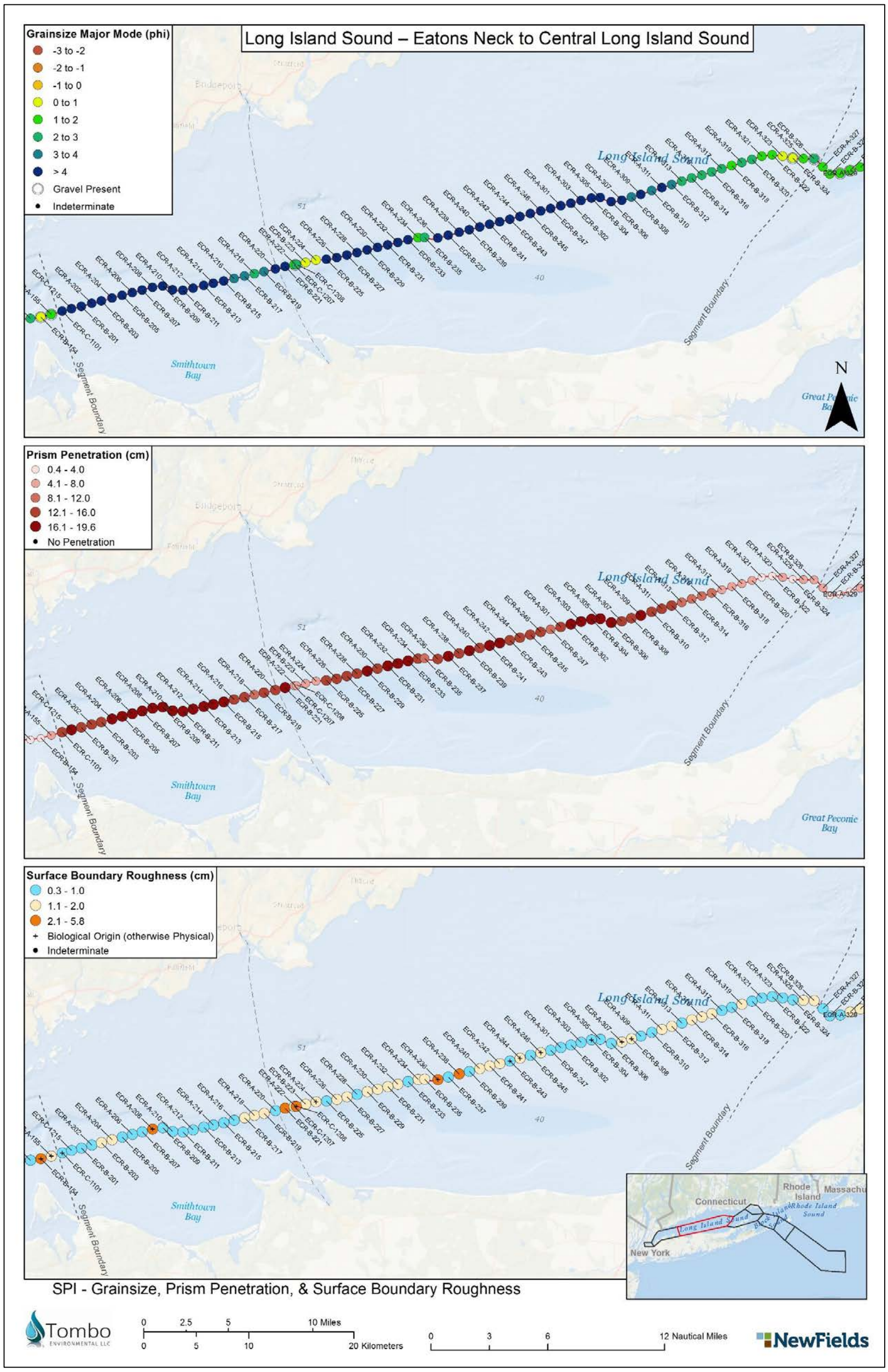


Figure 49 Sediment Profile Imaging (SPI) results for grain size, penetration, and surface boundary roughness along Segment 3. Segment 3 stations are located between the Segment Boundaries.

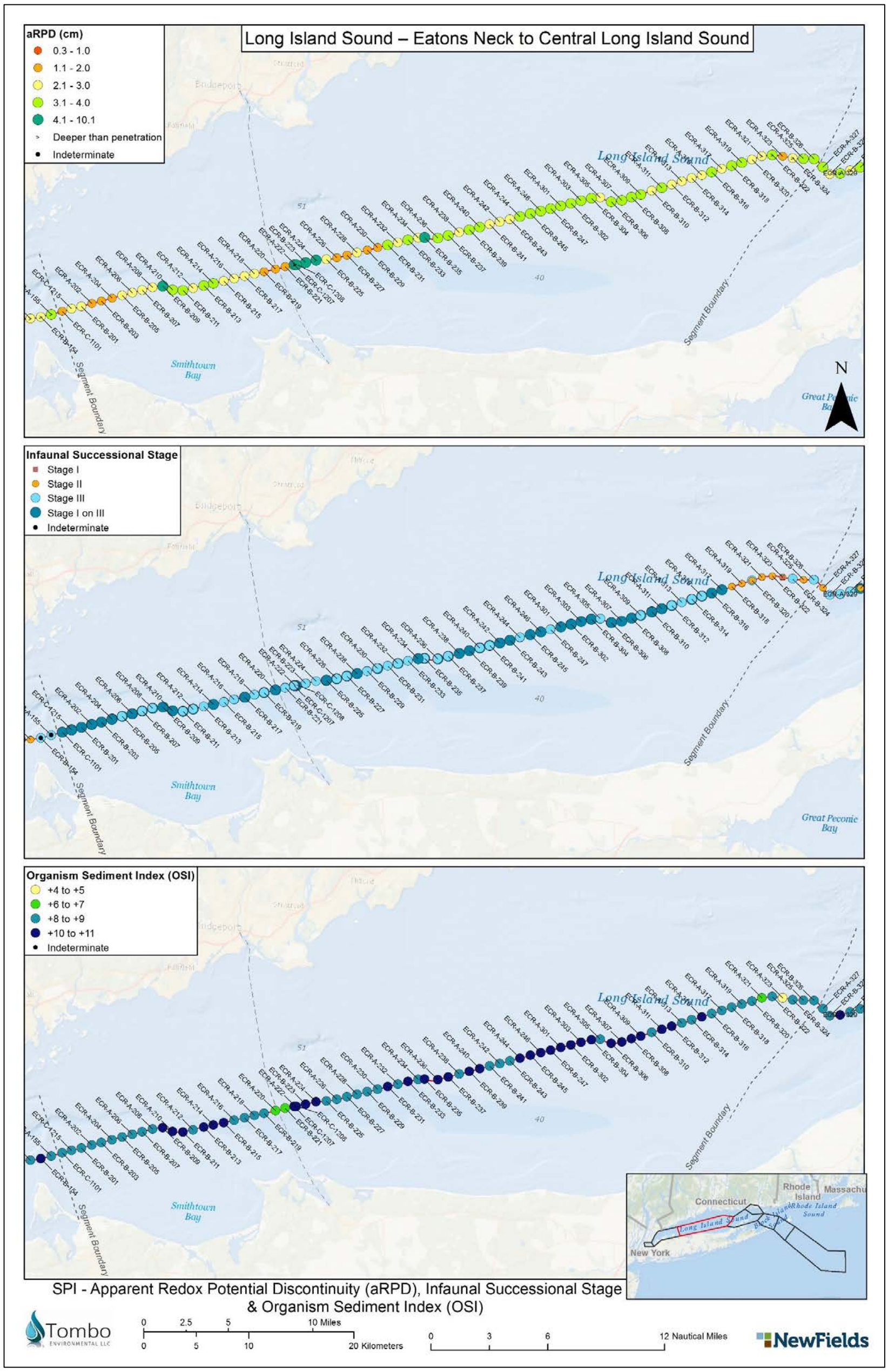
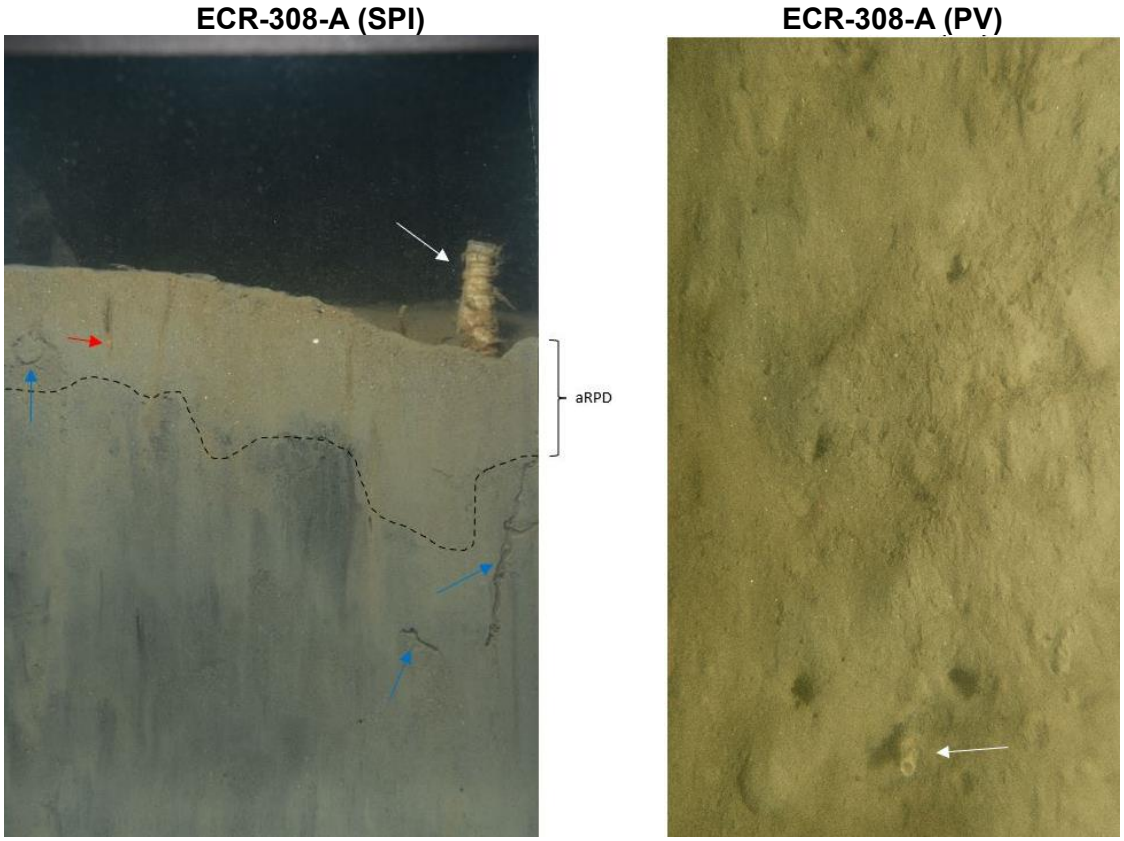


Figure 50 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 3. Segment 3 stations are located between the Segment Boundaries.

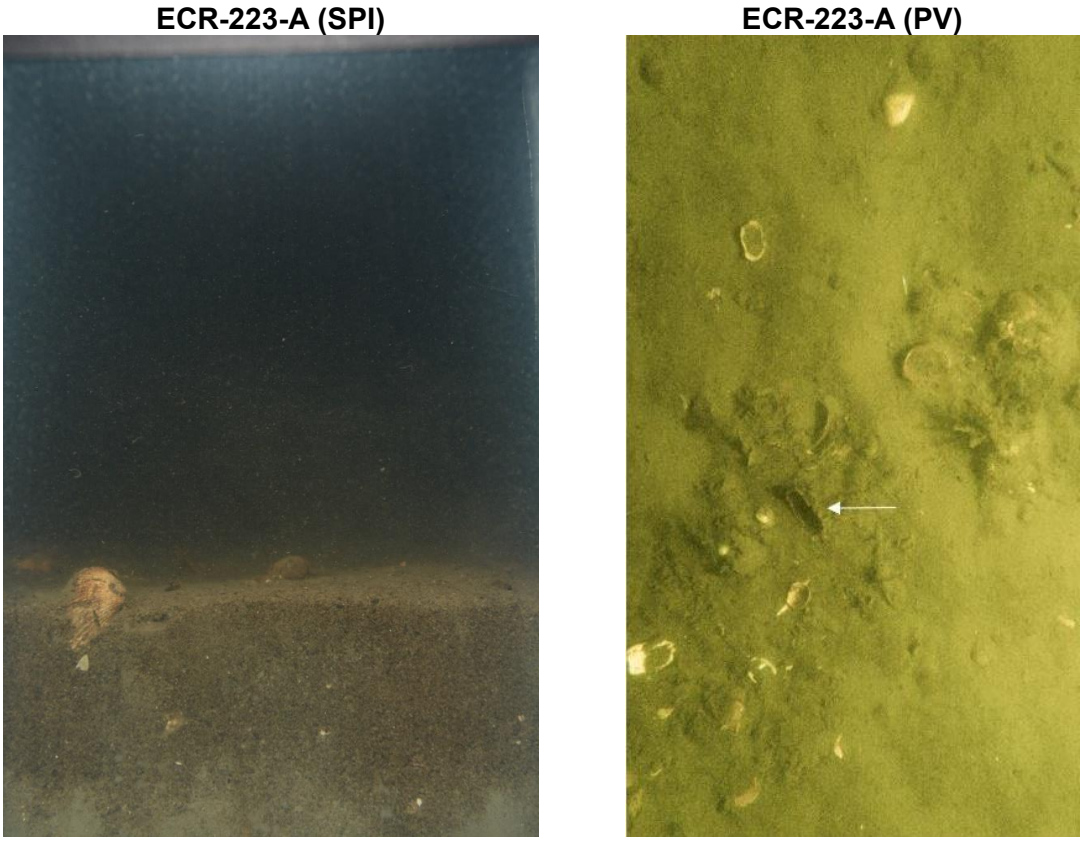
5.3.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode of surface sediments determined using SPI in Segment 3 was predominantly silt and clay (≥4 phi) (Figure 34) Example SPI/PV images showing typical silt/clay sediments in Segment 3 are provided in Image 36. Very fine (4 to 3 phi) and fine sand (3 to 2 phi) was present at 21 percent of the SPI images. A grain size mode of coarse sand (1 to 0 phi) was observed in 4 percent of the Segment 3 SPI images (Image 37). A grain size mode of very coarse sand (0 to -1 phi) was only observed at Segment 3 station ECR-222.



The SPI image from station ECR-308 showed surface sediments consisting of silt/clay (≥4 phi) with surface tubes, including a large polychaete (possibly *Chaeotopterus*) tube (white arrow). A feeding void and burrow structures (blue arrows) indicated the presence of Stage III organisms. A small polychaete (red arrow) was visible at depth. The PV image showed a muddy bottom with large surface burrows and the large *Chaeotopterus* tube (white arrow). SPI image width = 15cm. PV image area = 0.10 m^2 (estimated).

Image 36 Representative SPI and PV Images showing silt and clay dominated sediments from Segment 3 station ECR-308.



The SPI image from station ECR-223 showed surface sediments consisting of tan, brown very coarse sand (0 to -1 phi) overlying gray silt. Shells and shell particles were scattered on the sediment surface and at depth. The PV image showed fine muddy sand with shell hash, including shells with attached hydroids. SPI image width = 15cm. PV image area = 0.12 m².

Image 37 Representative SPI and PV Images showing coarse sand sediment from Segment 3 station ECR-223.

5.3.6.2| PRISM PENETRATION DEPTH

The distribution of SPI camera prism penetration (in centimeters) in the Segment 3 surface sediments is presented in Figure 49. The prism penetration depth provided a relative measure of sediment water content and shear strength of surface sediments. In general, prism penetration depths were relatively deep throughout Segment 3 and followed a pattern similar to the grain size major mode. Shallow prism penetration was generally observed where surface sediments consisted of medium or coarse sand. Penetration depths in Segment 3 ranged from 1.8 cm at station ECR-324 to 19.8 cm at station ECR-213 with a Segment average of 13.3 cm (± 4.5 cm, n = 154).

5.3.6.3 | SURFACE BOUNDARY ROUGHNESS

Mean surface boundary roughness values (i.e., surface relief) in Segment 3 are presented in Figure 49. Boundary roughness in Segment 3 ranged from 0.2 to 5.5 cm with a segment average of 1.1 cm (±0.81 cm, n = 154). The highest mean boundary roughness values (4.1 to 5.5 cm) were measured at stations ECR-208 and ECR-221 (Figure 49). The larger boundary roughness at station ECR-208 was due to biogenic surface pits, referred to as biological roughness while at station ECR-221, boundary roughness was due to a sloped surface referred to as physical roughness which was predominant in Segment 3.

5.3.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth provides a proxy for the degree of biogenic or physical mixing of surface sediments. The mean aRPD depths in Segment 3 as presented in Figure 50 ranged from 0.5 to 5.6 cm with a segment average of 2.9 cm (±1.0 cm, n = 154). The deepest aRPD depths (4.0 to 5.6 cm) were measured at stations ECR-1208 and ECR-222 through ECR-224, were fine to very coarse sand was present. As discussed in Section 4.3.4.1, the aRPD in coarse-grained surface sediments can be relatively deep, but difficult to measure due to the lack of optical contrast between oxidized and reduced particles (absence of silt/clays and organic matter). The aRPD depth at stations ECR-222 and ECR-224 was considered to be deeper than prism penetration depth due to the relatively wide surficial layer of coarse-grained sediments. Similarly, aRPD classifications (deeper than prism penetration depth) were noted for stations ECR-321, -322, and -324 where medium and coarse sand were present in surface sediments.

5.3.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 3 sediments was predominantly Stage III, present within 87 percent of the SPI images (Figure 50). Several images showed Stage I communities coexisting with the Stage III communities (47 percent of the SPI images). Stage I succession only, the initial pioneering stage, was only observed at station ECR-323 where coarse sand was present. In sandy, dynamic environments, the climax communities can be limited to surface dwellers (Stage I) due to higher energy conditions (see Section 4.3.4.1). Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at 10 percent of the SPI images and clustered together along the eastern portion of Segment 3.

5.3.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 3 since potential indicators for high SOD were lacking.

5.3.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The mean OSI values in Segment 3 as presented in Figure 50 range from +3 to +11. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. Nearly all OSI values in Segment 3 (99 percent) were +6 or higher. Only one SPI image from station ECR-323 indicated some local variability with a lower OSI value of +3 (Figure 50) that reflected the presence of a shallow aRPD and Stage I succession.

5.3.7 | PV RESULTS

The PV images were collected at 77 stations along Segment 3 (Figure 51). At the Segment 3 stations, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 1.1 ft^2 ((± 0.04 ft^2) [0.1 m^2 (± 0.04 m^2]).

5.3.7.1 | BEDFORMS

Physical bedforms were observed at 62 of the 77 Segment 3 sampling stations (Attachment G-2). Bedform ripples appearing as relic formations where fine silty deposits accumulate on ripple troughs (Image 38) are not characteristic of mobile sediment beds. Only a few of the Segment 3 stations were representative of mobile sediment beds.

Biological bedforms were observed at 15 of the 77 Segment 3 sampling stations (Attachment G-2) with muddy sand bottoms bioturbated with burrows, gastropod tracks and feeding depressions (Image 39).

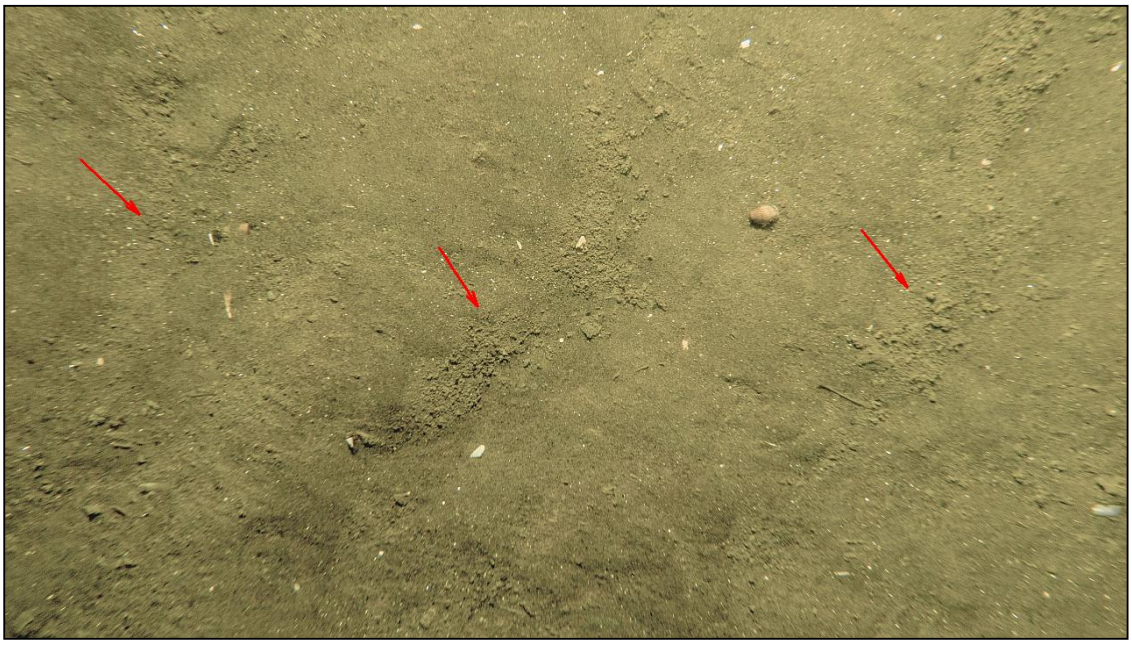


Image 38 Fine silty deposits on ripple troughs (red arrows) at Segment 3 station ECR-B-320.

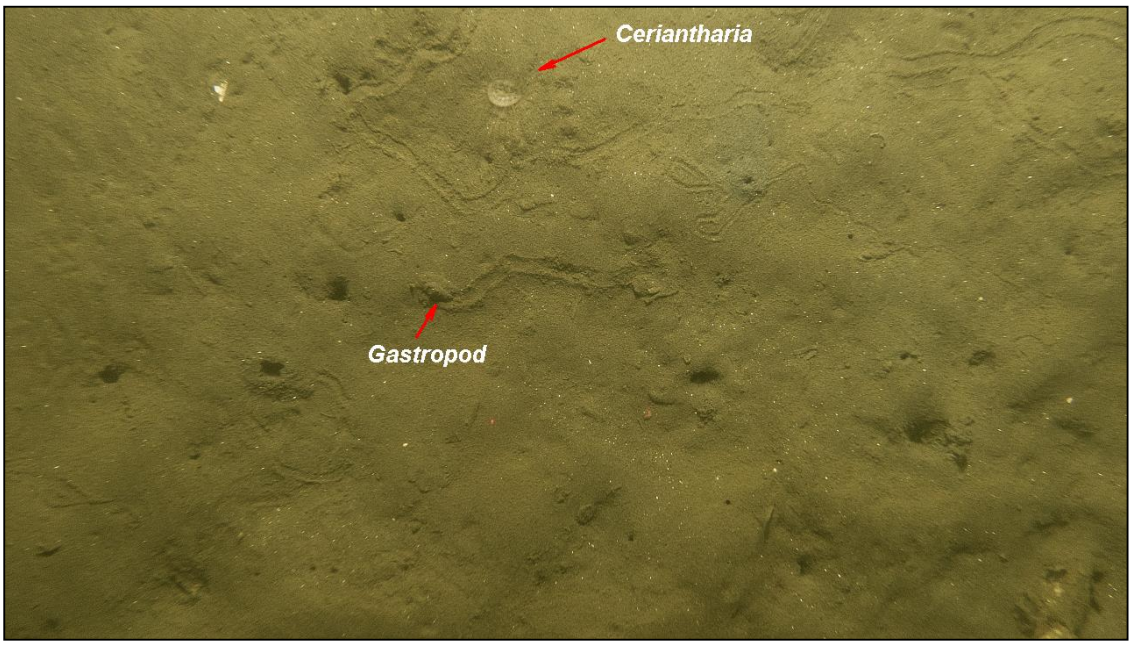


Image 39 Muddy sand bottom heavily bioturbated with burrows and gastropod (Ilyanassa sp.) tracks and a Ceriantharian burrowing anemone at Segment 3 station ECR-B-314.

5.3.7.2| FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 3 stations are provided in Attachment G-1. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 3 stations is shown in Figure 51. The biological assemblage observed in PV images from Segment 3 stations was not considered diverse with generally low faunal coverage. No marine macrophytes or seagrasses were observed in Segment 3. Dominant fauna observed in Segment 3 are as follows:

- The northern star coral *Astrangia poculata* was observed attached to cobble at five Segment 3 stations (Attachment G-1), with imagery showing single to multiple colonies per station (Image 40). The highest faunal percent cover was estimated to be 25 percent with a total count of 24 coral colonies in Segment 3;
- Stacks of slipper snails, *Crepidula fornicata*, were observed at four of the 77 Segment 3 stations; these stacks were observed attached to cobble substrate and in soft sediments (Image 41). There was a total of 88 individuals with a majority (66) observed attached to cobble;
- Stalks of the *Sertularia* hydroid were observed at nine of the 77 Segment 3 stations and considered attached fauna at two stations and soft sediment fauna at seven stations. The hydroid colonies were attached to some form of hard substrate whether it was a small shell fragment in predominant soft substrate (Image 41) or on cobble in a predominant gravel substrate;
- Mud snails (*Ilyanassa sp.*) were observed in soft sediments at 18 of the 77 Segment 3 sampling stations. Approximately 23 individuals were counted within Segment 3; and

- The hermit crab *Pagurus* sp. was observed at eight out of 77 Segment 3 stations with a total of 31 individuals.

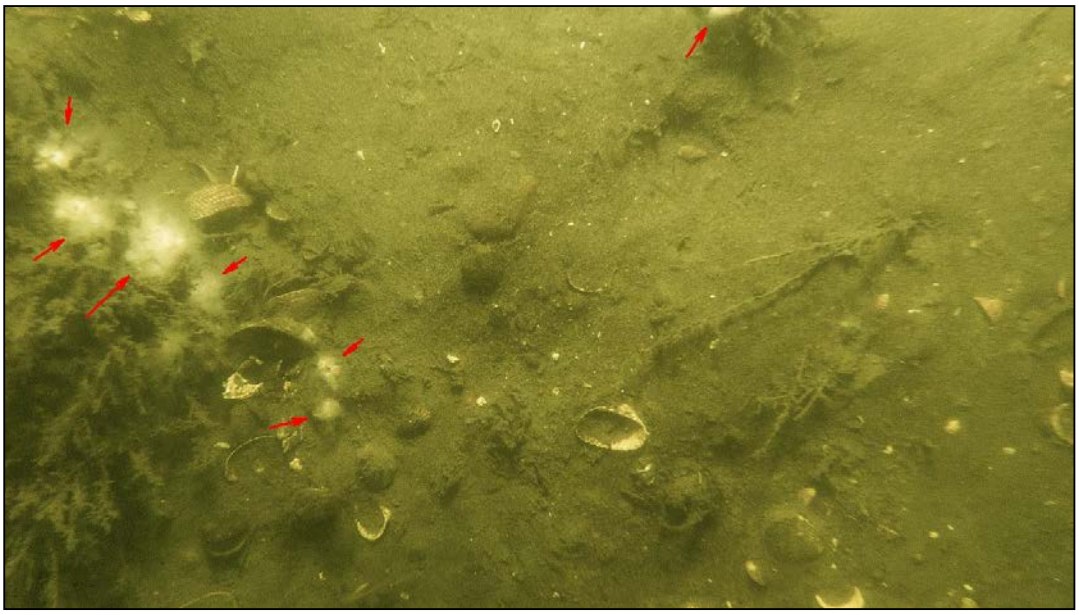


Image 40 Hydroids and small colonies of northern star coral, Astrangia poculata (red arrows) attached to cobble at Segment 3 station ECR-C-1208.

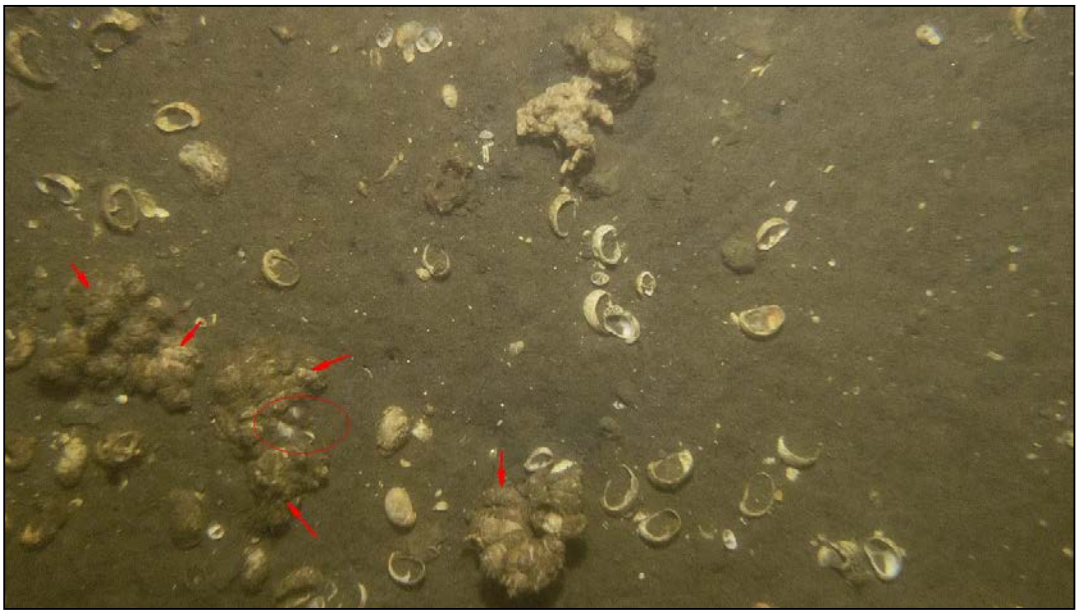


Image 41. Gravelly sand bottom with live stacks of Crepidula fornicata (red arrows) and northern star coral Astrangia poculata (red circle) at Segment 3 station ECR-A-323.

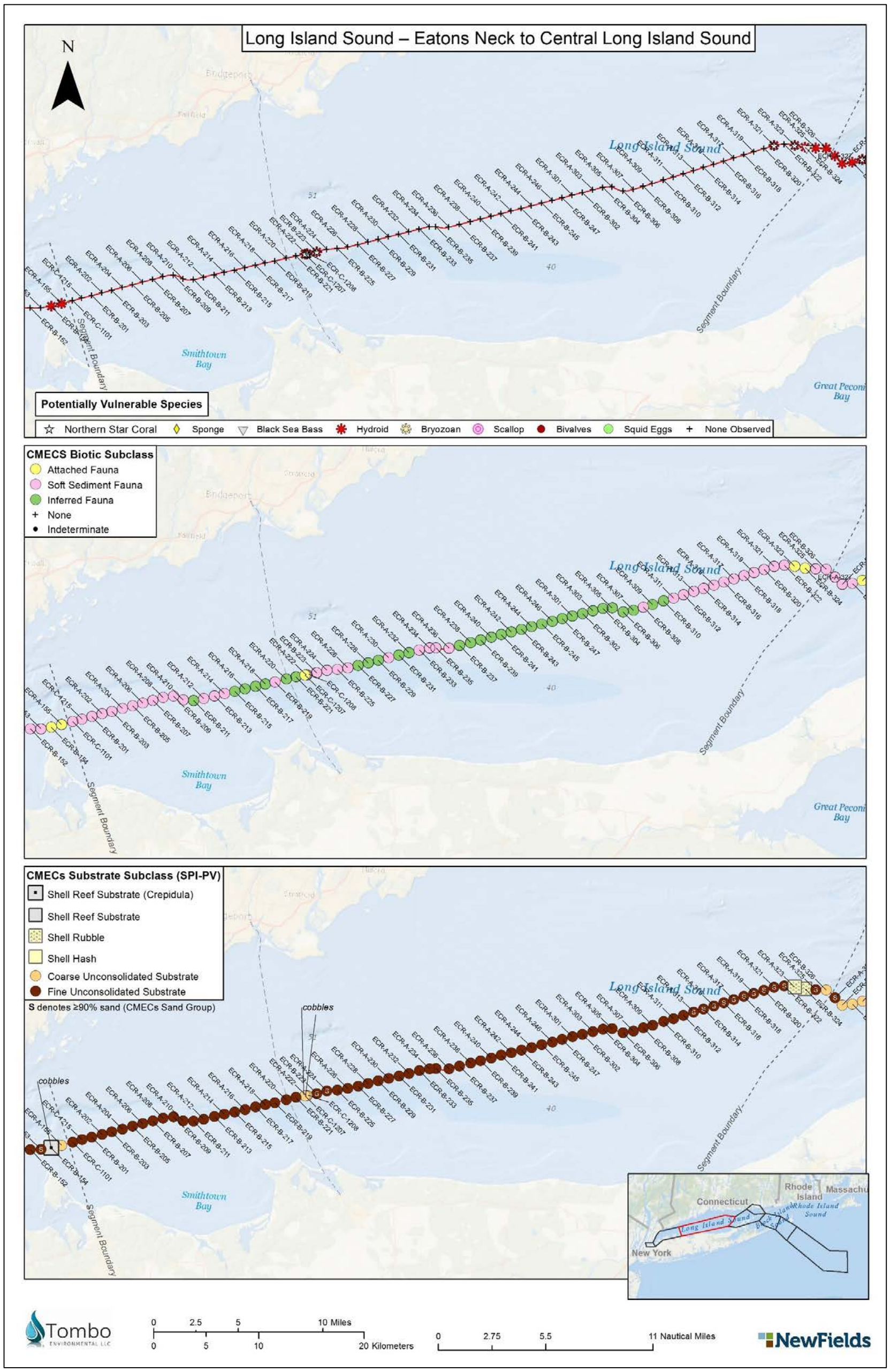


Figure 51 Plan View (PV) imaging results along Segment 3. Segment 3 stations are located between the Segment Boundaries.

5.3.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The PVS to project impacts observed in Segment 3 include the northern star coral, *Astrangia poculata*, based on meeting NOAA (2021) criteria of being a long-lived and habitat-forming species. Additionally, two juvenile black seabass which may be considered a PVS, were observed at station ECR-B-324, (Image 42).

Image 42 Medium sand bottom with ripples, live Crepidula fornicata shells and juvenile black sea bass (red arrows) at Segment 3 station ECR-B-324.

5.3.7.4| NON-NATIVE TAXA

No non-native species were observed in Segment 2.

5.3.8| CMECS CLASSIFICATIONS

5.3.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/towed camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. The Physiographic Setting, for Segment 3 within Long Island Sound was classified as Sound.

Both Geoform Levels 1 and 2 were considered for the classifications of each Segment 3 station along the ECR, with modifications made in certain instances. The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012; Mittermayr, 2020).

The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and Level 2 represents features smaller than 0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 3 had a flat overall seafloor topography consisting of unconsolidated substrate (ranging from silt to boulders) and stations were classified as Level 1 Flat Geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

At the smaller scale (less than 0.4 mi^2 [1 km^2] in size), the Geoform Level 2 classification consisted of two (2) categories. The first category is the Burrow/Bioturbation Geoform, of biogenic origin, consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna. Fifty (50) of the 55 Segment 3 stations were classified as Burrow/Bioturbation Geoform.

The other Level 2 classification is the Boulder Field Geoform, of geologic origin, described as an area dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. The Boulder Field Geoform was observed at five Segment 3 stations. Geoform classifications for Segment 3 are summarized and illustrated in Table 45 and Figure 52.

Table 45 Geoform components based on drop/towed video for Segment 3.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sound	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-A-212, ECR-A-236, ECR-B-201, ECR-B-203, ECR-B-205, ECR-B-207, ECR-B-209, ECR-B-211, ECR-B-213, ECR-B-215, ECR-B-217, ECR-B-219, ECR-B-221, ECR-B-223, ECR-B-225, ECR-B-227, ECR-B-229, ECR-B-231, ECR-B-233, ECR-B-235, ECR-B-237, ECR-B-239, ECR-B-241, ECR-B-243, ECR-B-245, ECR-B-247, ECR-B-302, ECR-B-304, ECR-B-306, ECR-B-308, ECR-B-310, ECR-B-312, ECR-B-314, ECR-B-316, ECR-B-318, ECR-B-320, ECR-B-322, ECR-B-324, ECR-B-326, ECR-C-1101, ECR-C-1201, ECR-C-1202, ECR-C-1203, ECR-C-1204, ECR-C-1205, ECR-C-1206, ECR-C-1210, ECR-C-1211, ECR-C-1212, ECR-C-1215
				Geologic	Boulder Field	ECR-C-1207, ECR-C-1208, ECR-C-1209, ECR-C-1213, ECR-C-1214

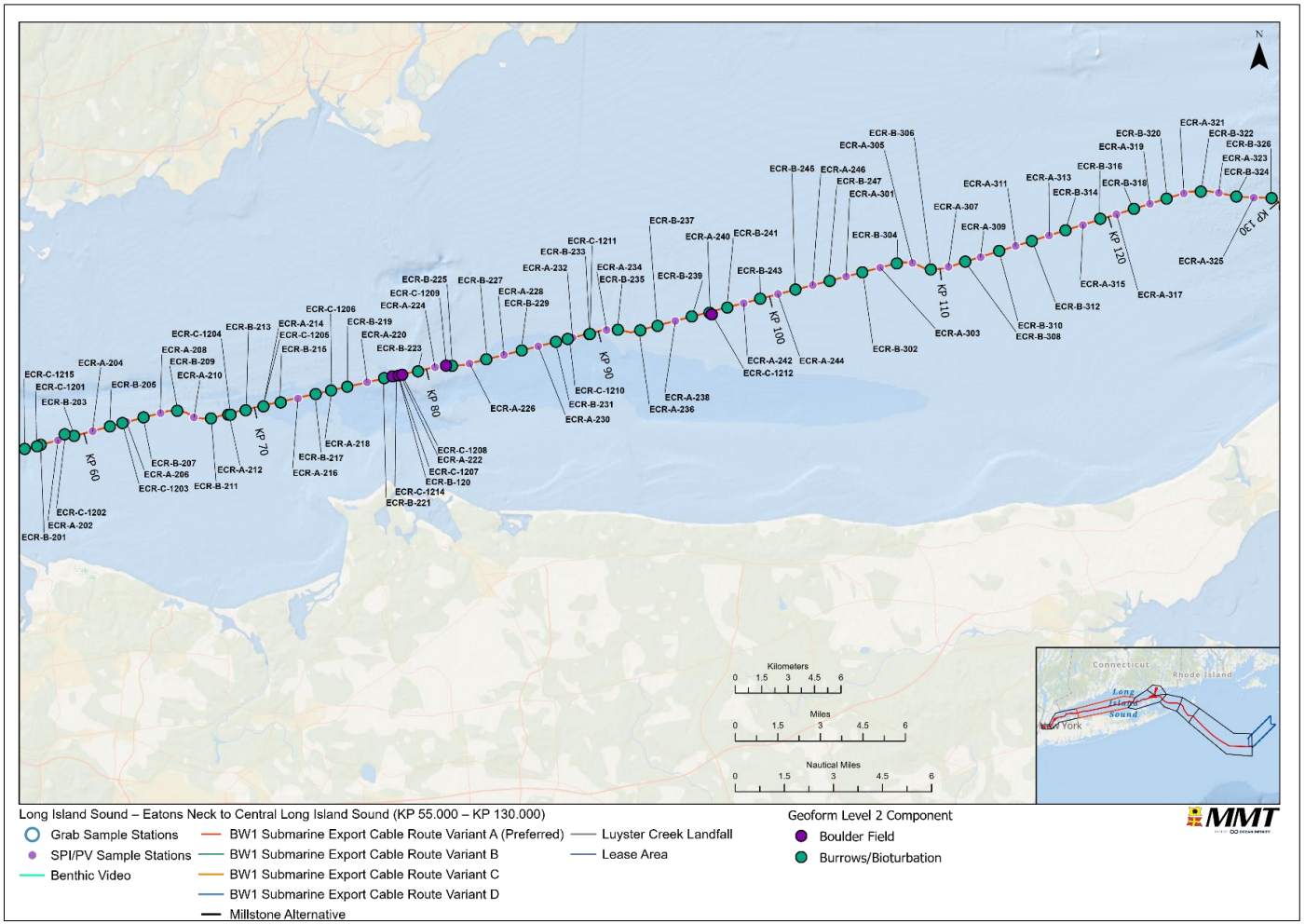


Figure 52 Overview of classified CMECS Geoform Level 2 Component based on drop/towed video in Segment 3.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/tow camera benthic video data (Table 46 and Figure 53). The entire Segment 3 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Fifty (50) of the 55 Segment 3 stations were classified as Soft Sediment Fauna (the same stations classified as Burrows/Bioturbation Level 2 Geoform). There did not appear to be any dominant macrofauna at these stations.

The other five stations were classified as Attached Fauna; the same stations were classified as Boulder Field Level 2 Geoform. Attached Fauna stations were further categorized into the Biotic Group, Diverse Colonizers and Biotic Community, Large Macrofauna, due to the various kinds of epifauna observed on the boulders including sponges, hydroids, bryozoans, tunicates, and the northern star coral, *Astrangia poculata*, that was present at four of the five stations where boulders were present: ECR-C-1207, ERC-C-1208, ERC-C-1209, and ERC-C-1214.

Table 46 CMECS Biotic components based on drop/towed camera video for Segment 3.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-A-212, ECR-A-236, ECR-B-201, ECR-B-203, ECR-B-205, ECR-B-207, ECR-B-209, ECR-B-211, ECR-B-213, ECR-B-215, ECR-B-217, ECR-B-219, ECR-B-221, ECR-B-223, ECR-B-225, ECR-B-227, ECR-B-229, ECR-B-231, ECR-B-233, ECR-B-235, ECR-B-237, ECR-B-239, ECR-B-241, ECR-B-243, ECR-B-245, ECR-B-247, ECR-B-302, ECR-B-304, ECR-B-306, ECR-B-308, ECR-B-310, ECR-B-312, ECR-B-314, ECR-B-316, ECR-B-318, ECR-B-320, ECR-B-322, ECR-B-324, ECR-B-326, ECR-C-1101, ECR-C-1201, ECR-C-1202, ECR-C-1203, ECR-C-1204, ECR-C-1205, ECR-C-1206, ECR-C-1210, ECR-C-1211, ECR-C-1212, ECR-C-1215
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-C-1207, ECR-C-1208, ECR-C-1209, ECR-C-1213, ECR-C-1214

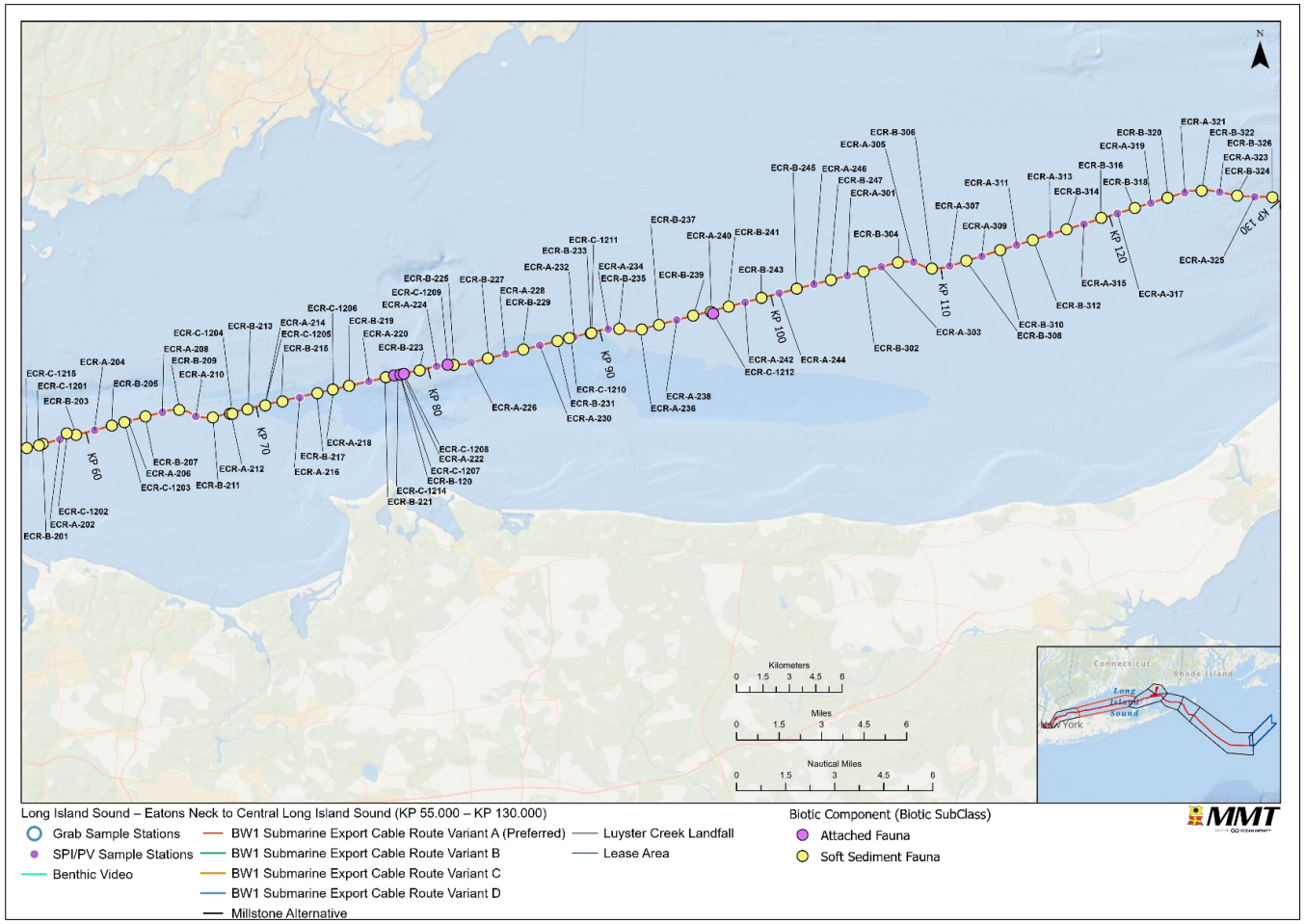


Figure 53 Overview of classified CMECS Biotic Component based on drop/towed camera video in Segment 3.

5.3.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Forty-one (41) benthic grab stations were successfully sampled along Segment 3.

CMECS and NMFS-modified substrate classifications for all 41 Segment 3 stations were derived from PSD results. After a review of benthic grab content imagery, no stations were determined to consist of substantial (>50 percent) biogenic (shell) material (Image 21).

CMECS substrate component classifications for benthic grab stations sampled from Segment 3 are presented in Table 47 and shown in Figure 54. The NMFS-modified CMECS substrate component classifications for Segment 3 stations are provided in Table 48 and shown in Figure 55. Within Segment 3, 51 percent (n=21) of benthic grab samples contained coarse unconsolidated substrate and 49 percent (n=20) contained fine unconsolidated substrate. Substrate types included Gravelly Mud, Gravelly Muddy Sand, Gravelly Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sand (CMECS), Slightly Gravelly Sandy Mud (CMECS)/Sandy Mud (NMFS-modified CMECS) and Silt (CMECS)/Mud (NMFS-modified CMECS).

Coarse unconsolidated substates and biogenic substrates are considered as indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. Fine unconsolidated substrate types are typically indicative of soft-bottomed habitats (NOAA Fisheries 2021).

The primary benthic grab sample and QC replicate from station ECR-B-322 were both classified as Medium Sand using NMFS-modified CMECS substrate classifications (Table 48). However, a slight gravel component (0.3 percent) detected in the primary sample (ECR-B-322) which was not present in the QC replicate (ECR-B-322-QC) resulted in different CMECS classifications at the substrate group level (Table 47).

a. Gravelly Mud (ECR-B-209)	b. Gravelly Muddy Sand (ECR-B-326)	c. Gravelly Sand (ECR-B-324)
d. Slightly Gravelly Sand (CMECS)/Medium Sand (NMFS-modified CMECS; ECR-B-322)	e. Silt (CMECS)/Mud (NMFS-modified CMECS; ECR-B-302)	

Image 43 Grab content images showing some representative substrate types encountered at benthic grab sampling stations from Segment 3.

Table 47 CMECS substrate component classifications for benthic grab stations sampled along Segment 3. Substrate classifications are grouped by substrate origin/class or subclass separated by horizontal grey bars.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-203	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-205	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-207	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-209	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-211	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-213	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-229	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-231	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-233	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-237	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-239	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-239-QC	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-241	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-243	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud
ECR-B-223	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-225	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-227	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-235	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-326	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-C-1207	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-C-1208	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-324	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-217	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-219	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-219-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-312	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-314	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-316	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-318	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-320	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-C-1101	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-322	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-201	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-215	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-221	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-245	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-302	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-304	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-306	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-308	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-310	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-C-1215	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-322-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand
ECR-B-247	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	Silt

N/A: Not Applicable; QC: Quality Control.

Table 48 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled from Segment 3. Substrate classifications are grouped by substrate origin/class or subclass separated by horizontal grey bars.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-203	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-205	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-207	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-209	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-211	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-213	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-229	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-231	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-233	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-237	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-239	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-239-QC	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-241	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-243	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Mud	Granule/Pebble
ECR-B-223	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-225	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-227	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-235	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-326	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-C-1207	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-C-1208	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-324	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	Granule/Pebble

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-217	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-219	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-219-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-312	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-314	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-316	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-318	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-320	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-C-1101	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-322	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-201	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-215	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-221	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-245	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-302	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-304	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-306	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-308	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-310	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-C-1215	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-322-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-247	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	N/A	N/A

N/A: Not Applicable; QC: Quality Control.

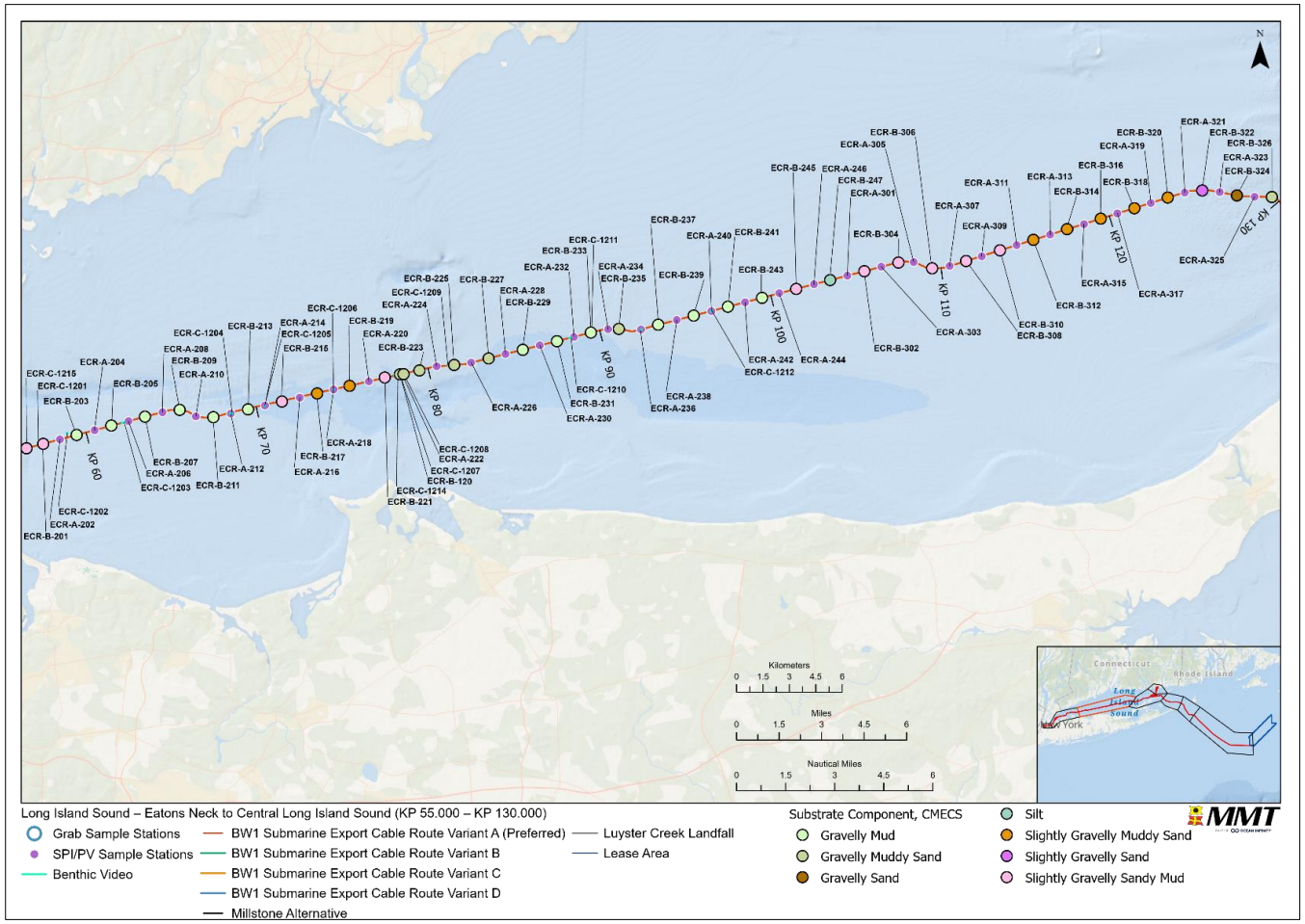


Figure 54 CMECS substrate component classifications for benthic grab stations sampled from Segment 3.

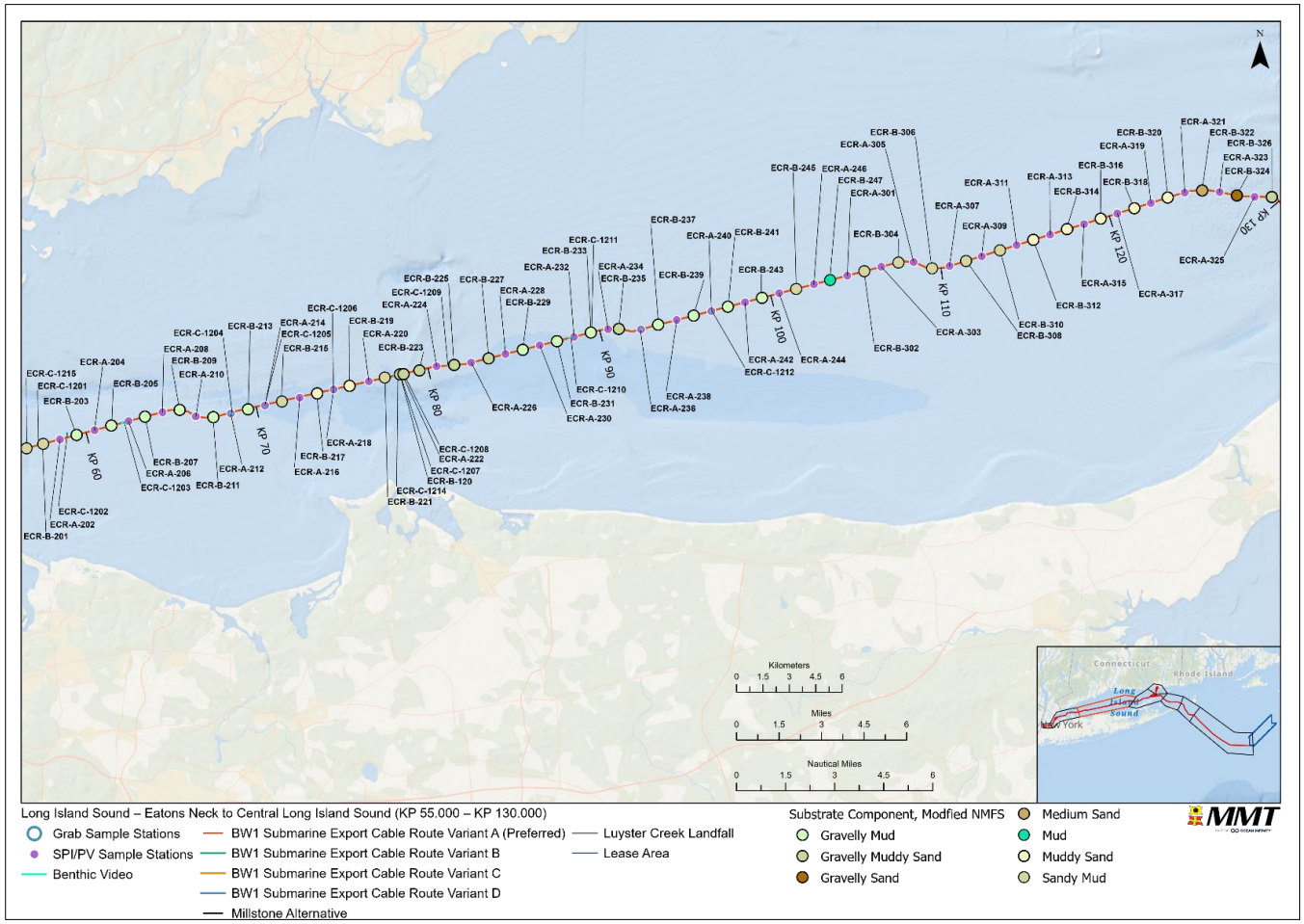


Figure 55 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled from Segment 3.

5.3.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). Segment 3 was composed of 97 percent CMECS Unconsolidated Mineral Substrate at 75 of the 77 Segment 3 stations while the CMECS Shell Substrate class type was observed at two out of 77 Segment 3 stations (Table 49).

CMECS Fine Unconsolidated Substrate was present at 71 of the 77 Segment 3 stations (Table 49). CMECS Fine Unconsolidated Substrate was composed of sand, muddy sand and sandy mud. Fine Unconsolidated Substrate extended throughout Segment 3 (Figure 51, CMECS Substrate Subclass panel and Table 49.

CMECS Coarse Unconsolidated Substrate was present at four of the 77 Segment 3 stations (Figure 51, CMECS Substrate Subclass panel). CMECS Coarse unconsolidated substrate was composed of gravelly sand and muddy sandy gravel (Table 49).

CMECS Shell Rubble subclass was observed at two of the 77 Segment 3 stations (Figure 51, CMECS Substrate Subclass panel and Table 49).

Table 49 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 3.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	75	97%	Fine Unconsolidated Substrate	71	92%	Sand	13	17%	Fine/Very Fine Sand	8	10%
									Medium Sand	3	4%
									Very Coarse/Coarse Sand	2	3%
						Muddy Sand	7	9%	--	7	9%
						Sandy Mud	51	66%	--	51	66%
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	4	5%	Gravels	0	0%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	0	0%
									Gravel Pavement	0	0%
						Gravel Mixes	2	3%	Sandy Gravel	0	0%
									Muddy Sandy Gravel	2	3%
									Muddy Gravel	0	0%
						Gravelly	2	3%	Gravelly Sand	2	3%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	2	3%	Shell Reef Substrate	0	0%	Crepidula Reef Substrate	0	0%	--	--	--
									--	--	--
			Shell Rubble	2	3%	--	2	3%	--	2	3%
			Shell Hash	0	0%	--	--	--	--	--	--

5.3.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The Soft Sediment Fauna CMECS subclass biotic component was observed at 44 of the 77 Segment 3 sampling stations (Figure 51, CMECS Biotic Subclass panel). The Soft Sediment Fauna component included *Pagurus* beds, *Sertularia* beds, *Crepidula* beds, *Chaetopterus* polychaete beds and *Ilyanassa* beds (Attachment G-1).

The CMECS Subclass Attached Fauna biotic component was observed at three of the 77 Segment 3 sampling stations (Figure 51, CMECS Biotic Subclass panel). The Attached Fauna component included colonies of Astrangiidae corals (*Astrangia poculata*), *Sertularia* hydroids and *Crepidula* shell stacks.

Thirty-two (32) of the 77 Segment 3 stations were classified and mapped as Inferred Fauna CMECS subclass biotic component (Figure 51, CMECS Biotic Subclass panel). The Inferred Fauna CMECS subclass biotic component observed in Segment 3 includes the CMECS Track and Trails group with decapod tracks and gastropod trails, the CMECS Fecal Mounds group with *Arenicola* fecal castings (Attachment G-1).

No CMECS Class Aquatic Vegetation was observed in Segment 3.

5.4| LONG ISLAND SOUND - CENTRAL LONG ISLAND SOUND TO THE RACE

Segment 4 includes sample stations along the BW1 Variant A submarine export cable corridor from Central Long Island Sound to The Race and includes additional stations along an alternate Variant B corridor located to the north of a section of the Variant A corridor (Figure 56).

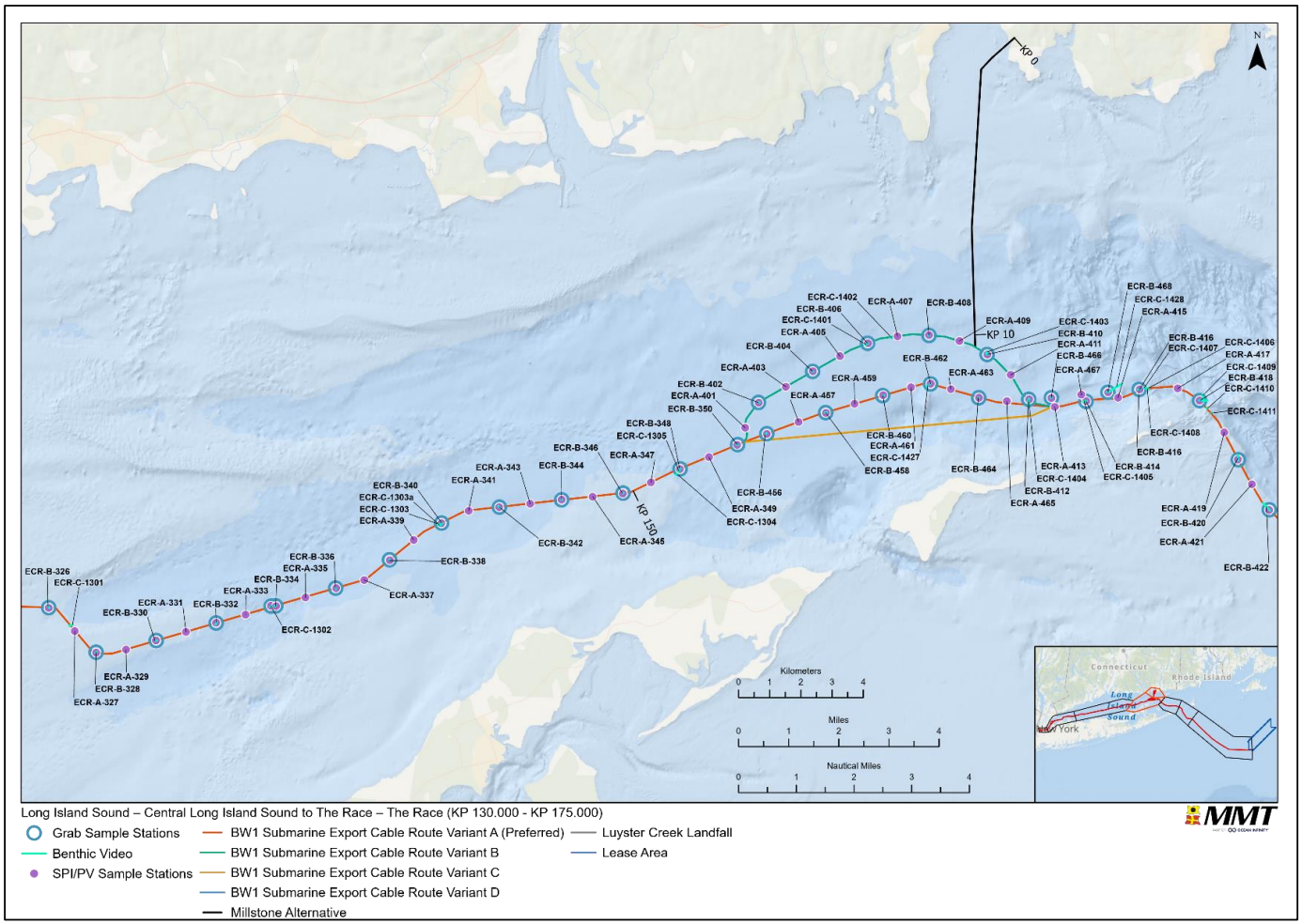


Figure 56 Overview of the Segment 4 sample stations.

5.4.1| BENTHIC VIDEO

The Segment 4 seabed was characterized by various substrates, including fine sandy silt, coarser sand substrate, areas of gravel, cobble and boulders covered in epiphytic growth, and areas of concentrated shells (some consisting of intact bivalve shells, shell fragments and shell hash). There were areas of fine sediments where bioturbation was observed in the form of tracks and burrows, the presence of tube-building amphipods and polychaetes and bivalve siphons protruding from the sediment. Undulating sand ripple/ features were also observed within Segment 4. These substrates supported a relatively diverse assemblage of macrobenthic taxa and demersal fish (some fish that may be present in Segment 4 are listed in Section 5.0). The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitat from within this Segment are provided in Image 44, Image 45 and Image 46.

No consolidated hard substrates were observed within Segment 4. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 1 m within the water column.

Observed macroinvertebrates included various mollusks – slipper snails (*Crepidula* spp.*),* whelks (*Busycotypus* sp. or *Busycon* spp.), and unidentified bivalves; crustaceans - hermit crabs (*Pagurus* spp.), spider crabs (*Libinia* sp.), and Atlantic rock crab (*Cancer irroratus*); and echinoderms - sea urchins (*Arabacia punctulata*) and sea stars. Observed attached biota included bryozoans, colonial tunicates, hydroids, anemones and various sponges (including *Cliona* spp.). The northern star coral (*Astrangia poculata*) was observed growing on boulders at 10 stations within Segment 4: ECR-C-1303, ERC-C-1304, ERC-C-1405, ERC-C-1406, ERC-C-1407, ERC- C-1408, ERC-C-1409, ERC-C-1410, ERC-C-1411 and ECR-C-1427.

Image 44 Representative image from Segment 4 displaying a boulder with attached epifauna including the sponge (Cliona sp.).

Image 45 Representative image from Segment 4 displaying an area of concentrated shells and shell hash with some gravel integrated into the sand bottom.

Image 46 Representative image from Segment 4 displaying an area of sand ripples, with coarser sand and shell hash commonly seen in the troughs.

5.4.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 4 are provided in Attachment B. Of the 30 Segment 4 stations, twenty-eight (28) yielded sediment samples from benthic grabs. The collection of benthic grab samples was not successful at stations ECR-B-418 and ECR-B-420 due to interference with the grab from cobble-sized substrates.

None of the 28 stations' benthic samples collected had any distinctive odor. Details are provided in Attachment B with the other noted visual observations.

Anthropogenic debris was not observed in any of the Segment 4 benthic grabs. Successful grab samples had penetration depths ≥2.8 in (7 cm), adequate to sample macroinfauna.

Several grabs were observed to contain shell and shell fragments and gravel, and various macrofauna (Attachment B; Image 47), while others lacked notable surficial features (Image 48).

Image 47 Representative surficial grab sample from station ECR-B-410 displaying some shell and shell fragments, some gravel and pebbles in coarse sand. An urchin (Arabacia punctulata) is visible in the upper right corner.

Image 48 Representative surficial grab sample from station ECR-B-346 displaying mostly medium sand to very fine sand.

5.4.3| PARTICLE SIZE DISTRIBUTION

A total of 28 samples from Segment 4 stations (Figure 56) were analyzed for PSD; additional QC sediment samples were collected at two stations. The PSD for these samples is based on the Wentworth scale (Table 21) as presented in Table 50 for Segment 4.

All 28 Segment 4 sediment samples had some type of gravel (Pebbles and/or Granules). Fifteen (15) stations had a total gravel fraction of 10 percent or more, five of which had 25 percent or more, and one station, ECR-B-412, had over a 50 percent gravel fraction.

Twenty-five (25) of the stations had sediment compositions that consisted of a greater than 50 percent of sand. A single station, ECR-B-348 had a combined Silt and Clay fraction that exceeded 50 percent of the sediment composition (64.3 percent).

Total gravel, total sand, and silt + clay was calculated and are presented in Figure 57 and Figure 58. Figure 57 and Figure 58 illustrate the TOC results, as more thoroughly presented in Section 5.4.4, relative to the percentage of total gravel, total sand, and silt + clay.

Table 50 Percentages of particle size classes according to Wentworth (1922) from Segment 4. Grayed columns show sediment component totals. Note: stations along the Variant B corridor are shaded in blue.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-328	--	--	0.6	0.8	1.4	4.2	14.9	59.8	9.2	0.8	88.9	8	1.7	9.7
ECR-B-330	--	--	14	6.9	20.9	6.6	8	34.5	13.8	1.4	64.3	11.4	3.4	14.8
ECR-B-332	--	--	3.8	0.3	4.1	1.1	5.6	48	17.3	1.2	73.2	18.5	4.2	22.7
ECR-C-1302	--	--	--	1.2	1.2	4.9	31	49.9	2.2	--	88.0	8.8	2	10.8
ECR-B-334	--	--	0.5	2	2.5	7.4	27.2	47.4	4.2	0.2	86.4	9.1	2	11.1
ECR-B-336	--	--	0.5	0.8	1.3	1.8	4.9	42.9	20.4	3.1	73.1	20.9	4.7	25.6
ECR-B-338	--	--	0.2	1.2	1.4	3.9	10.8	40.6	25.4	1	81.7	14.5	2.4	16.9
ECR-B-340	--	--	--	0.6	0.6	1.8	8.9	49.5	28.1	0.4	88.7	9.5	1.2	10.7
ECR-B-340-QC	--	--	--	0.3	0.3	2	11	49.8	25.9	0.5	89.2	9	1.5	10.5
ECR-B-342	--	--	0.1	0.8	0.9	2.5	22	57.5	5.8	0.2	88.0	9.6	1.5	11.1
ECR-B-344	--	--	0.2	1.7	1.9	9.6	40.3	36.2	1.5	0.1	87.7	9	1.4	10.4
ECR-B-346	--	--	22.3	2.5	24.8	0.7	1.2	44.4	16.5	0.8	63.6	10.6	1	11.6
ECR-B-348	--	--	--	0.2	0.2	3	5.7	16.5	9.4	0.9	35.5	35.5	28.8	64.3
ECR-B-350	--	--	8.8	5.2	14.0	6.5	9.1	32.4	25.1	1.7	74.8	9.7	1.5	11.2
ECR-B-414	--	--	--	1.3	1.3	2.1	11.7	42.3	25.3	1.9	83.3	13.7	1.7	15.4
ECR-B-416	--	--	--	0.7	0.7	5.9	27.6	32.1	15.7	0.4	81.7	13.2	4.4	17.6
ECR-B-456	--	--	7.8	6.3	14.1	5.9	18.4	29.9	21.5	1.9	77.6	7.1	1.2	8.3
ECR-B-458	--	--	14.3	8.1	22.4	6.7	10.6	23.3	23.4	2.9	66.9	9.7	1	10.7
ECR-B-460	--	--	16.1	10.5	26.6	8.4	11.7	26.2	16.5	1.3	64.1	8	1.3	9.3
ECR-B-460-QC	--	--	16.1	15.5	31.6	12.6	14.1	19.5	10.5	1.2	57.9	9.1	1.4	10.5
ECR-B-462	--	--	10.7	9.4	20.1	7	10.6	33.8	15.3	1.9	68.6	9.7	1.6	11.3
ECR-B-464	--	--	15.2	10.3	25.5	7.5	15.7	24.4	9.5	2	59.1	13.6	1.8	15.4
ECR-B-466	--	--	14.5	8.4	22.9	7.7	13.4	27.9	14.6	2.5	66.1	9.7	1.3	11.0
ECR-B-468	--	--	0.7	2.4	3.1	10.7	51.1	23.4	3.9	0.4	89.5	6.7	0.7	7.4

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-402	--	--	22.8	9.4	32.2	0.8	5.1	11.2	2.9	0.4	20.4	40.3	7.1	47.4
ECR-B-404	--	--	8.7	7	15.7	6.1	9	28.2	23.7	2.1	69.1	13.2	2	15.2
ECR-B-406	--	--	15.5	7.4	22.9	6	11.6	31	14.8	1.3	64.7	10.8	1.6	12.4
ECR-B-408	--	--	13.5	6.1	19.6	3.6	4.1	30.4	28.9	1.8	68.8	10.3	1.3	11.6
ECR-B-410	--	--	21.4	8.2	29.6	7.5	11.7	23.6	12.1	1.8	56.7	11.9	1.8	13.7
ECR-B-412	--	--	43.6	10.8	54.4	6	7.1	14.2	8.3	1.1	36.7	7.9	1	8.9

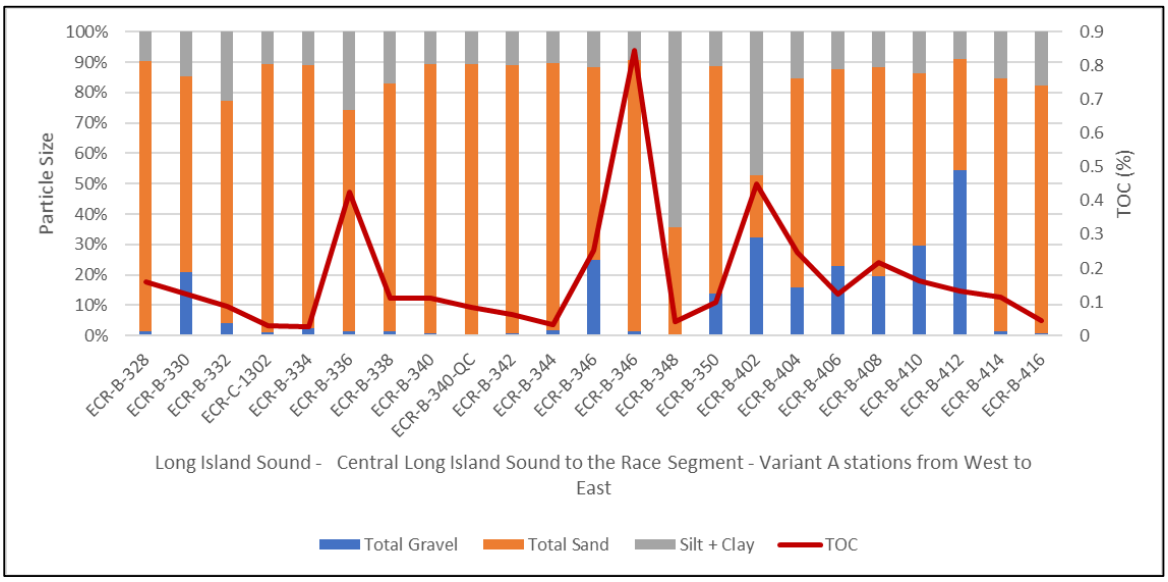


Figure 57 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Segment 4 stations excluding Variant B corridor presented West to East.

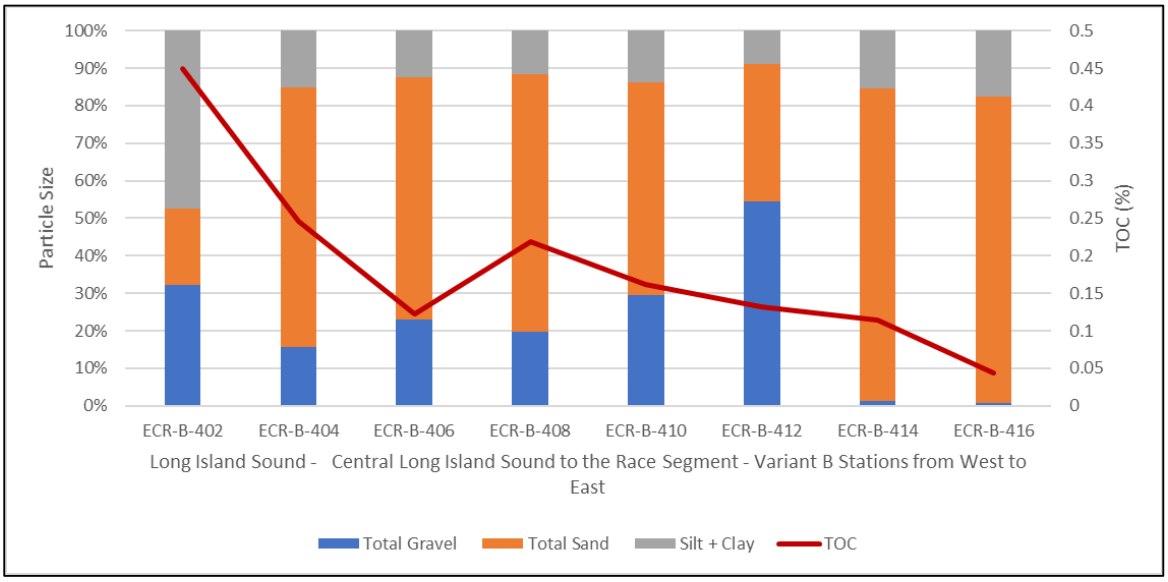


Figure 58 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Variant B corridor stations presented West to East.

5.4.4| TOTAL ORGANIC CARBON

The sediment TOC concentrations (exclusive of QC replicates) from Segment 4 benthic grab stations ranged from 0.03-0.45 percent (mean: 0.16 percent; SE: 0.02; Table 51). The mean sediment TOC concentration in Segment 4 was lower than the average TOC concentration (0.83 percent) for all sampled stations within the study area.

Table 51 Summary of total organic carbon (TOC) concentrations from benthic grab stations within Segment 4. Note: stations along the Variant B corridor are shaded in blue.

Station	TOC (percent)
ECR-B-328	0.16
ECR-B-330	0.12
ECR-B-332	0.09
ECR-C-1302	0.03
ECR-B-334	0.03
ECR-B-336	0.43
ECR-B-338	0.11
ECR-B-340	0.11
ECR-B-340-QC	0.08
ECR-B-342	0.06
ECR-B-344	0.03
ECR-B-346	0.25
ECR-B-348	0.04
ECR-B-350	0.10
ECR-B-414	0.11
ECR-B-416	0.04
ECR-B-456	0.08
ECR-B-458	0.12
ECR-B-460	0.13
ECR-B-460-QC	0.79
ECR-B-462	0.28
ECR-B-464	0.31
ECR-B-466	0.41
ECR-B-468	0.05
ECR-B-402	0.45
ECR-B-404	0.25
ECR-B-406	0.12
ECR-B-408	0.22
ECR-B-410	0.16
ECR-B-412	0.13

5.4.5| INFAUNA FROM GRAB SAMPLES

Twenty-one (21) of the 28 successful benthic grab samples were selected for infaunal analyses. The 21 Segment 4 stations yielded 2,404 individuals and 139 total infauna taxa from seven phyla: Annelida, Arthropoda, Echinodermata, Mollusca, Nemertea, Platyhelminthes, and Sipuncula. A total of 82 taxa were identified to species level another 57 to LPIL.

5.4.5.1 | BIOMASS

Biomass was measured for 11 taxonomic classes of infauna present in the samples. Total infauna biomass for the 21 sampling stations was 79 g with a mean biomass per station of 3.6 g ± 4.9 SD.

Bivalvia, Gastropoda, and Polychaeta collectively accounted for 80.3 percent of the total biomass sampled (Table 52). Malacostraca (amphipods), Echinoidea (sand dollars), and Ophiuroidea (brittle stars) contributed a combined 18.6 percent of the biomass. Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 59. Gastropod and bivalve biomass was higher near the eastern end of Segment 4; other classes were more uniformly distributed.

Table 52 Summary Statistics for infauna biomass collected from Segment 4.

Class	Total (g)	Percent	Mean	SD
Bivalvia	27.77	35.17	1.26	2.04
Gastropoda	26.78	33.92	1.22	2.67
Polychaeta	8.83	11.18	0.40	0.36
Malacostraca	7.10	8.99	0.32	0.51
Echinoidea	4.55	5.76	0.21	0.88
Ophiuroidea	3.01	3.81	0.14	0.40
Anthozoa	0.83	1.06	0.04	0.13
Nemertea *incertae sedis*	0.05	0.06	<0.001	<0.001
Holothuroidea	0.03	0.03	<0.001	<0.001
Sipunculidea	0.02	0.03	<0.001	<0.001
Clitellata	<0.01	<0.01	--	--

SD = Standard deviation.

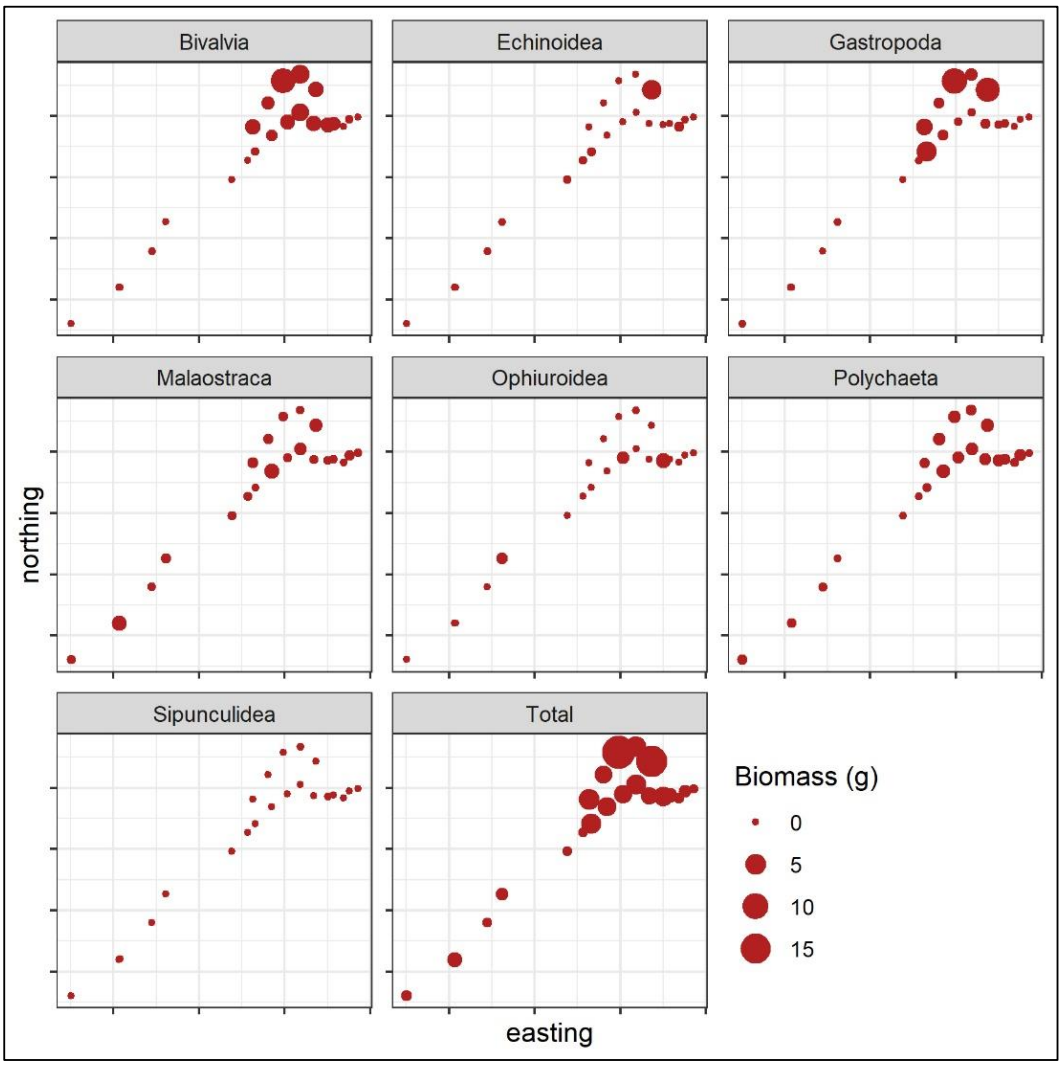


Figure 59 Biomass (g) of infauna organisms for the Classes Nemertea incertae sedis, Bivalvia, Echinodea, Gastropoda, and Malacostraca, Ophiuroidea, Polychaeta, and total plotted on the station positions along Segment 4.

5.4.5.2 | UNIVARIATE STATISTICAL ANALYSES

Species level identifications included 2,404 individuals or 62.0 percent of the 3,883 total. All statistical analyses and diversity indices were calculated using the data set with species level identifications. Diversity indices did not vary greatly across samples as depicted in Figure 60. The number of species per sample averaged 18.4 and ranged from 6 to 30. The Margalef's species richness (d) values ranged from 1.5 to 5.4; diversity (H') ranged from 0.9 to 2.8; Fisher's alpha ranged from 2.5 to 13.4. Evenness measured with Pielou's J averaged 0.74 and ranged from 0.46 to 0.95.

The ten most abundant species sampled are shown in Table 53. These species collectively account for 69.4 percent of the infauna abundance recorded during the survey. Numerically dominant species include four polychaete annelids, four mollusks, and two arthropods. The most abundant species, *Crepidula fornicata* (gastropod mollusk), *Crassinella lunulata* (bivalve mollusk), *Scalibregma inflatum* (polychaete worm), and *Protohaustorius wigleyi* (amphipod crustacean) accounted for 27.1 percent, 13.0 percent, and 6.3 percent, and 5.8 percent of the 2,404 individuals, respectively. Spatial patterns of abundance for these ten taxa are shown in Figure 61.

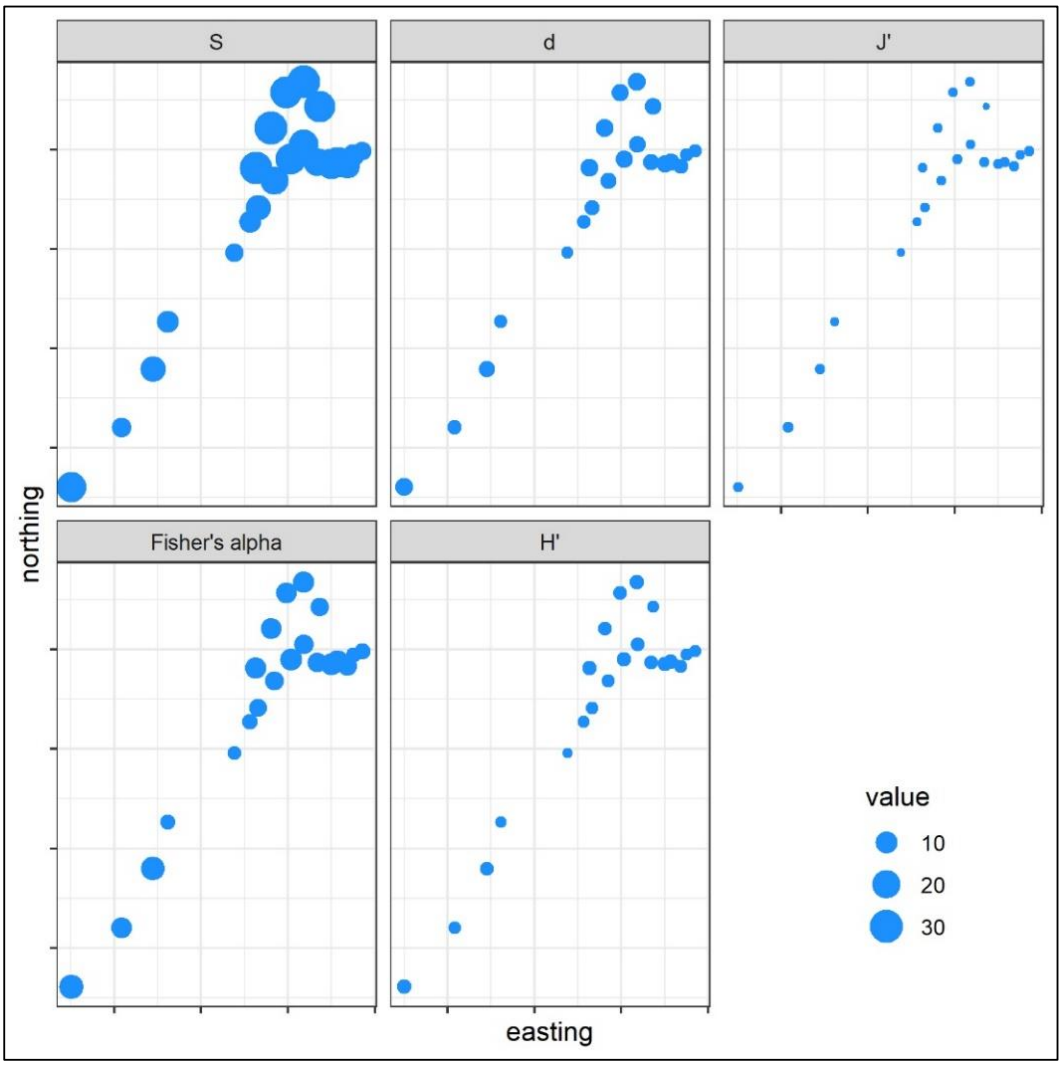


Figure 60 Number of taxa (S), Margalef's species richness (d), Fisher's alpha, evenness (J'), and species diversity (H') plotted on the station positions along Segment 4.

Table 53 Numerically dominant species collected in grab samples from Segment 4.

Phylum	Species	Number of Individuals	Percent of Total Individuals	Station Occurrence
Mollusca	*Crepidula fornicata*	651	27.1	16
Mollusca	*Crassinella lunulata*	312	13.0	15
Annelida	*Scalibregma inflatum*	152	6.3	13
Arthropoda	*Protohaustorius wigleyi*	139	5.8	9
Arthropoda	*Unciola irrorata*	131	5.5	11
Annelida	*Ampharete finmarchica*	70	2.9	9
Annelida	*Parapionosyllis uebelackerae*	57	2.4	14
Mollusca	*Crepidula plana*	53	2.2	6
Annelida	*Ancistrosyllis hartmanae*	52	2.2	11
Mollusca	*Caecum johnsoni*	51	2.1	8

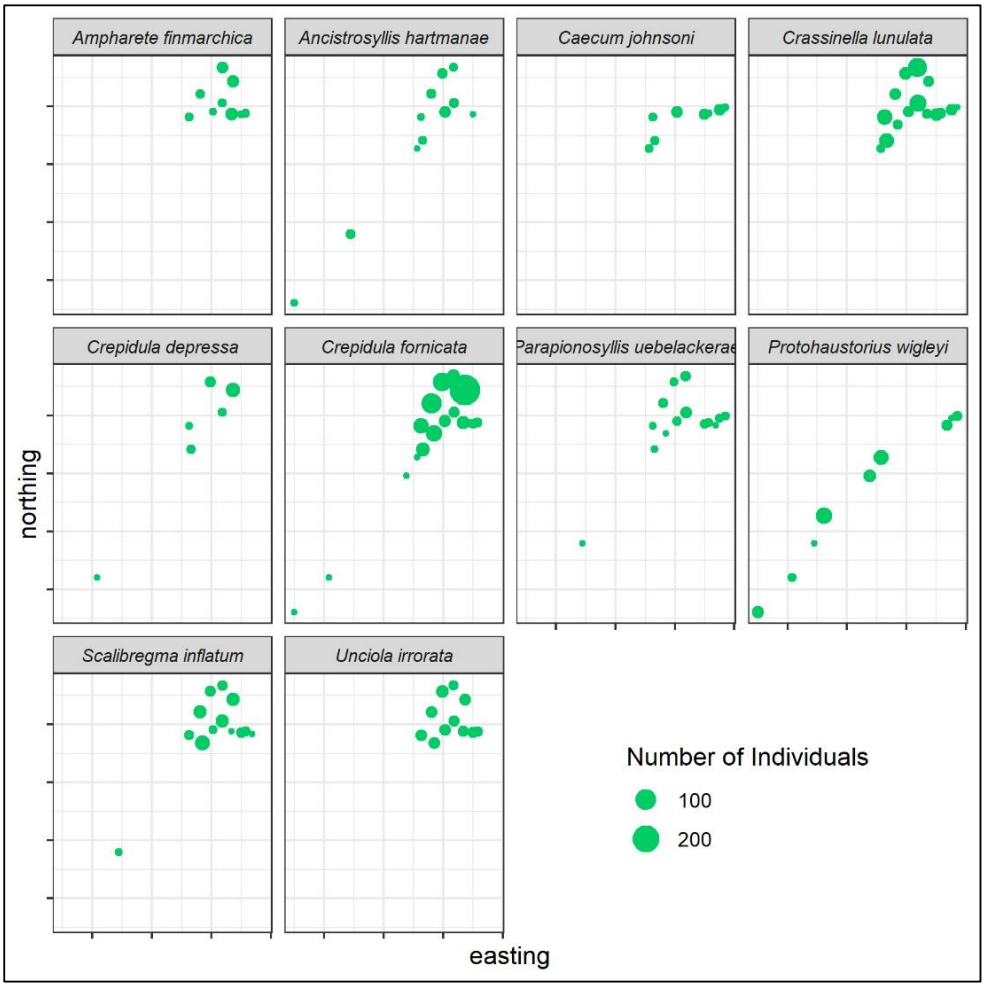


Figure 61 Number of individuals of the ten most abundant species in the samples plotted on the station positions along Segment 4.

5.4.5.3| MULTIVARIATE STATISTICAL ANALYSES

Cluster analysis of stations coupled with the SIMPROF routine identified three groups of stations with significantly similar species compositions (Figure 62). One group (group a) was a single station the other two groups (groups b and c) consisted of 9 and 11 stations, respectively. Group a was characterized by moderate numbers of *Crassinella lunulata* and *Crepidula fornicata*. Group b samples were distinguished by *Crepidula fornicata*, *Crassinella lunulata*, *Scalibregma inflatum*, and *Unciola irrorata* (amphipod crustacean). Group c stations included *Protohaustorius wigleyi* (amphipod crustacean), *Acanthohaustorius millisi* (amphipod crustacean), and *Echinorachnius parma* (sand dollar).

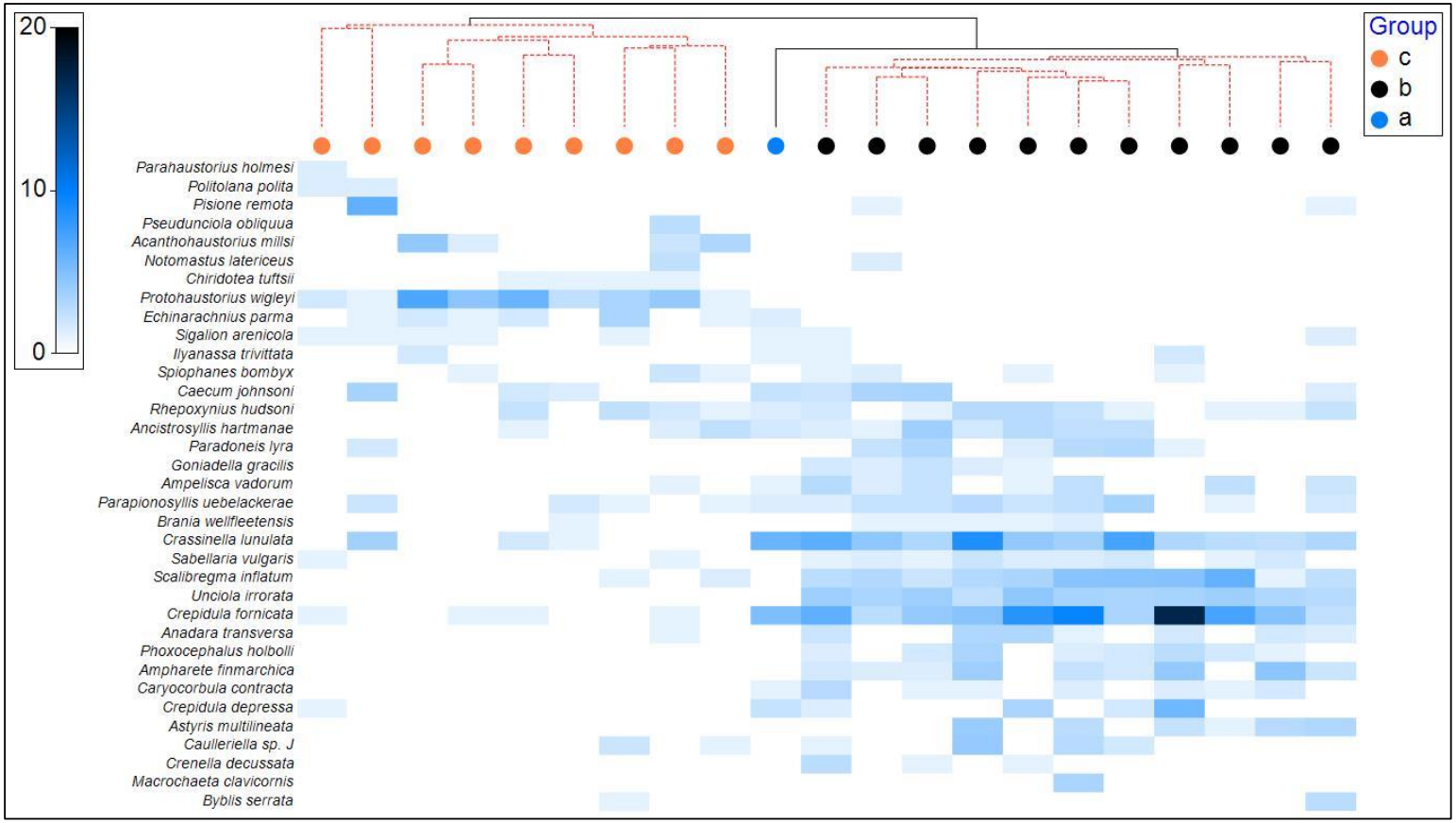


Figure 62 Results of normal cluster analysis of Segment 4 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in Segment 4 samples.

5.4.5.4| ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

Ordination of samples showed Groups b and c separated along the first NMDS axis (Group a is a single station outlier). Group c samples were more variable and spread out along the left side of the plot whereas Group b samples formed a tighter cluster on the right (Figure 63). Vectors for sedimentary variables overlying the plot indicate significant correlations with percent gravel and TOC on the right side of the ordination, Group b samples (R^2=0.67, $p<0.05$ and R^2=0.41 $p<0.05$, respectively) generally indicating the association of Group b with elevated levels of TOC and gravel. Vectors for percent fines and sand on the left side of the plot were not statistically significant (R^2=0.08, $p>0.05$ and R^2=0.17 $p>0.05$, respectively) and do not show an association with any of the SIMPROF groups in the ordination.

Groups b and c illustrate a distinct spatial pattern when plotted on station coordinates (Figure 64). Group b was composed of stations in the northern portion of Segment 4. As shown above, northern stations supported several of the most abundant species (e.g., *Crepidula fornicata*, *Crassinella lunulata*, *Scalibregma inflatum*, and *Protohaustorius wigleyi*) as well as high biomass of bivalves and gastropods. These Group b stations also had high TOC concentrations (mean=0.31) and percent gravel (mean=29.4 percent) as shown in the ordination (Figure 63).

Group c stations generally fell along the Variant A corridor in Segment 4 but with three stations adjacent to group b along the Variant B corridor (Figure 64). Group c stations were associated with lower TOC (mean=0.09) and higher percent sand (88.9 percent) than group b stations (63.6 percent) although these variables were not statistically significant.

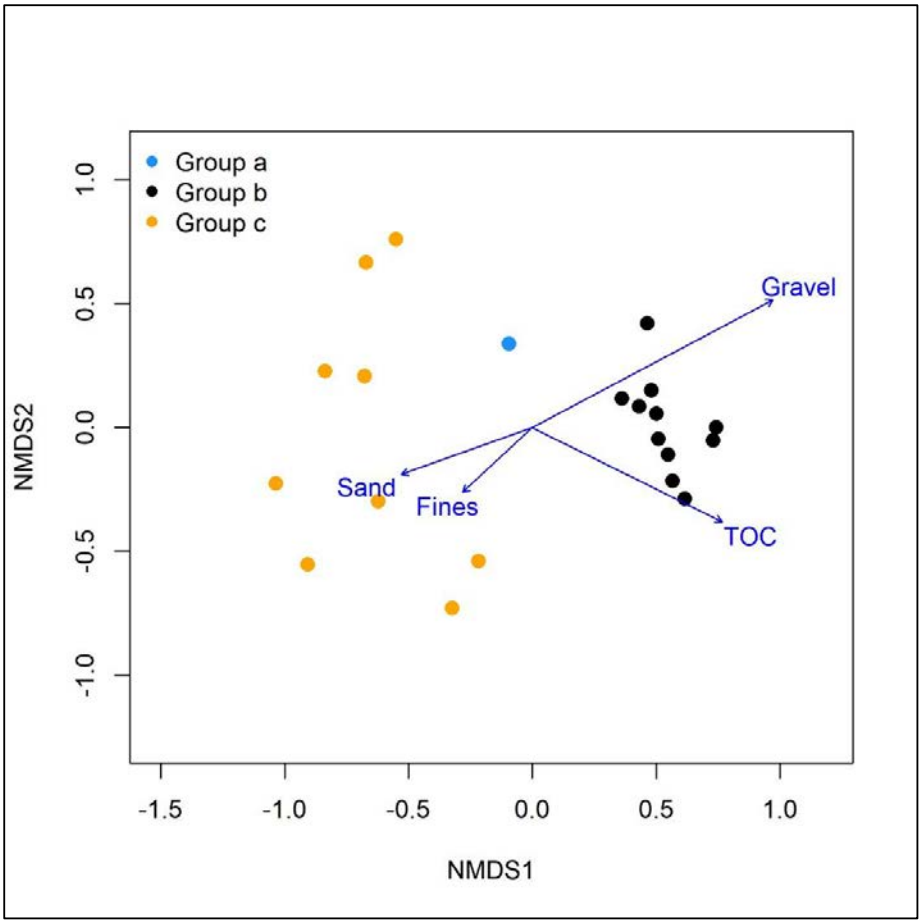


Figure 63 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand, gravel, and fines sediment; and total organic carbon (TOC) in the Segment 4 samples.

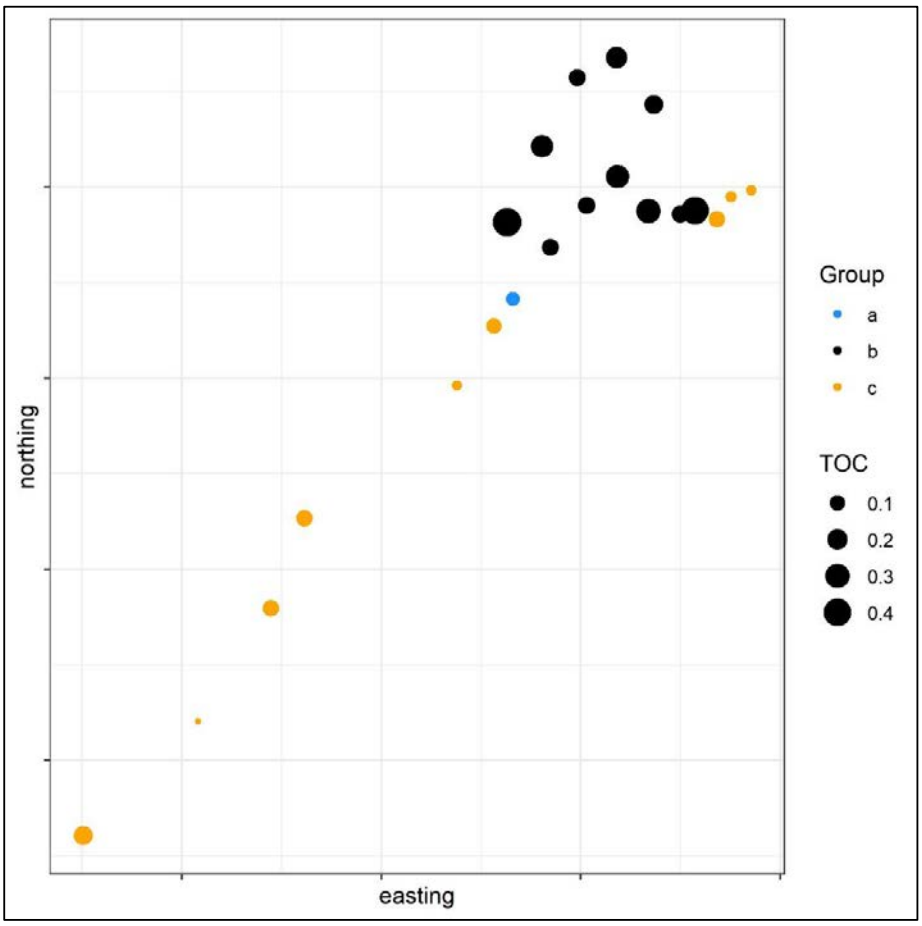


Figure 64 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 4. The size of the symbols is proportional to total organic carbon (TOC) levels (percent weight).

5.4.6| SPI RESULTS

SPI images were collected at a total of 44 stations along Segment 4. The results for the SPI image analysis are provided in Attachment H. Selected parameters for Segment 4 are plotted in Figure 65 (grain size, penetration, and surface boundary roughness) and Figure 66 (aRPD, infauna succession, and organism sediment index).

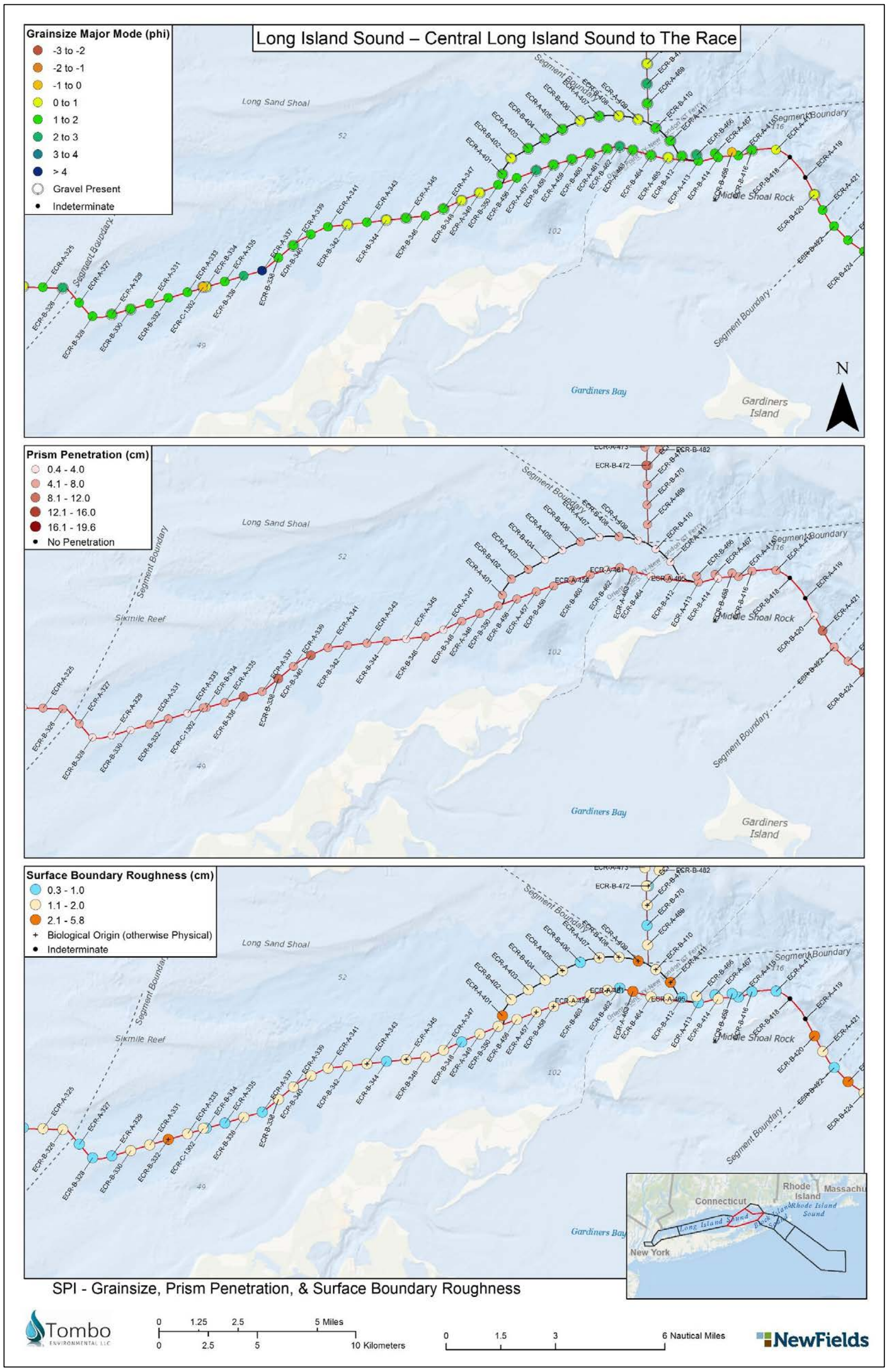


Figure 65 Sediment Profile Imaging (SPI) results for grain size, penetration, and surface boundary roughness along Segment 4. Segment 4 stations are along the west-east red line corridor between the Segment Boundaries.

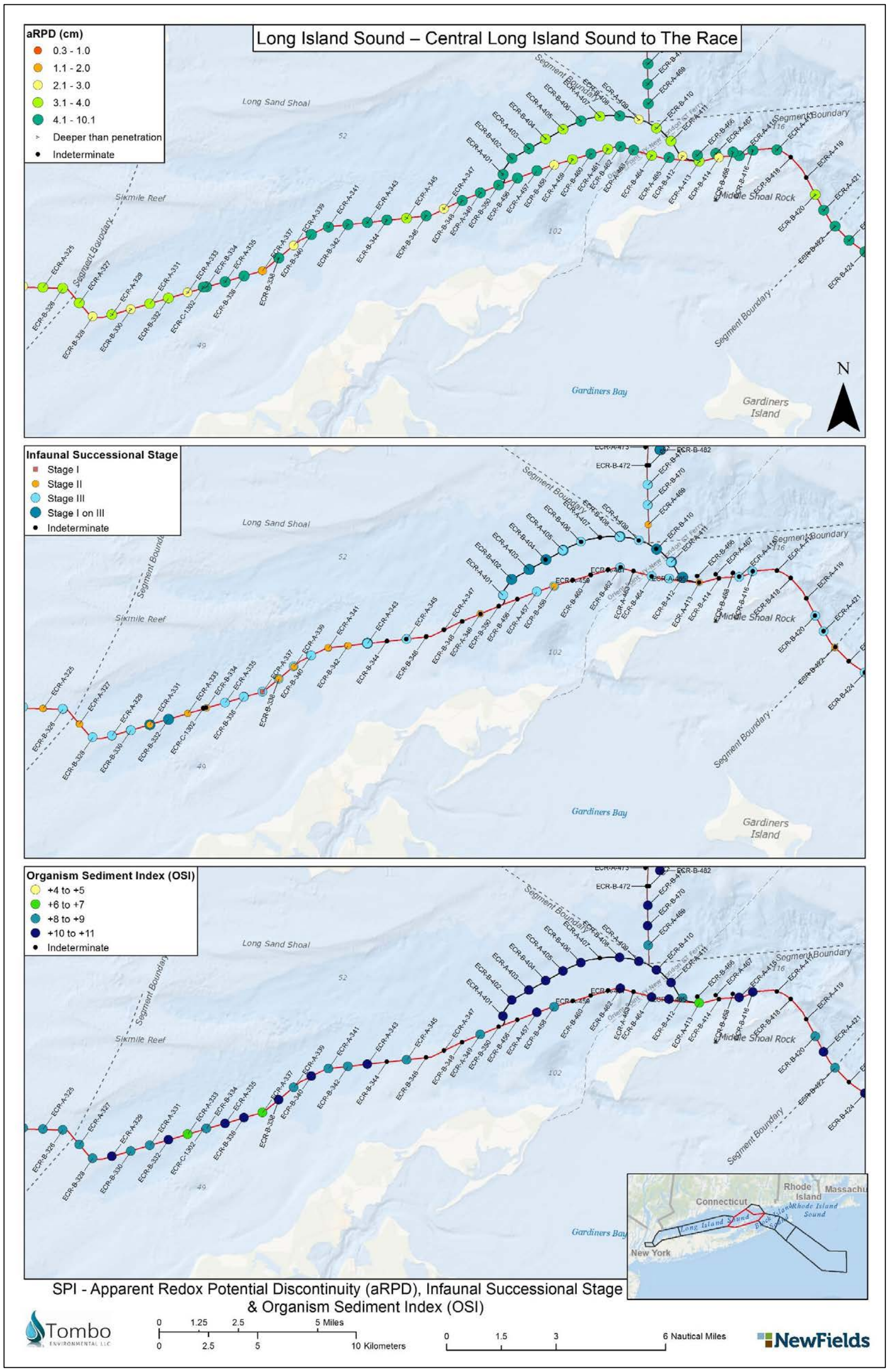
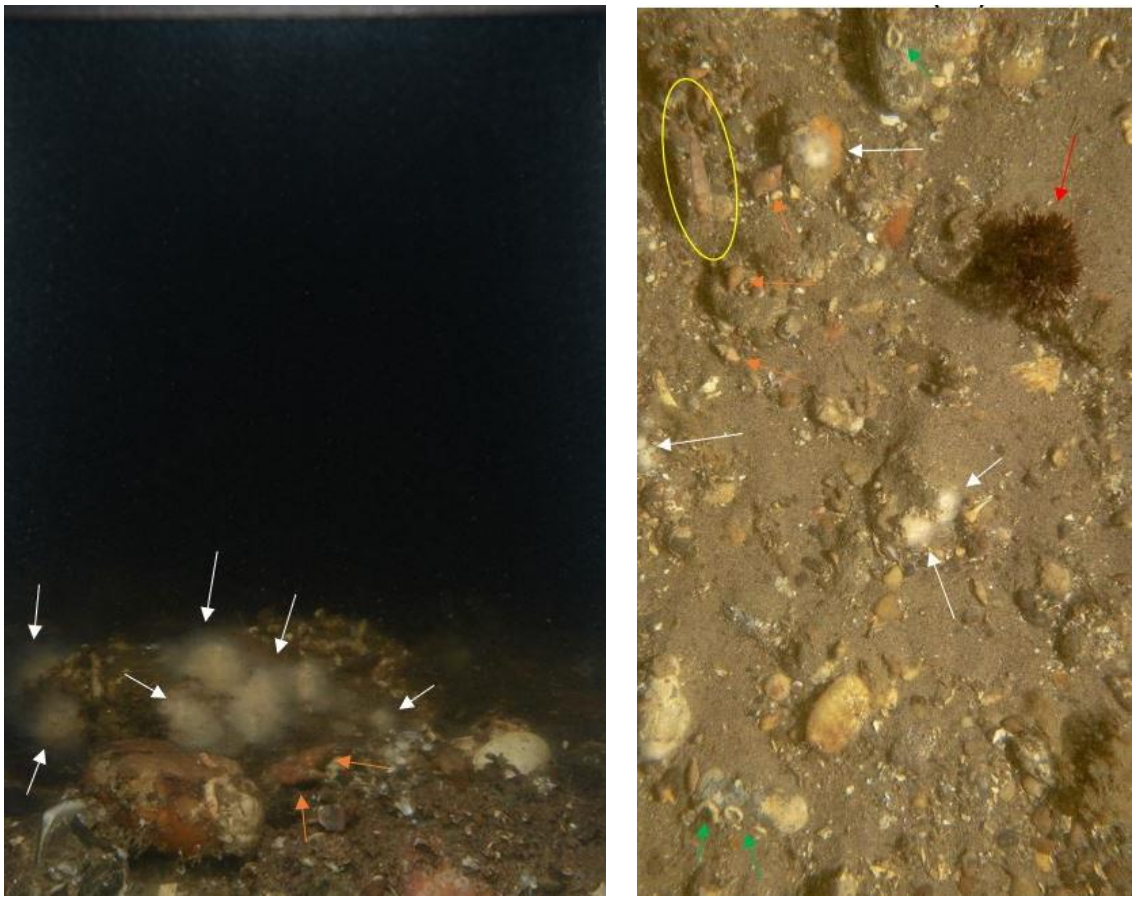


Figure 66 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 4. Segment 4 stations are along the west-east red line corridor between the Segment Boundaries.

5.4.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode of surface sediments determined using SPI in Segment 4 was predominantly medium sand (2 to 1 phi) (64 percent of SPI images) (Figure 65). Example SPI/PV images showing coarse-grained sediments in Segment 4 are provided in *Image 51*. Very coarse (0 to -1 phi) and coarse sand (1 to 0 phi) were present in 14 percent of the SPI images. Only one station (station ECR-337) had a grain size mode of silt and clay (>4 phi). The grain size mode was classified as indeterminate at two Segment 4 stations (stations ECR-418 and ECR-419) due to no prism penetration in pebble/granules or cobble.

ECR-419-A (SPI) **ECR-419-A (PV)**



The SPI image from station ECR-419 showed low prism penetration with cobble, pebbles, and shells, in a matrix of coarse sand. Northern star corals (*Astrangia poculata*) (white arrows) and gastropods (orange arrows) were visible on the sediment surface. The PV image showed a sandy gravel surface with cobble. Organisms observed on the surface included red algae (red arrow), northern star coral (*A. poculata*) (white arrows), numerous gastropods (orange arrow examples), and serpulid polychaete tubes (green arrows) attached to cobble. A black sea bass (*Centropristis striata*) (yellow circle) was also observed. SPI image width = 15cm. PV image area = 0.10 m^2 (estimated).

Image 49 SPI and PV Images showing coarse-grained sediments from Segment 4 station ECR-419.

5.4.6.2 | PRISM PENETRATION DEPTH

The distribution of SPI camera prism penetration (in centimeters) in Segment 4 surface sediments is presented in Figure 65. The prism penetration depth provided a relative measure of sediment water content and shear strength of surface sediments. In general, prism penetration depths were shallow throughout Segment 4 reflecting a pattern similar to the grain size major mode of coarse-grained sediments which had a higher sediment bearing capacity resulting in lower prism penetration depths. Penetration depths in Segment 4 ranged from no penetration at stations ECR-418 and ECR-419, to 11 cm at stations ECR-336 and ECR-340 with a Segment 4 average of 5.2 cm (± 2.1 cm, n = 88) that was approximately 25 percent of maximum prism penetration of 20 cm. The lack of camera penetration at stations was due to the presence of cobbles, pebbles and shells in surface sediments.

5.4.6.3 | SURFACE BOUNDARY ROUGHNESS

Mean small-scale boundary roughness in Segment 4 is presented in Figure 65. Boundary roughness in Segment 4 ranged from 0 to 3.4 cm with a segment average of 1.2 cm (±0.70 cm, n = 88). The larger boundary roughness values were due to a sloped surface or coarse sediment, referred to as physical roughness, and surface pits, referred to as biological roughness. Physical roughness was predominant across Segment 4, present in 88 percent of the images.

5.4.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. For individual replicates, aRPD depths in Segment 4 ranged from 0.9 to 10.1 cm with a segment average of 4.6 cm (±1.9 cm, n = 84). The aRPD depths at stations ECR-418 and ECR-419 were indeterminate due to no SPI prism penetration. As discussed in Section 4.3.4.1, the aRPD in coarse-grained surface sediments can be relatively deep, but difficult to measure due to the lack of optical contrast between oxidized and reduced particles (absence of silt/clays and organic matter). The aRPD depth at several stations in Segment 4 was classified as deeper than the SPI prism penetration (Figure 66) due to limited prism penetration and the presence of a relatively wide surficial layer of coarse-grained sediments.

5.4.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 4 sediments was predominantly indeterminate due to shallow penetration or no SPI prism penetration in 45 percent of the images. Stage III was observed in 31 percent of the SPI images (Figure 66). Stage I communities coexisting with the Stage III communities, referred to as Stage I on III, was observed in 3 percent of the SPI images. Stage I succession only, the initial pioneering stage, was observed only at stations ECR-333 and ECR-337 where coarse sand was present. Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at 18 percent of the SPI images, mostly in the western portion of Segment 4.

5.4.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogensis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 4 since potential indicators for high SOD were lacking.

5.4.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The mean OSI values in Segment 4 as presented in Figure 66 range from +5 to +11. At 15 of the 44 stations, OSI values were not calculated because of indeterminate aRPD depths, or indeterminate successional stage. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. The vast majority (94 percent) of OSI values in Segment 4 were +7 or higher. OSI values of +5 were measured in one image from stations ECR-333 and ECR-337. Those specific locations where OSI was less than +6 showed the presence of medium or coarse sand and a shallow aRPD depth, which is indicative of a habitat type that can remain in an earlier infaunal successional stage.

5.4.7 | PV RESULTS

The PV images were collected at 44 Segment 4 stations (Figure 54). At Segment 4 stations, the PV camera was triggered at 0.5 m and 0.8 m from the bottom due to high turbidity in the water column (Attachment E). Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.2 m^2 (± 0.14 m^2) (Attachment G-2).

5.4.7.1 | BEDFORMS

Physical bedforms were observed at 34 of the 44 Segment 4 stations (Attachment G-2). Bedform ripples were observed at 68 percent (30 of 44 stations), present primarily in gravelly sand, (Figure 67, CMECS Substrate Subclass panel) and are representative of mobile sediment beds.

Biological bedforms was observed at three of the 44 Segment 4 stations (Attachment G-1) with gravelly sand and muddy sandy gravel bottoms (Image 50). Shell rubble was observed at one Segment 4 station (ECR-A-417) was composed primarily of dead clam and blue mussel shells (Image 51).

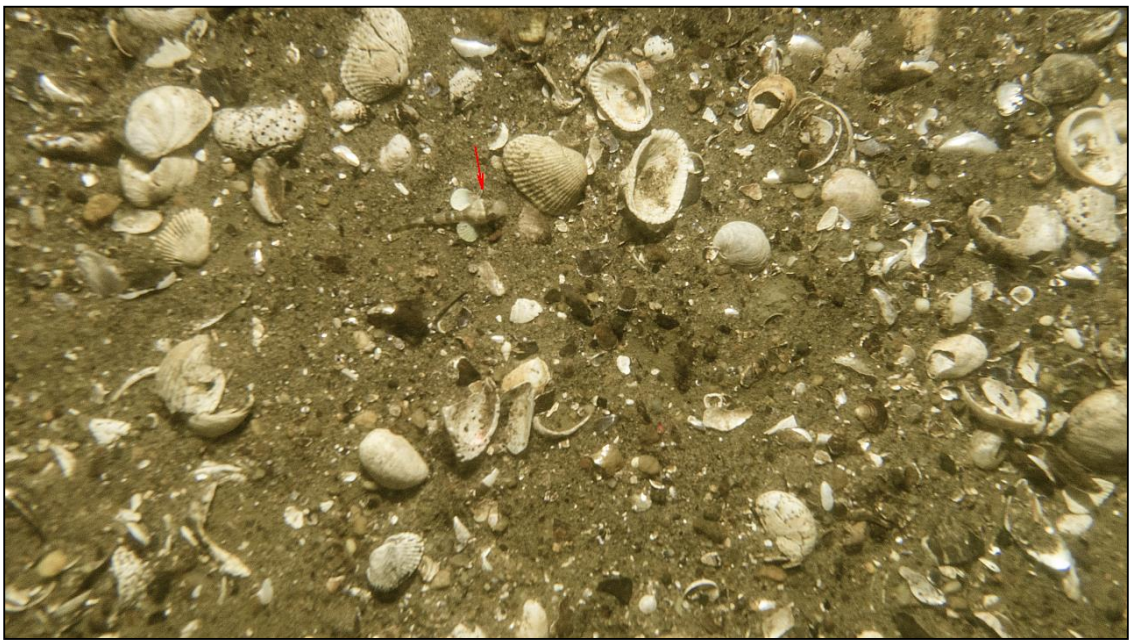


Image 50 Gravelly sand with shell hash with one juvenile sea robin (family Triglidae) at Segment 4 station ECR-B-344.

Image 51 Rubble composed of mostly dead clam and blue mussel shells with two juvenile black sea bass (red arrows) at Segment 4 station ECR-A-417.

5.4.7.2| FLORA AND FAUNA PRESENCE

The summary table for CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 4 stations are provided in Attachment G-1. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 4 stations is shown in Figure 67. The biological assemblage observed in Segment 4 PV images was relatively diverse with some high faunal coverages. Dominant fauna observed at stations along Segment 4 are as follows:

- The northern star coral, *Astrangia poculata*, was observed at four Segment 4 stations, ranging from a single coral colony up to 29 coral colonies per station (Image 52). Two of those stations supported coral colonies associated with CMECS Attached Fauna and two stations supported single colonies associated with CMECS Soft Sediment Fauna with the colony attached to small rubble fragment in predominant soft substrate;
- Stalks of the *Sertularia* hydroid were observed at 14 Segment 4 stations and considered attached fauna at three stations and soft sediment fauna at 11 stations (Image 53);
- Colonial tunicates (Class Ascidiacea, family Didemnidae) (Image 54) were observed at eight Segment 4 stations and considered as attached fauna at four stations and soft sediment fauna at four stations;
- Mud snails (*Ilyanassa* sp.) was observed at one of the 44 Segment 4 stations with approximately seven observed individuals;
- Stacks of *Crepidula fornicata* were observed at nine of the 44 Segment 4 stations and considered as attached fauna at four stations and soft sediment fauna at five (Image 55). These stacks, regardless of the predominant substrate type present, were attached to some form of hard substrate; and
- The hermit crab *Pagurus* spp. was observed at nine of the 44 Segment 4 stations with total of 25 individuals.

The CMECS Aquatic Vegetation Class observed along Segment 4 was as follows:

- Marine macrophytes as leathery leafy red algae were found at three of the 44 Segment 4 stations with *Chondrus crispus* (Image 52) at two stations and a piece of *Coccotylus truncatus* (Image 53) at one station. Both algae had a flora percent cover of 4.5 percent and 2.3 percent, respectively. An occasional piece of eelgrass leaf blade detritus was observed but no live eelgrass was observed in Segment 4.

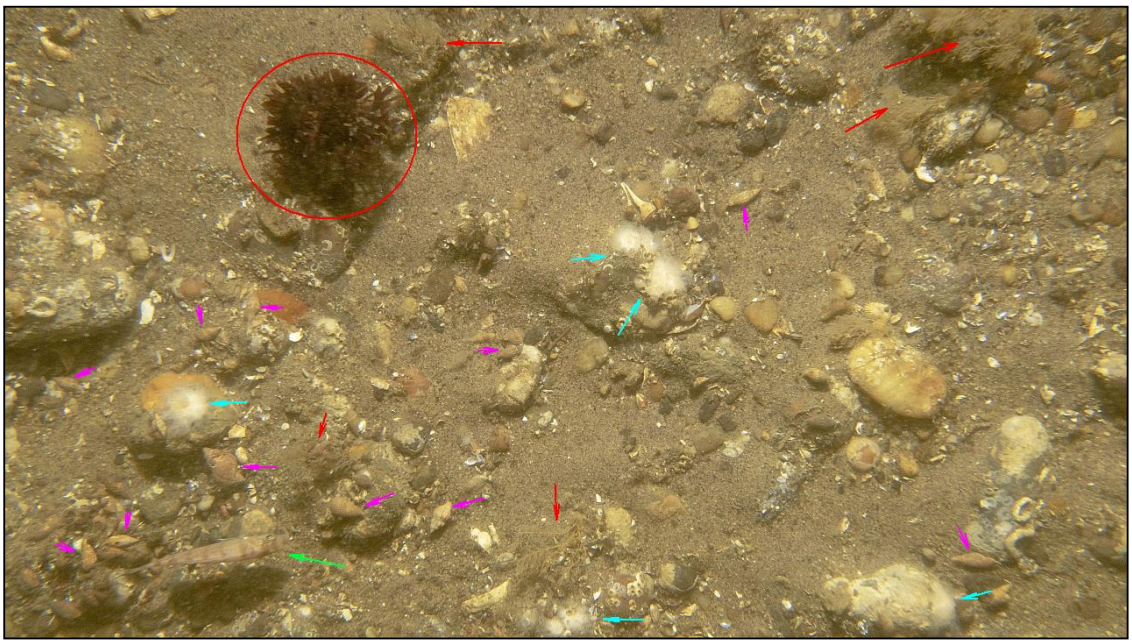


Image 52 Sandy gravel with cobble and shell hash. Attached red algae, Chondrus crispus (red circle), hydroid stalks (red arrows), northern star coral, Astrangia poculata (blue arrows), gastropods (pink arrows) and one juvenile black sea bass (green arrow) at Segment 4 station ECR-A-419.

Image 53 Muddy sand bottom with hydroids attached to shells (arrows) and a drifting piece of red algae, Coccotylus truncatus at Segment 4 station ECR-A-327.

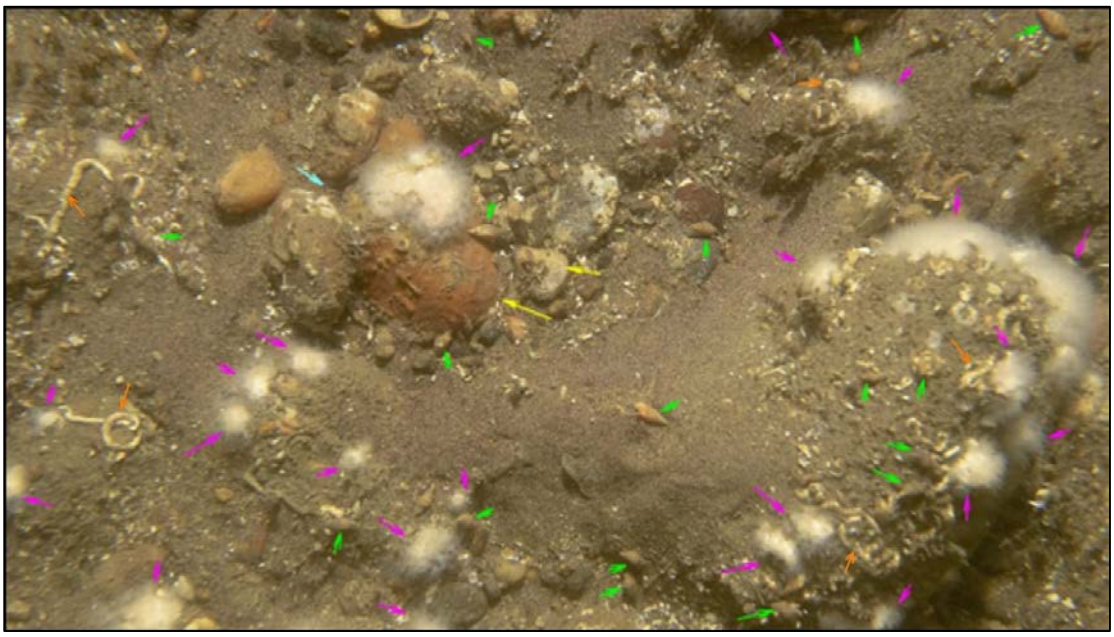


Image 54 Medium sand bottom with cobble supports northern star coral (pink arrows), bryozoa colonies (yellow arrows), urchin (blue arrow), serpulid worms (orange arrows), and gastropods (green arrows) at Segment 4 station ECR-A-419.

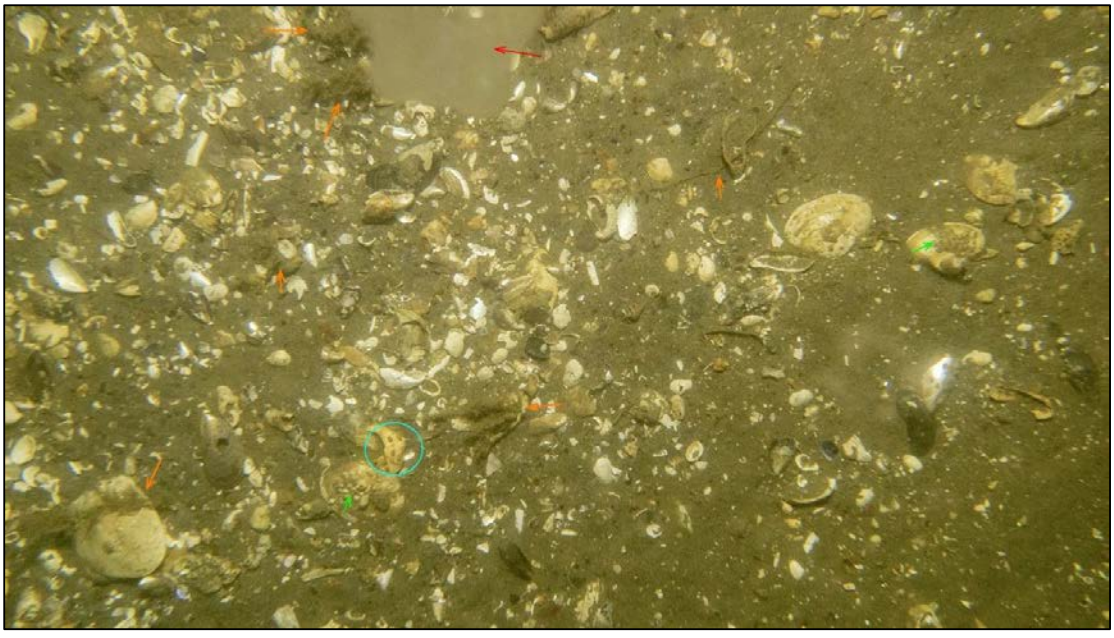


Image 55 Sertularia hydroids attached to shell hash (orange arrows), barnacles (green arrows), limpets (blue circle) and drifting ctenophore (red arrow) at Segment 4 station ECR-B-330.

Image 56 Sandy gravel and shell hash with encrusting tunicates (orange arrows) and a hydroid (green arrow) at Segment 4 station ECR-A-403.

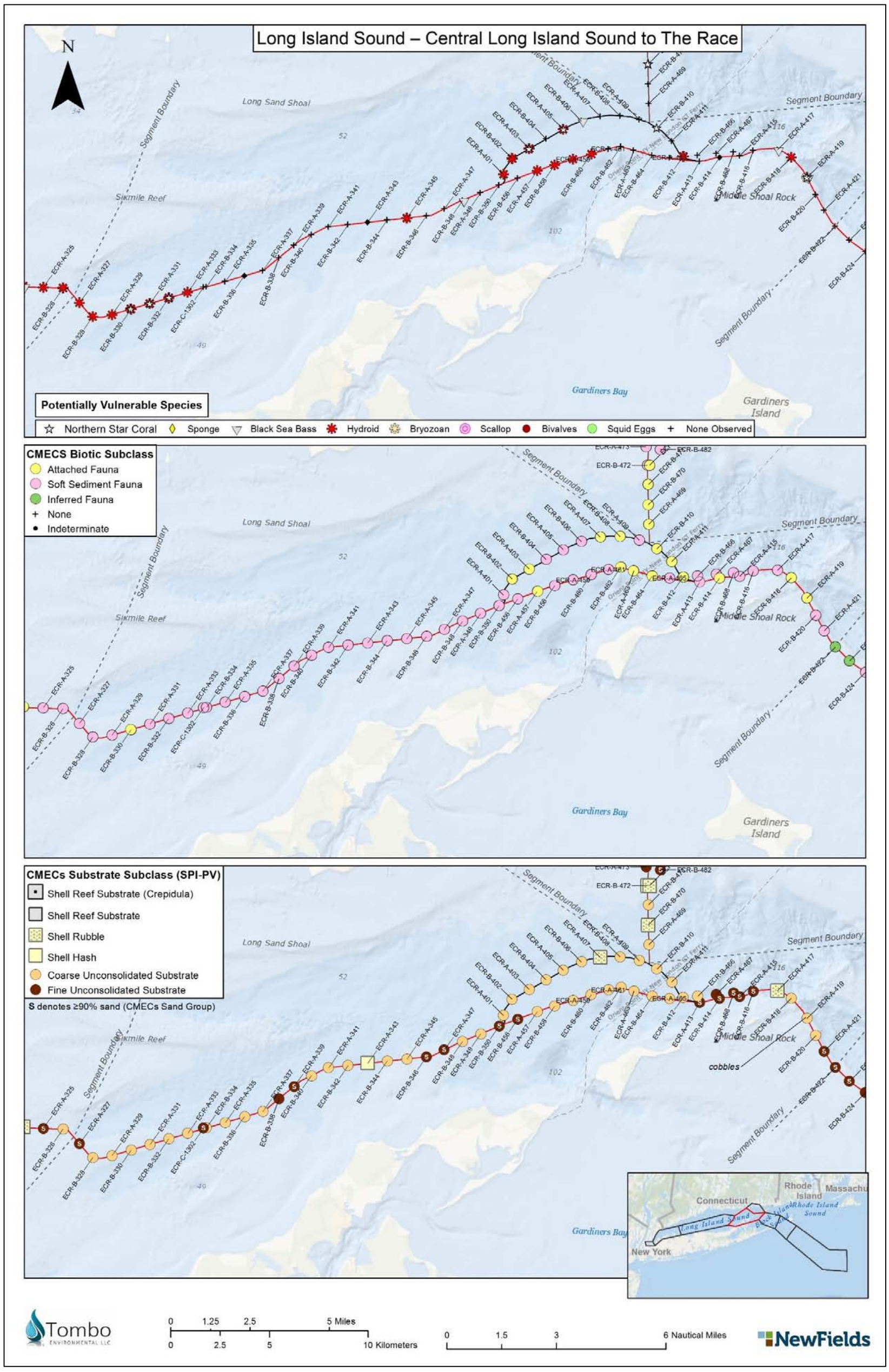


Figure 67 Plan View (PV) imaging results along Segment 4. Segment 4 stations are along the west-east red line corridor between the Segment Boundaries.

5.4.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The PVS to project impacts observed at seven Segment 4 stations included northern star coral, *Astrangia poculata*, colonies. A Ceriantharian burrowing anemone was observed at Segment 4 station ECR-A-417 but this organism is not considered a PVS since it does not meet NOAA (2021) criteria of being long-lived and/or a habitat-forming species. Six juvenile black seabass, which may be considered a PVS, were observed within Segment 4.

5.4.7.4| NON-NATIVE TAXA

The only possible non-native species observed in 12 out of the 44 Segment 4 stations was a colonial tunicate of the family Didemnidae. The observed tunicate could possibly be *Didemnum vexillum* a species thought to be native to Japan that has been reported from waters of the western North Atlantic.

5.4.8| CMECS CLASSIFICATIONS

5.4.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/towed video camera system from 49 Segment stations. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. The Physiographic Setting for Segment 4 within Long Island Sound was classified as Sound.

The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and Level 2 represents features smaller than 0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 4 had a flat overall seafloor topography consisting of unconsolidated substrate (ranging in size from silt to boulders) and stations were classified as Level 1 Flat Geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

The Geoform Level 2 classification for Segment 4 consisted of three (3) categories. Two categories are of geologic origin, and included 1) Flat and 2) Boulder Field Geoforms. The Flat Geoform, as described above, was seen at 17 of the 48 Segment 4 stations. The Boulder Fields Geoform is applied to areas dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. The Boulder Field Geoform was observed at 12 Segment 4 stations.

The remaining 19 Segment 4 stations were classified as the Burrow/Bioturbation Geoform, of biogenic origin, consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna. Geoform classifications for Segment 4 are summarized and illustrated in Table 54 and Figure 68.

Table 54 Geoform components based on drop/towed camera video for Segment 4.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sound	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-B-328, ECR-B-330, ECR-B-332, ECR-B-334, ECR-B-336, ECR-B-338, ECR-B-340, ECR-B-342, ECR-B-344, ECR-B-346, ECR-B-348, ECR-B-350, ECR-C-1301, ECR-C-1302, ECR-B-414, ECR-B-416, ECR-B-458, ECR-C-1404, ECR-C-1428
				Geologic	Boulder Field	ECR-B-420, ECR-C-1303, ECR-C-1303a, ECR-C-1304, ECR-C-1305, ECR-C-1405, ECR-C-1406, ECR-C-1408, ECR-C-1409, ECR-C-1410, ECR-C-1411, ECR-C-1427
					Flat	ECR-B-402, ECR-B-404, ECR-B-406, ECR-B-408, ECR-B-410, ECR-B-412, ECR-B-418, ECR-B-456, ECR-B-460, ECR-B-462, ECR-B-464, ECR-B-466, ECR-B-468, ECR-C-1401, ECR-C-1402, ECR-C-1403, ECR-C-1407

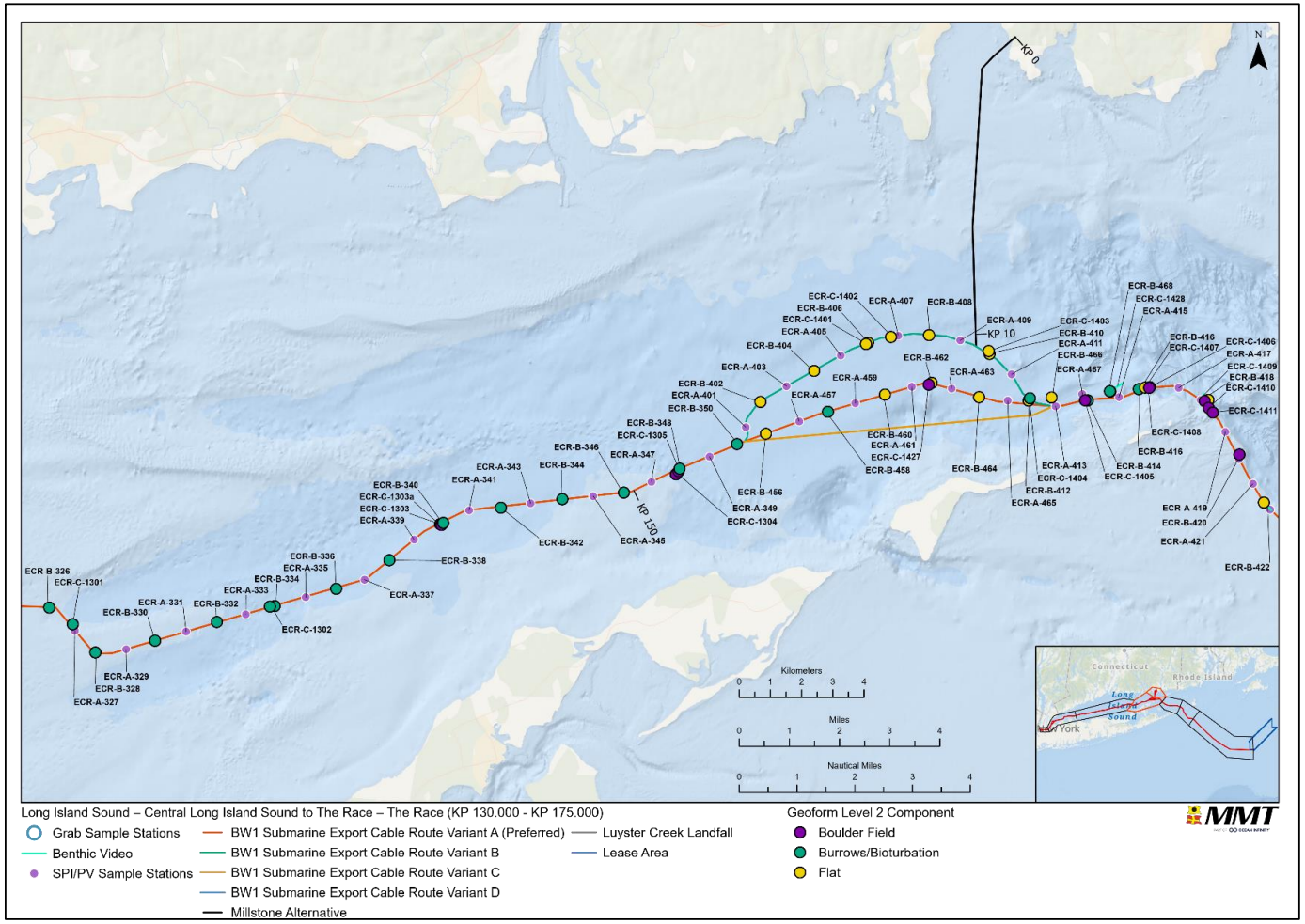


Figure 68 Overview of classified CMECS Geoform Level 2 Component based on drop/towed camera video in Segment 4.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/towed camera benthic video data (Table 55 and Figure 69). The entire Segment 4 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Thirty-six (36) of the 48 stations in Segment 4 associated with Soft Sediment Fauna were the same stations classified as Burrows/Bioturbation and Flat Geoforms. There did not appear to be any dominant macrofauna at these stations.

The other twelve Segment 4 stations were classified as Attached Fauna, with Attached Fauna being directly associated with the Boulder Field Geoform. Attached Fauna was further categorized into the Biotic Group, Diverse Colonizers and Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders including sponges, hydroids, bryozoans, tunicates, and the northern star coral, *Astrangia poculata* that was present at eight of the twelve stations classified as Biotic subclass - Attached Fauna.

Table 55 CMECS Biotic components based on drop/towed camera video along Segment 4.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-B-328, ECR-B-330, ECR-B-332, ECR-B-334, ECR-B-336, ECR-B-338, ECR-B-340, ECR-B-342, ECR-B-344, ECR-B-346, ECR-B-348, ECR-B-350, ECR-C-1301, ECR-C-1302, ECR-B-414, ECR-B-416, ECR-B-458, ECR-C-1404, ECR-C-1428, ECR-B-402, ECR-B-404, ECR-B-406, ECR-B-408, ECR-B-410, ECR-B-412, ECR-B-418, ECR-B-456, ECR-B-460, ECR-B-464, ECR-B-466, ECR-B-468, ECR-C-1401, ECR-C-1402, ECR-C-1403, ECR-C-1407
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-B-420, ECR-C-1303, ECR-C-1303a, ECR-C-1304, ECR-C-1305, ECR-C-1405, ECR-C-1406, ECR-C-1408, ECR-C-1409, ECR-C-1410, ECR-C-1411, ECR-C-1427

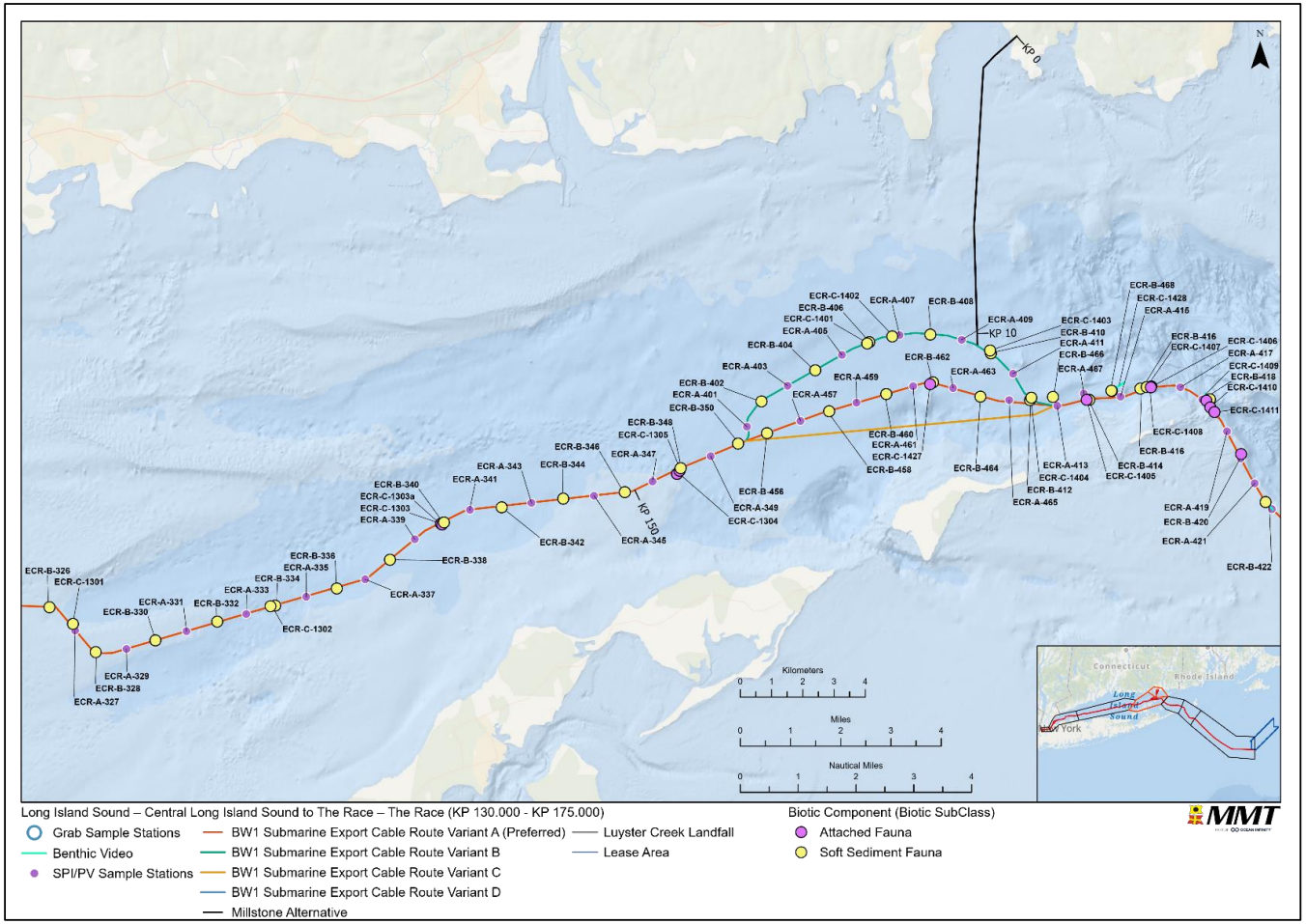


Figure 69 Overview of classified CMECS Biotic Component based on drop/towed camera video in Segment 4.

5.4.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Thirty (30) benthic grab stations were sampled along Segment 4 with successful grab samples obtained at 28 of those stations; sediment samples were not collected at stationsECR-B-418 and ECR-B-428 due to interference with cobble/gravel substrates. NMFS-modified CMECS substrate classifications for ECR-B-418 and ECR-B-420 were derived from SPI and PV imagery – see Section 5.4.8.3 and Attachment F and Attachment G.

CMECS and NMFS-modified substrate classifications were derived from PSD results for 27 of the 28 sampled stations. After a review of benthic grab content imagery station ECR-B-408 was determined to consist of substantial (>50 percent) surficial biogenic (shell) material and was therefore classified using grab content images (Image 57).

CMECS substrate component classifications for Segment 4 benthic grab stations are presented in Table 56 and illustrated in Figure 70.

The NMFS-modified CMECS substrate component classifications for Segment 4 stations are provided in Table 57 and shown in Figure 71. Within Segment 4, 50 percent (n=14) of benthic grab samples contained coarse unconsolidated substrate types, 46 percent (n=13) contained fine unconsolidated substrate types and 4 percent (n=1) contained biogenic substrate types). Substrate types included Shell (Clam) Hash, Muddy Gravel, Muddy Sandy Gravel, Gravelly Muddy Sand, Gravelly Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sand (CMECS)/Muddy Sand (NMFS-modified CMECS) and Slightly Gravelly Sandy Mud (CMECS)/Sandy Mud (NMFS-modified CMECS).

Coarse unconsolidated substrates and biogenic substrates are considered as indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. Coarse unconsolidated Gravel Mixes and Gravelly substrates contained primarily pebble/granule as the gravel component. Fine unconsolidated substrate types are indicative of soft-bottomed habitats (NOAA Fisheries 2021).

The primary benthic grab sample and QC replicate from station ECR-B-460 were both classified as Coarse Unconsolidated Substrates. However, a small (5 percent) increase in the gravel component detected in the QC replicate (ECR-B-460-QC) over the primary sample (ECR-B-460) resulted in different CMECS and NMFS-modified CMECS classifications at the substrate group level.

a. Shell (Clam) Hash (ECR-B-408)	b. Muddy Gravel (ECR-B-402)	c. Muddy Sandy Gravel (ECR-B-412)
d. Gravelly Muddy Sand (ECR-B-330)	e. Gravelly Sand (ECR-B-456)	f. Slightly Gravelly Sand (CMECS)/Muddy Sand (NMFS-modified CMECS; ECR-B-468)

Image 57 Grab content images showing some representative substrate types encountered at benthic grab sampling stations from Segment 4.

Table 56 CMECS substrate component classifications for benthic grab stations sampled from Segment 4. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: stations along the Variant D corridor are denoted with light blue shading.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-408	Biogenic	Shell	Shell Hash	Clam Hash	N/A
ECR-B-402	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Gravel
ECR-B-412	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel
ECR-B-460-QC	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel
ECR-B-330	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-346	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-350	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-404	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-406	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-410	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-458	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-460	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-462	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-464	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-466	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-456	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand
ECR-B-332	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-334	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-336	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-338	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-340	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-340-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-342	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-344	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-414	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-416	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-C-1302	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-328	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-468	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-348	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud

N/A: Not Applicable; QC: Quality Control.

Table 57 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled from Segment 4. Substrate classifications are grouped by substrate origin/class or subclass separated by horizontal grey bars. Note: stations along the Variant D corridor are denoted with light blue shading.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-408	Biogenic	Shell	Shell Hash	N/A	N/A
ECR-B-402	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Gravel	Granule/Pebble
ECR-B-412	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	Granule/Pebble
ECR-B-460-QC	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	Granule/Pebble
ECR-B-330	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-346	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-350	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-404	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-406	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-410	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-458	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-460	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-462	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-464	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-466	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-456	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	Granule/Pebble
ECR-B-332	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-334	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-336	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-338	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-340	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-340-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-342	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-344	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-414	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-416	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-C-1302	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-328	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-468	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-348	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A

N/A: Not Applicable; QC: Quality Control.

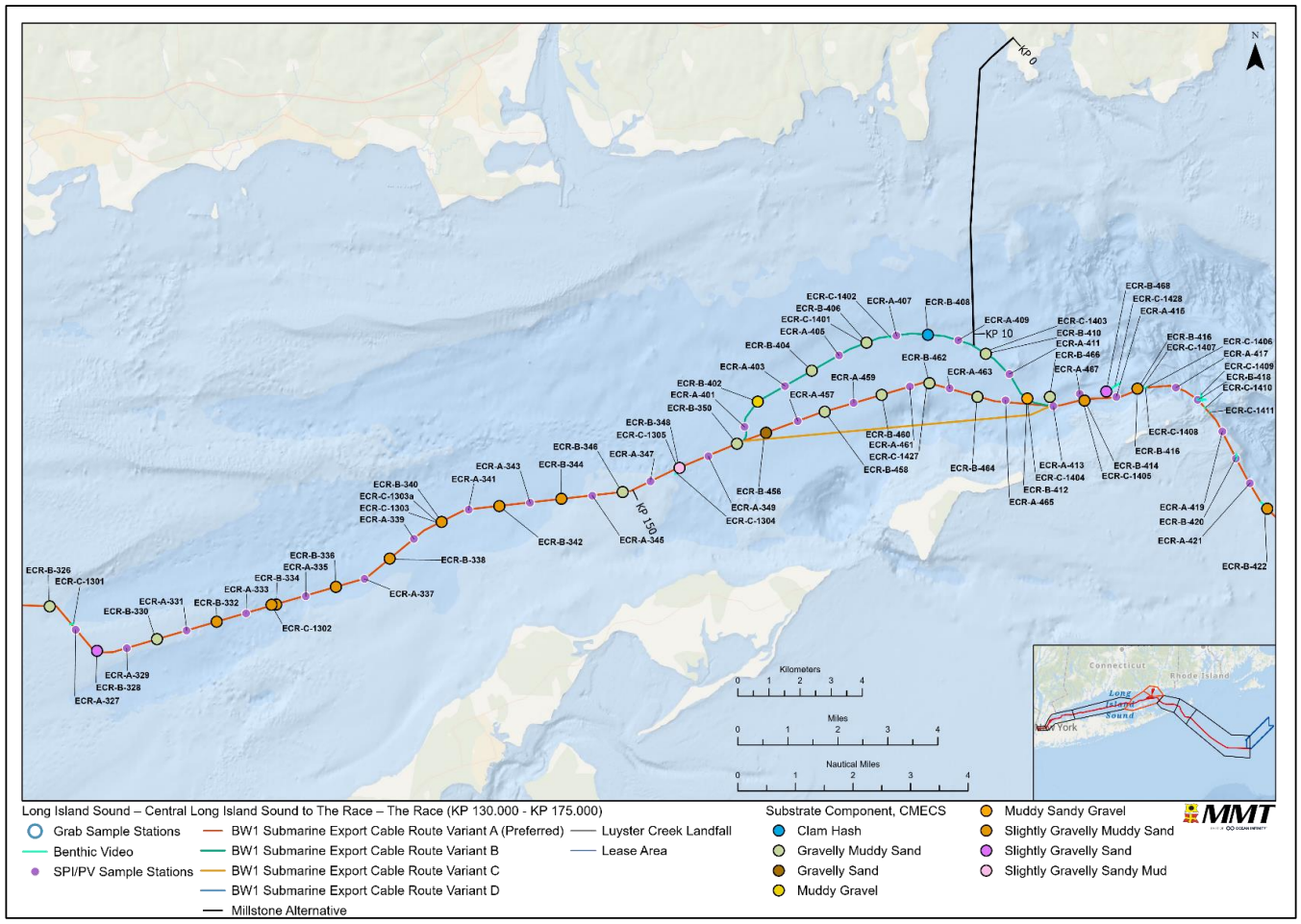


Figure 70 CMECS substrate component classifications for benthic grab stations sampled from Segment 4.

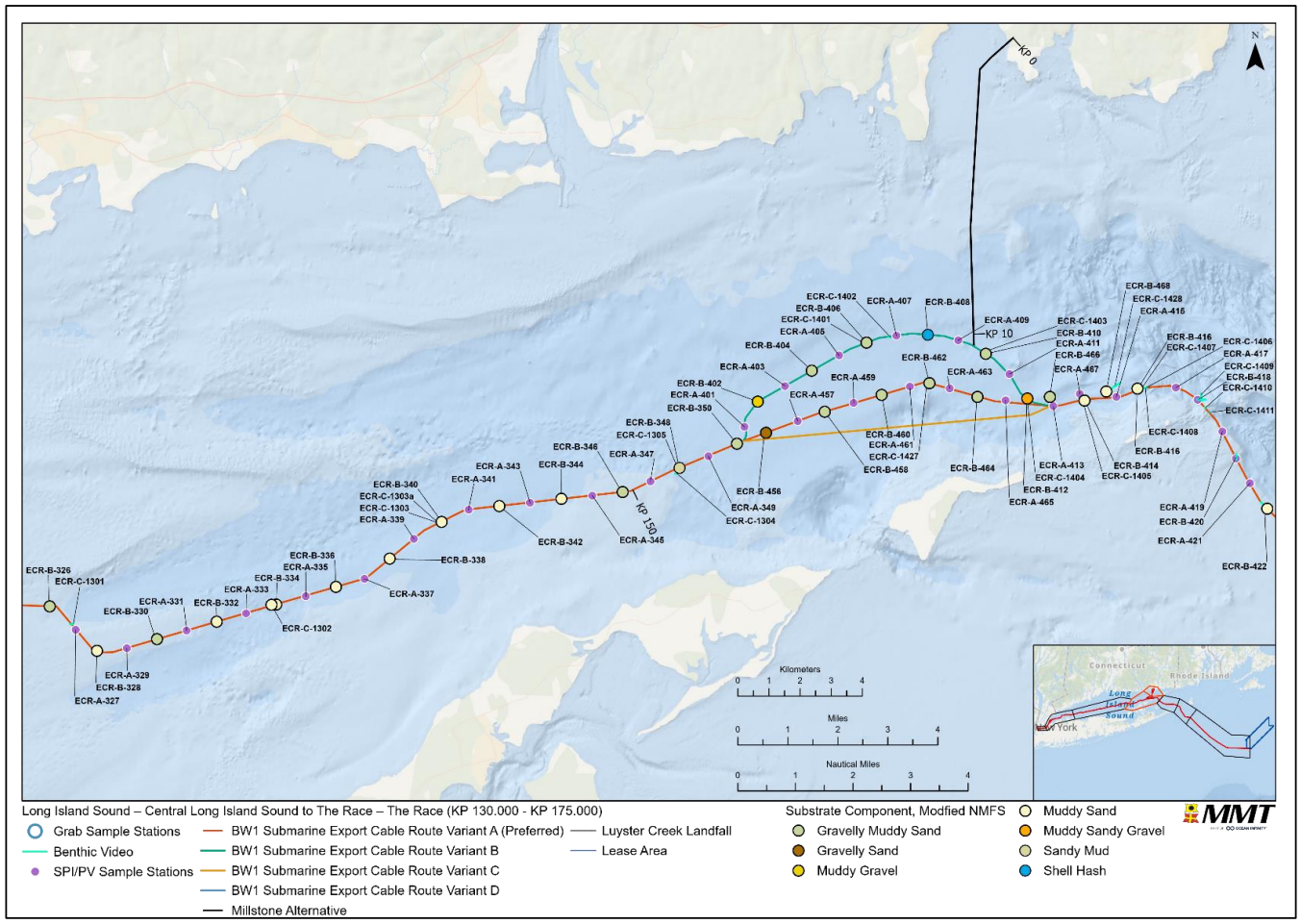


Figure 71 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled from Segment 4.

5.4.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). CMECS Unconsolidated Mineral Substrate was present at 42 of the 44 Segment 4 SPI/PV stations while the CMECS Shell Substrate class type was observed at 2 of the 44 Segment 4 stations (Table 58).

CMECS Fine Unconsolidated Substrate was present at 13 of the 44 Segment 4 stations (Table 58). CMECS Fine Unconsolidated Substrate, classified entirely within the Sand Group, ranged from Fine/Very Fine Sands to Very Coarse/Coarse sand Subgroups (Table 58). Fine Unconsolidated Substrate extended throughout Segment 4 (Figure 67, CMECS Substrate Subclass panel and Table 58).

CMECS Coarse Unconsolidated Substrate was present at 29 of the 44 Segment 4 stations (Figure 67, CMECS Substrate Subclass panel). CMECS Coarse Unconsolidated Substrate was composed of cobble, pebble/granule sandy gravel, muddy sandy gravel, and gravelly sand (Table 58).

CMECS Shell Rubble subclass and Shell Hash subclass were observed, each at a single station, within Segment 4 (Table 58 and Figure 67, CMECS Substrate Subclass panel).

Table 58 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 4.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	42	95%	Fine Unconsolidated Substrate	13	30%	Sand	13	30%	Fine/Very Fine Sand	3	7%
									Medium Sand	8	18%
									Very Coarse/Coarse Sand	2	5%
						Muddy Sand	0	0%	--	--	--
						Sandy Mud	0	0%	--	--	--
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	29	66%	Gravels	2	5%	Boulder	0	0%
									Cobble	1	2%
									Pebble/Granule	1	2%
									Gravel Pavement	0	0%
						Gravel Mixes	9	20%	Sandy Gravel	8	18%
									Muddy Sandy Gravel	1	2%
									Muddy Gravel	0	0%
						Gravelly	18	41%	Gravelly Sand	18	41%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	2	5%	Shell Reef Substrate	0	0%	Crepidula Reef Substrate	0	0%	--	--	--
									--	--	--
			Shell Rubble	1	2%	--	1	2%	--	1	2%
			Shell Hash	1	2%	--	1	2%	--	1	2%

5.4.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Soft Sediment Fauna subclass biotic component was observed at 36 of the 44 Segment 4 stations (Figure 67, CMECS Biotic Subclass panel). The Soft Sediment Fauna component included *Pagurus* beds, *Crepidula* beds, and *Ilyanassa* beds (Attachment G). Attached fauna such as Didemnidae tunicate beds and *Sertularia* beds were also observed in predominantly soft sediment fauna locations; these organisms were observed attached to some sort of hard substrate, such as a shell fragment.

Eight (8) of the 44 Segment 4 stations were classified as Attached Fauna CMECS biotic component. The Attached Fauna component included barnacles, Astrangiidae corals, *Sertularia* hydroids, Didemnidae tunicates, and *Crepidula fornicata*.

Marine macrophytes as leathery leafy red algae were found at 3 of the 44 Segment 4 stations with *Chondrus crispus* (Image 52) at two stations and a piece of *Coccotylus truncatus* (Image 53) at one station. Both algae had a flora percent cover of 4.5 percent and 2.3 percent, respectively. An occasional piece of eelgrass leaf blade detritus was observed but no live eelgrass was observed in Segment 4. Although aquatic vegetation was observed at Segment 4 stations, they were not the dominant biota grouping; none of the Segment 4 stations were mapped as CMECS Class Aquatic Vegetation (Figure 67, CMECS Biotic Subclass panel).

No Inferred Fauna CMECS subclass biotic components were observed along Segment 4. No CMECS Class Aquatic Vegetation was observed along Segment 4.

5.5| MILLSTONE ALTERNATIVES

Segment 5 includes sample stations along the Millstone submarine export cable corridor at Waterford, Connecticut and includes additional stations along a previously considered secondary landfall corridor on the east side of Millstone Point that has since been eliminated from consideration (Figure 72).

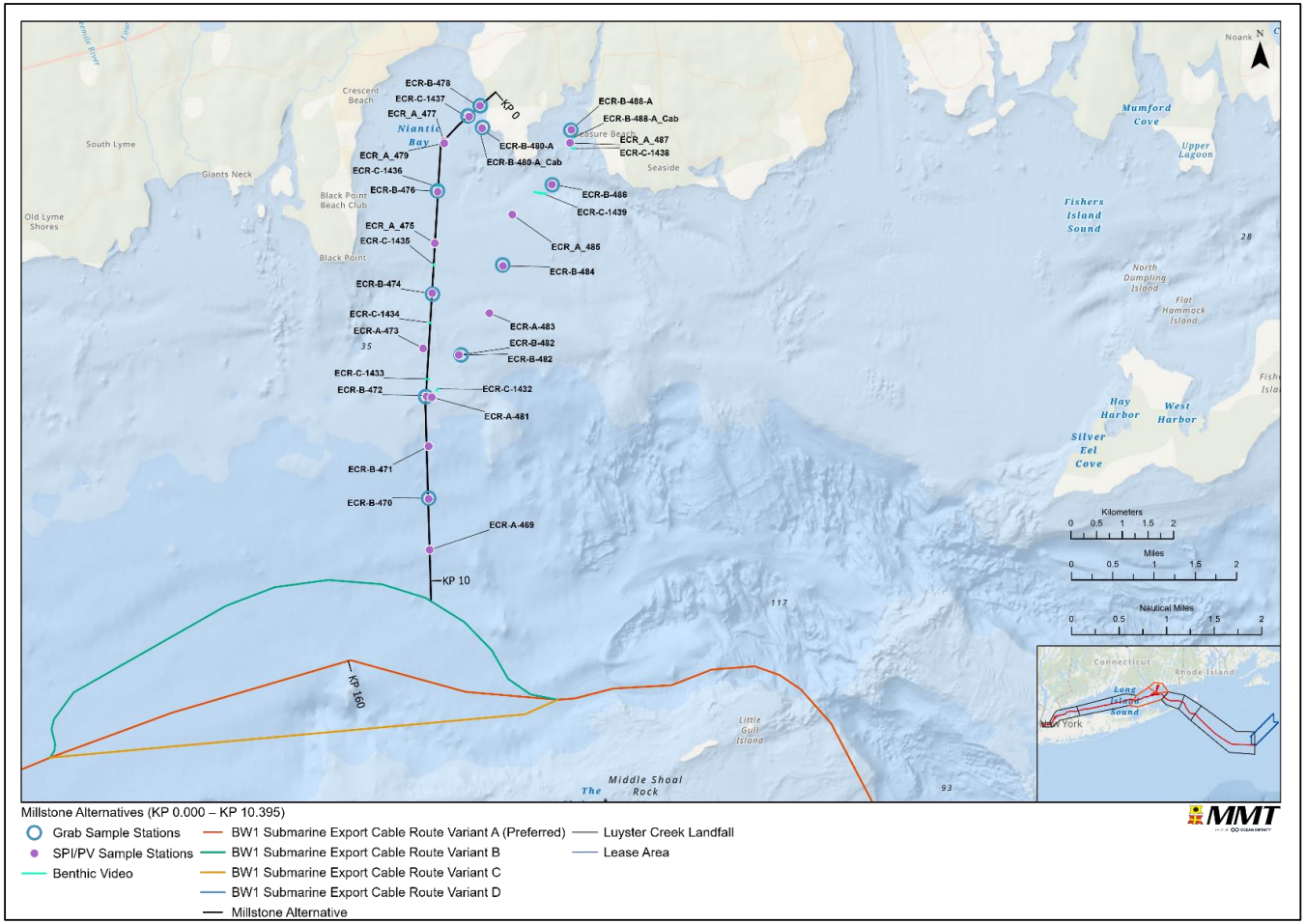


Figure 72 Overview of the Segment 5 sample stations.

5.5.1| BENTHIC VIDEO

The Segment 5 seabed was characterized by a range of observed substrates, from fine sandy silt to coarser sand substrate and occasional areas of gravel, with additional areas of cobble and boulder present covered with epiphytic growth. There were areas of concentrated shell observed with some consisting of intact bivalve shells, shell fragments and shell hash. There were also areas of fine sediments where bioturbation, in the form of tracks and burrows is evident and included the presence of tube-building amphipods and polychaetes, and bivalve siphons protruding from the sediment. Undulating sand wave features were also present within Segment 5. Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed throughout these areas. The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitat from within this Segment are provided in Image 58, Image 59 and Image 60.

Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 3.3 ft (1 m) within the water column. Based on a comprehensive review of the video, no continuous emergent hard bottom outcrops were discernible, although observations were made of habitat characterized by buried boulders were observed.

Macroinvertebrates observed included various mollusks -– slipper snails (*Crepidula* spp.*),* razor clams *(Ensis* spp.*)* and other unidentified bivalves; crustaceans - hermit crabs (*Pagurus* spp.), spider crabs (*Libinia* sp.); and echinoderms - sea urchins (*Arabacia punctulata*) and sand dollars (likely *Echinarachnius parma*). Attached taxa observed included bryozoans, colonial tunicates, hydroids, anemones and various sponges. The northern star coral (*Astrangia poculata*) was observed on boulders at two stations within Segment 5: ECR-C-1432 and ERC-C-1434.

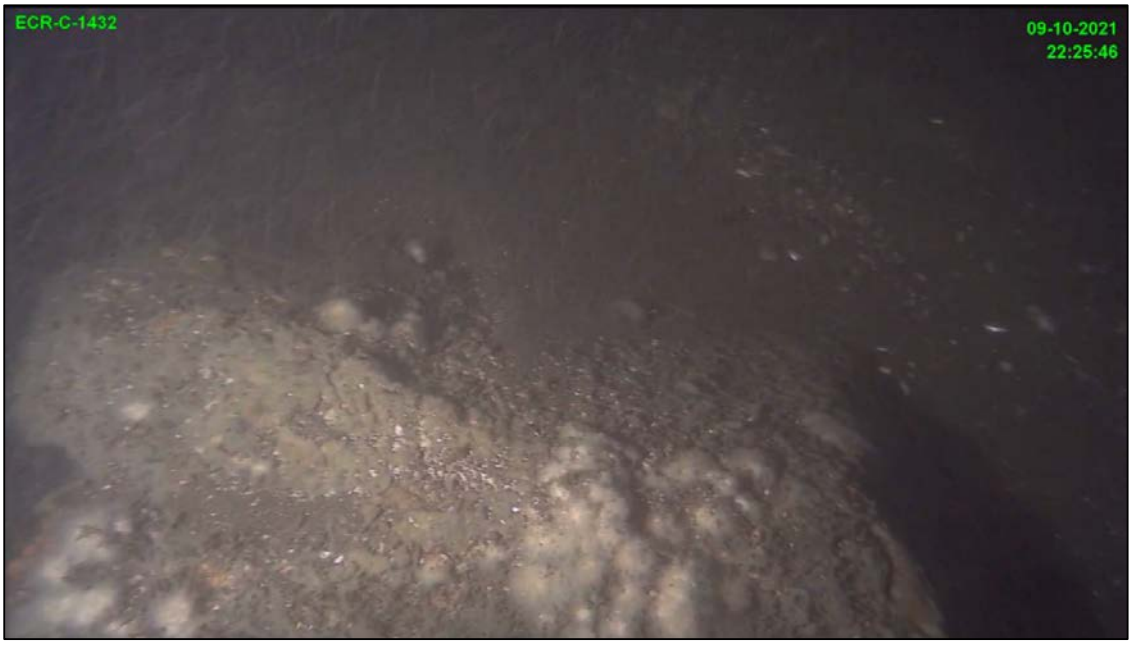


Image 58 Representative image from Segment 5 displaying a boulder with northern star coral (Astrangia poculata) and other unidentified attached epifauna.

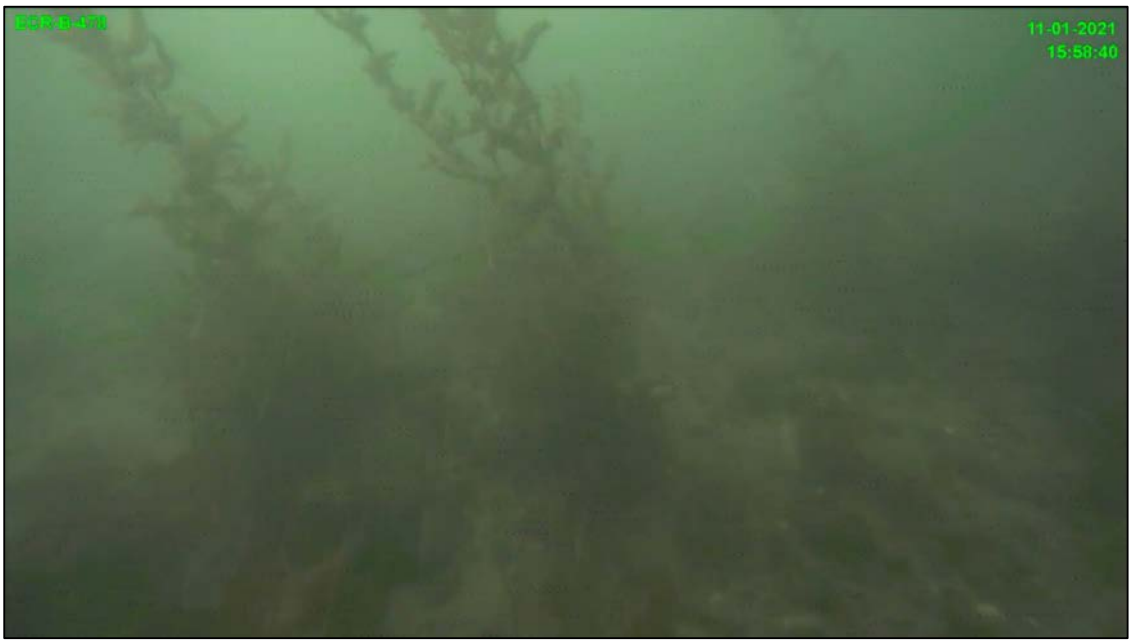


Image 59 Representative image from Segment 5 displaying an area of concentrated cobble and sand substrate with a variety of macroalgae, including Sargassum spp.

Image 60 Representative image from Segment 5 displaying an area of sand bottom with scattered shell and shell fragments.

5.5.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 5 are provided in Attachment B. Five of the six benthic grab stations along the primary corridor yielded sediment samples from benthic grabs within this Segment. The collection of grab samples from ECR-B-478 was unsuccessful due to fouling of the grab from large gravel. An additional five stations were successfully sampled along the Alternate landfall corridor.

None of the samples collected from Segment 5 had any distinctive odor. Additional details are provided in Attachment B with the other noted visual observations.

None of the benthic grabs had the presence of anthropogenic debris. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of ≥2.8 in (7 cm).

Several grabs were observed to contain shell and shell fragments and gravel, (Image 61), while others lacked notable surficial features (Image 62).

Image 61 Representative surficial grab sample from station ECR-B-472 displaying some shell and shell fragments, and some gravel in mostly coarse to fine sand.

Image 62 Representative surficial grab sample from station ECR-B-476 displaying mostly coarse to fine sand.

5.5.3| PARTICLE SIZE DISTRIBUTION

A total of five sediment samples from the Millstone landfall corridor, and five sediment samples along the secondary landfall corridor as shown in Figure 72 were analyzed for PSD. Note that stations ECR-B-476 and ECR-B-1437 were analyzed and reported to the Unified Soil Classification System (USCS) scale due to being part of a geotechnical sample set and were converted to an approximate Wentworth scale *post hoc.* The PSD data, based on the Wentworth scale (Table 21) are presented in Table 59 for Segment 5.

Four of the five samples from the Millstone landfall corridor contained some fraction of gravel. Cobbles were present at a single station, ECR-B-472. Samples from three stations had a gravel fraction greater than 5 percent and those samples all contained pebbles. A single station had a total gravel fraction >10 percent (ECR-B-470; 22.4 percent).

All of the five samples from the secondary landfall corridor contained some fraction of gravel. Samples from three stations had a gravel fraction greater than 10 percent (Table 59).

All five of the samples from the Millstone landfall corridor had sediment compositions that consisted of greater than 50 percent of a combined sand particle fraction, of which two stations exceeded 75 percent. Sand fractions were often composed of particles primarily ranging between Coarse Sand (1 to 0.5 mm) and Very Fine Sand (0.125 to 0.0625 mm). No stations had a combined Silt and Clay fraction that exceeded 50 percent.

All five of the samples from the secondary landfall corridor had sediment compositions that consisted of greater than 50 percent of a combined sand particle fraction, of which one station exceeded 75 percent. Sand fractions were often composed of particles primarily ranging between Coarse Sand (1 to 0.5 mm) and Very Fine Sand (0.125 to 0.0625 mm). No stations had a combined Silt and Clay fraction that exceeded 50 percent.

The total gravel, total sand, and silt + clay along the Millstone landfall corridor was calculated and are presented in Figure 73. A minor spatial pattern of an increased silt and clay fraction closer to shore (northern most stations) and an increased total gravel fraction at its two southernmost stations, closer to the Variant A corridor was evident. Figure 73 introduces TOC results, as more thoroughly presented in Section 5.5.4, relative to the percentage of total gravel, total sand, and silt + clay. A general correlation between increased TOC levels and greater percent fine fraction of silt and clay was evident.

The total gravel, total sand, and silt + clay along the secondary landfall corridor was calculated and are presented in Figure 74. Figure 74 introduces TOC results, as more thoroughly presented in Section 5.5.4, relative to the percentage of total gravel, total sand, and silt + clay. A general correlation between increased TOC levels and greater percent fine fraction of silt and clay was evident.

Table 59 Percentages of particle size classes according to Wentworth (1922) from benthic grab stations within Segment 5. Grayed columns show sediment component totals. Note: stations along the secondary landfall corridor are shaded in blue.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-1437	--	--	4.0	1.0	5.0	6.0	11.0	14.0	25.0	5.0	61.0	*	*	34.0
ECR-B-476	--	--	--	--	--	--	--	1.0	28.0	31.0	60.0	*	*	40.0
ECR-B-474	--	--	--	0.7	0.7	4.6	17.5	32.8	25.2	5.1	85.2	11.8	2.3	14.1
ECR-B-472	--	0.3	5.4	4	9.4	9.9	19.8	37.3	12.9	1.7	81.6	7.4	1.3	8.7
ECR-B-470	--	--	15	7.4	22.4	10	16.6	24.8	9.5	1.9	62.8	13.0	1.8	14.8
ECR-B-480-A	-	-	0.7	0.8	1.5	1.4	9.1	47	21.5	2.3	81.3	15.5	1.7	17.2
ECR-B-482	-	-	3.7	7.7	11.4	9.6	17	29.7	15.1	2.5	73.9	13.3	1.4	14.7
ECR-B-484	-	-	-	0.2	0.2	0.2	0.3	1	19.4	47.5	68.4	25.8	5.6	31.4
ECR-B-486	-	-	4.3	14.6	18.9	9.4	11.4	40.8	7.9	1.5	71.0	9.5	0.6	10.1
ECR-B-488	-	-	5.9	4.9	10.8	7.3	12.7	17	20.9	5.6	63.5	23.8	1.9	25.7

* Separate silt and clay fraction not available for these stations.

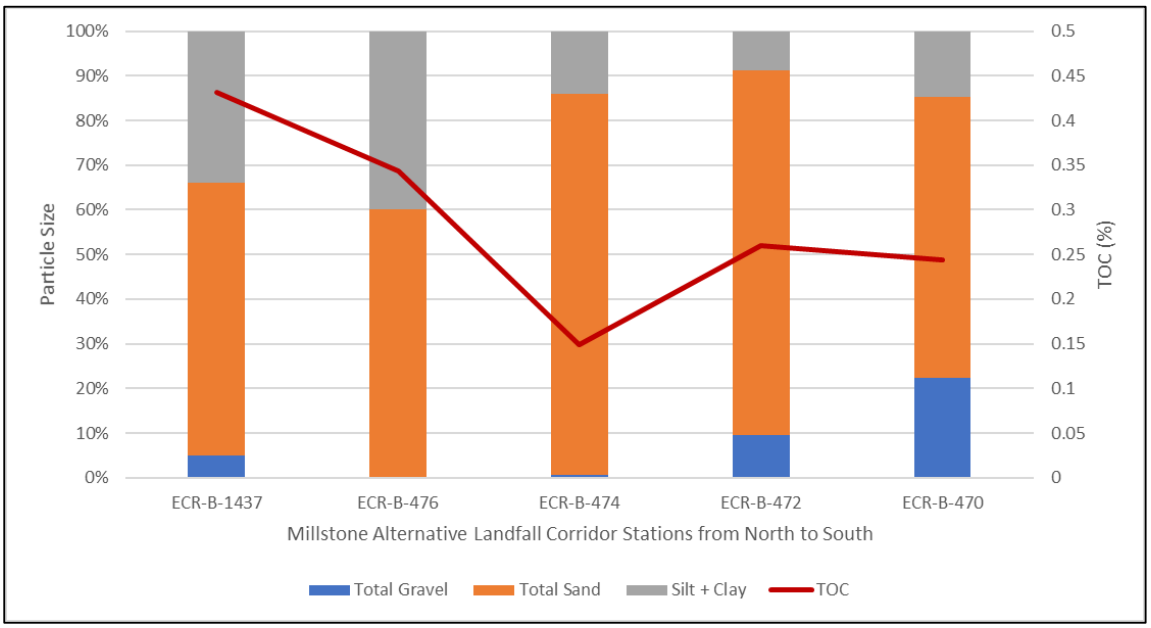


Figure 73 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from the Millstone landfall corridor in Segment 5 presented North to South.

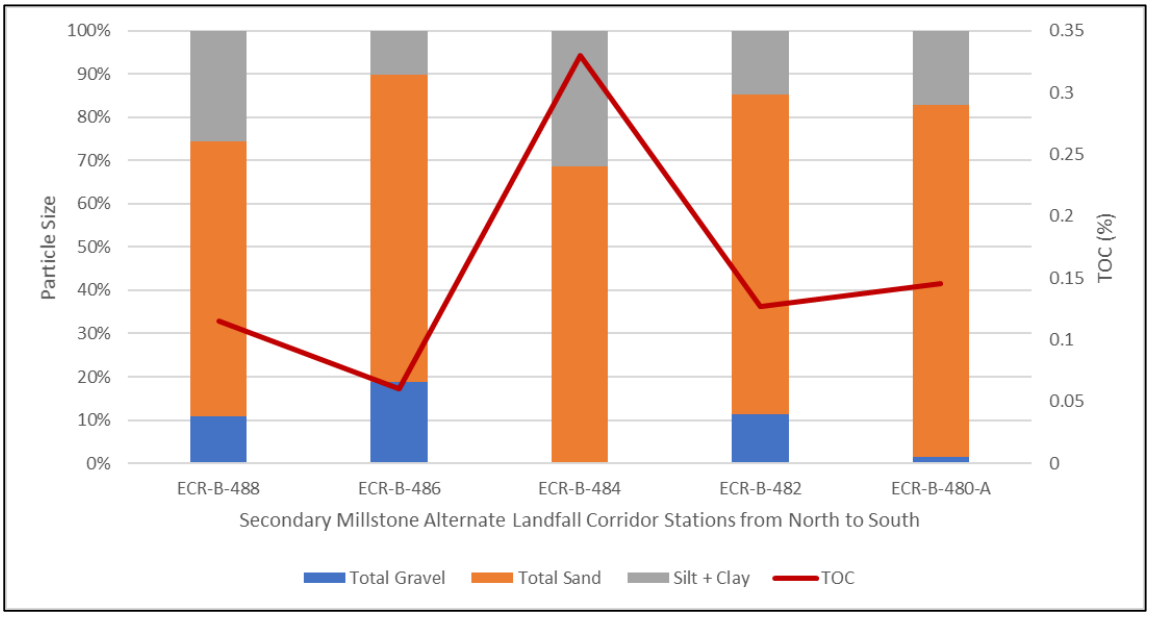


Figure 74 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from the secondary landfall corridor in Segment 5 presented North to South.

5.5.4 | TOTAL ORGANIC CARBON

Sediment TOC concentrations (exclusive of QC replicates) from benthic grab stations along Segment 5 (including an alternate landfall corridor) ranged from 0.06-0.43 percent (mean: 0.22 percent; SE: 0.04; Table 60). Mean TOC concentration in Segment 5 was lower than the mean average TOC concentration over all sampled sites (0.83 percent) but similar to samples from adjacent Variant A stations.

Sediment TOC concentrations from grab samples collected in Segment 5 were relatively low (<1.0 percent) across all samples. Sediment TOC concentrations were generally somewhat higher in areas where samples contained relatively higher proportions of silt + clay (Figure 73).

Table 60 Summary of total organic carbon (TOC) concentrations from benthic grab stations along Segment 5 (including an alternate landfall corridor). Note: stations along the secondary landfall corridor are shaded in blue.

Station	TOC (percent)
ECR-B-1437	0.43
ECR-B-470	0.24
ECR-B-472	0.26
ECR-B-474	0.15
ECR-B-476	0.34
ECR-B-480-A	0.15
ECR-B-482	0.13
ECR-B-484	0.33
ECR-B-486	0.06
ECR-B-488	0.12

5.5.5 | INFAUNA FROM GRAB SAMPLES

Four of the five successful benthic grab samples were selected for infaunal analyses. These four stations sampled along Segment 5 Millstone corridor yielded 511 individuals and 94 total infauna taxa from seven phyla: Annelida, Arthropoda, Echinodermata, Mollusca, Nemertea, Platyhelminthes, and Sipuncula. A total of 56 taxa were identified to species level another 38 to LPIL.

Three of the five successful benthic grab samples collected along the Segment 5 secondary landfall corridor were selected for infaunal analyses. These three stations yielded 377 individuals and 68 total infauna taxa from seven phyla: Annelida, Arthropoda, Chordata, Echinodermata, Mollusca, Nemertea, and Sipuncula. A total of 42 taxa were identified to species level another 26 to LPIL.

5.5.5.1 | BIOMASS

Biomass along the Segment 5 landfall corridor was measured for 11 taxonomic classes of infauna present in the samples. Total infauna biomass for the sampling stations was 5.4 g. The mean biomass per station was (1.8 g ±0.28 SD). Bivalvia (bivalve mollusks) contributed 50.3 percent of the total biomass sampled. Seven of the 11 classes including Bivalvia, Polychaeta, Gastropoda, Ophiuroidea, Malacostraca, Echinoidea, and Sipuncilidea represented 99 percent of the total infauna biomass in the samples (Table 61).

Biomass was measured for eight taxonomic classes of infauna present in the samples. Total infauna biomass for the three secondary alternative landfall corridor sampling stations was 22.8 g. The mean biomass per station was (5.7g ± 8.9 SD). Gastropoda and Bivalvia combined contributed 86.1 percent of

the total biomass sampled. Five of the classes including Bivalvia, Gastropoda, Polychaeta, Malacostraca, and Ophiuroidea, collectively accounted for 99 percent of the total infauna biomass in the samples.

Table 61 Summary Statistics for infauna biomass collected from Segment 5. Note stations along the secondary landfall corridor are shaded in blue

Class	Total (g)	Percent	Mean	SD
Gastropoda	14.69	64.42	3.672	6.793
Bivalvia	4.95	21.69	1.237	1.600
Polychaeta	2.29	10.02	0.571	0.632
Malacostraca	0.81	3.56	0.203	0.118
Ophiuroidea	0.05	0.24	0.014	0.027
Nemertea *incertae sedis*	0.01	0.06	0.003	0.006
Clitellata	0.00	0.00	<0.001	<0.001
Anthozoa	0.00	0.00	<0.001	<0.001
Bivalvia	2.73	50.32	0.909	0.751
Polychaeta	0.85	15.70	0.284	0.303
Gastropoda	0.73	13.47	0.243	0.220
Ophiuroidea	0.42	7.72	0.139	0.241
Malacostraca	0.33	6.16	0.111	0.094
Echinoidea	0.29	5.40	0.097	0.169
Sipunculidea	0.03	0.63	0.011	0.018
Nemertea *incertae sedis*	0.03	0.56	0.010	0.014
Ascidiacea	<0.01	<0.01	--	--
Holothuroidea	<0.01	<0.01	--	--
Clitellata	<0.01	<0.01	--	--

SD = Standard deviation.

5.5.5.2| UNIVARIATE STATISTICAL ANALYSES

Along the Segment 5 corridor, specie level identifications included 277 individuals or 54.0 percent of the 511 total. All diversity indices were calculated using this set of species. The number of species per sample averaged 20.8 and ranged from 19 to 24. The Margalef's species richness (d) ranged from 4.5 to 5.0; diversity (H') ranged from 2.1 to 2.7; Fisher's alpha ranged from 9.1 to 12.1. Evenness measured with Pielou's J averaged 0.80 and ranged from 0.66 to 0.93.

The ten most abundant species sampled along the Segment 5 corridor are shown in Table 62. These species collectively account for 61.8 percent of the infauna abundance recorded along this Segment. Numerically dominant species include four polychaete annelids, three arthropods, and three mollusks. The most abundant species, *Crassinella lunulata* (bivalve mollusk), *Crepidula fornicata* (gastropod mollusk), *Ampelisca* sp. R (amphipod crustacean), and *Ampharete finmarchia* (polychaete worm) accounted for 21.3 percent, 19.5 percent, and 5.1 percent, and 3.3 percent of the 277 individuals, respectively.

Along the secondary alternative landfall corridor, species level identifications included 247 individuals or 65.6 percent of the 377 total.

The number of species per sample averaged 17.7 and ranged from 14 to 21. Margalef's species richness (d) values ranged from 2.9 to 4.3; diversity (H') ranged from 1.7 to 2.5, and Fisher's alpha ranged from 4.6 to 9.8. Evenness measured with Pielou's J was high across all stations averaging 0.69 ranging from 0.58 to 0.85.

The ten most abundant species sampled are shown in Table 62 (blue rows). These species collectively account for 78.1 percent of the infauna abundance recorded along this Segment. Numerically dominant species include four polychaete annelids, three arthropods, and three mollusks. The most abundant species, *Crassinella lunulata* (bivalve mollusk), *Ampelisca* sp R (amphipod crustacean), *Eurytellina alternata* (bivalve mollusk), and *Scalibregma inflatum* (polychaete worm) accounted for 31.2 percent, 19.0 percent, and 10.1 percent, and 3.6 percent of the 247 individuals, respectively.

Table 62 Numerically dominant species collected in grab samples from Segment 5. Note: stations along the secondary landfall corridor are shaded in blue.

Phylum	Species	Number of Individuals	Percent of Total Individuals	Station Occurrence
Mollusca	*Crassinella lunulata*	59	21.3	3
Mollusca	*Crepidula fornicata*	54	19.5	2
Arthropoda	*Ampelisca sp. R*	15	5.4	2
Annelida	*Ampharete finmarchica*	9	3.3	2
Annelida	*Parapionosyllis uebelackerae*	7	2.5	3
Arthropoda	*Unciola irrorata*	7	2.5	3
Arthropoda	*Byblis serrata*	5	1.8	1
Mollusca	*Mercenaria mercenaria*	5	1.8	2
Annelida	*Nephtys picta*	5	1.8	2
Arthropoda	*Oxyurostylis smithi*	5	1.8	2
Mollusca	*Crassinella lunulata*	77	31.2	2
Arthropoda	*Ampelisca sp. R*	47	19	1
Mollusca	*Eurytellina alternata*	25	10.1	2
Annelida	*Scalibregma inflatum*	9	3.64	2
Annelida	*Brania wellfleetensis*	8	3.24	2
Arthropoda	*Ampelisca vadorum*	6	2.43	2
Arthropoda	*Rhepoxynius hudsoni*	6	2.43	2
Annelida	*Prionospio pygmaeus*	5	2.02	1
Arthropoda	*Byblis serrata*	5	2.02	2
Mollusca	*Crenella decussata*	5	2.02	1

5.5.5.3| MULTIVARIATE STATISTICAL ANALYSES

Multivariate statistical analysis was not conducted for Segment 5 due to the small sample size.

5.5.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

This analysis was not conducted for Segment 5 due to the small sample size.

5.5.6 | SPI RESULTS

SPI images were collected at a total of 11 Segment 5 stations (stations ECR-1437, ECR-469 through ECR-478) with the results of the SPI image analysis found in Attachment H. Selected parameters for Segment 5 are plotted in Figure 75 (grain size, penetration, and surface boundary roughness) and Figure 76 (aRPD, infauna succession, and organism sediment index).

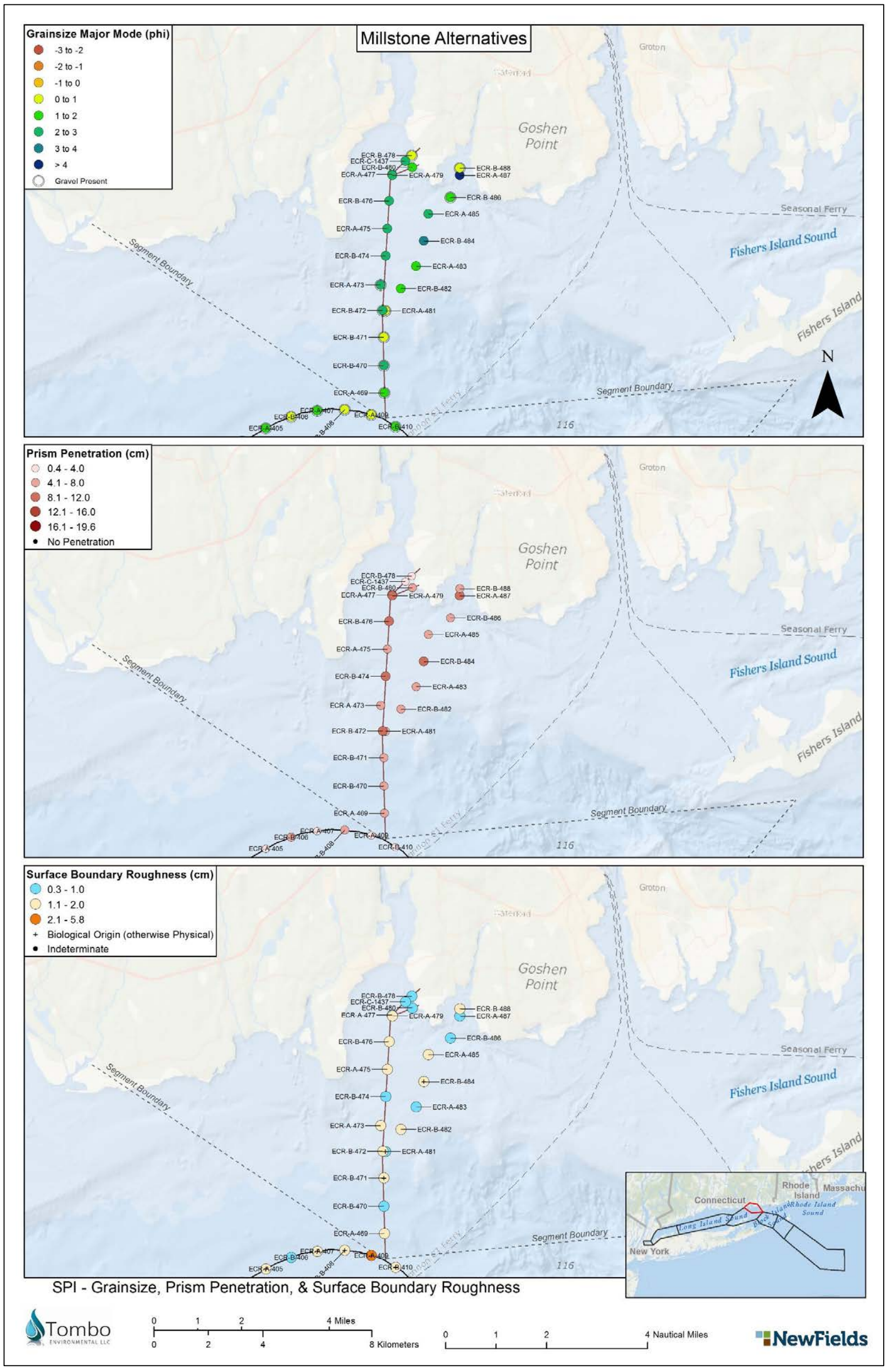


Figure 75 Sediment Profile Imaging (SPI) results for grain size, penetration, and surface boundary roughness along Segment 5. Segment 5 stations (stations ECR-1437, ECR-469 through ECR-478) are along the north-south red line corridor.

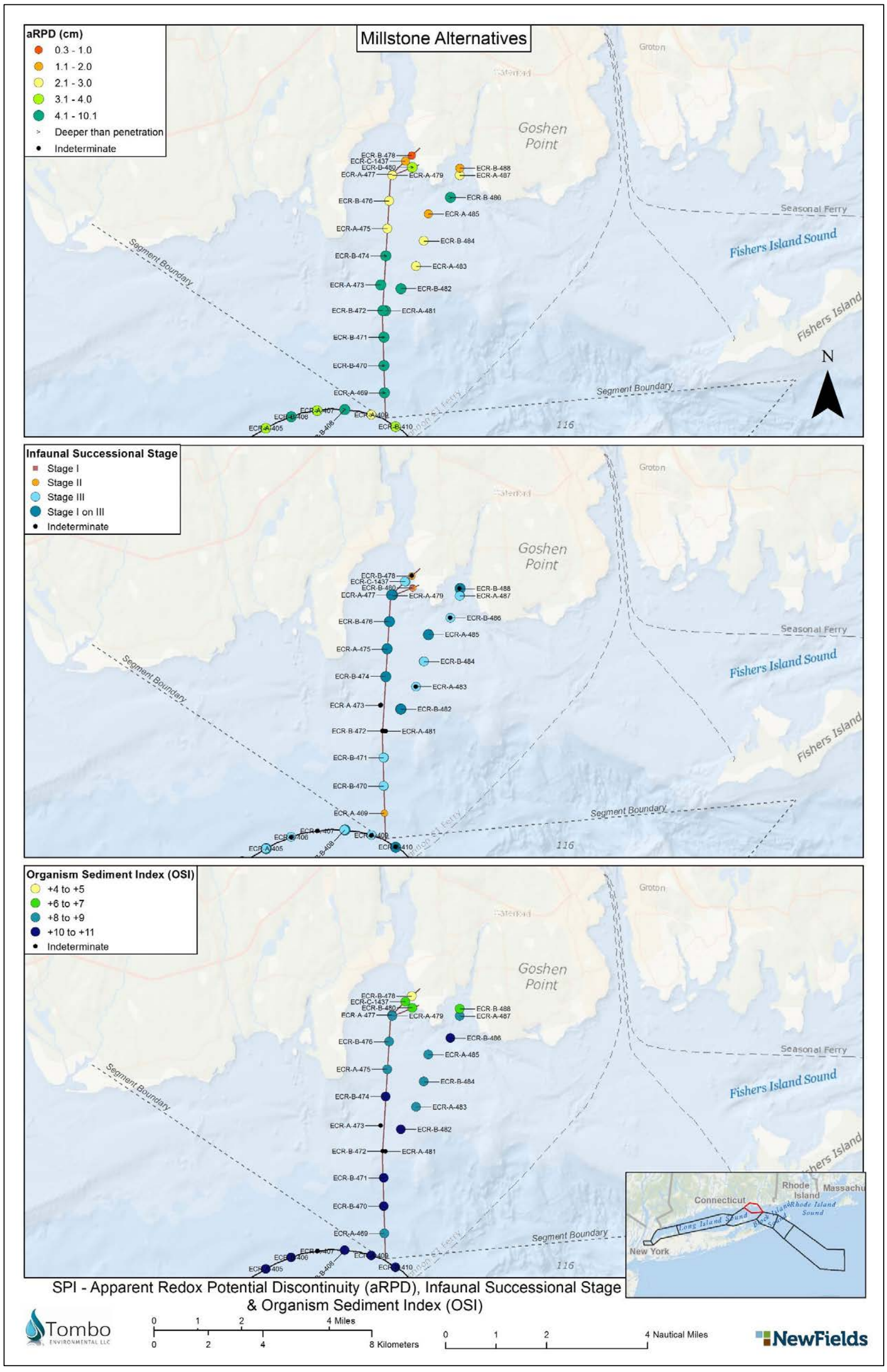
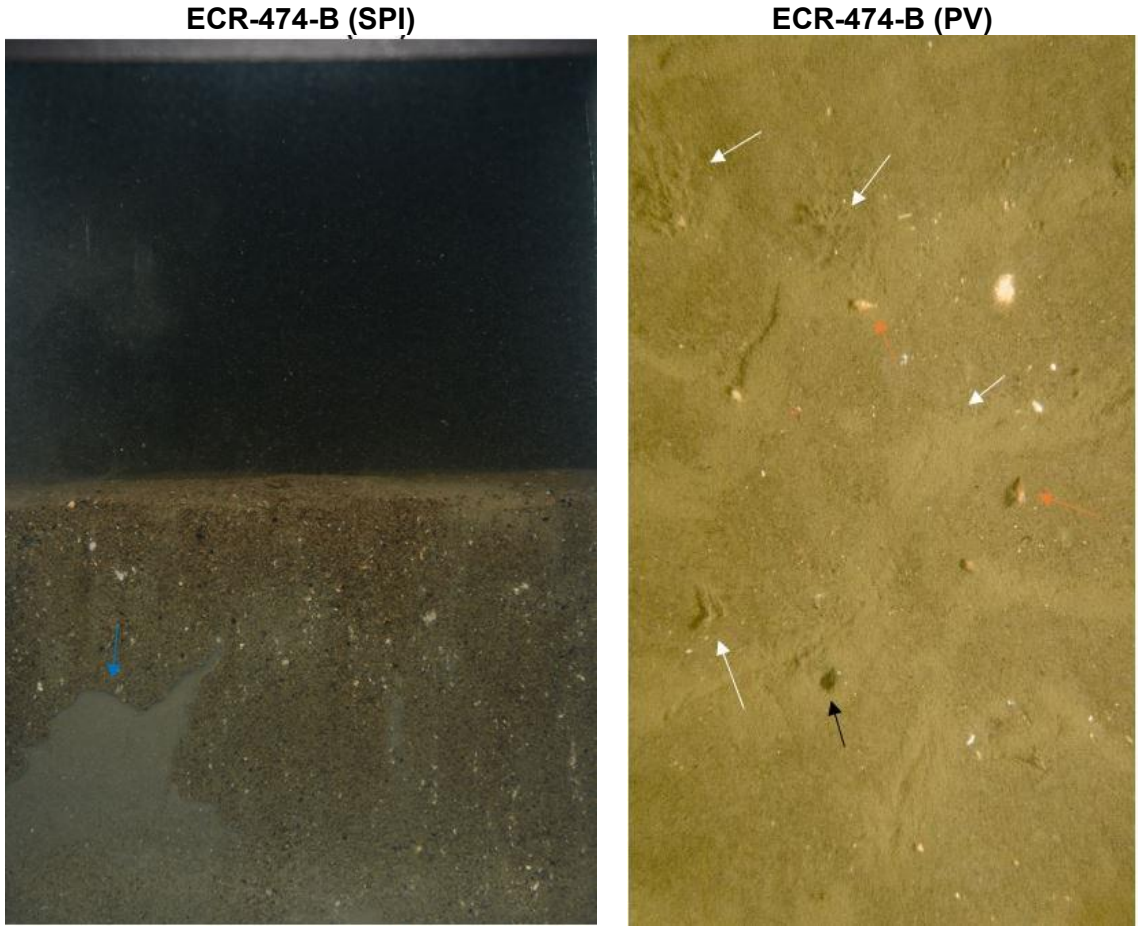


Figure 76 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 5. Segment 5 stations (stations ECR-1437, ECR-469 through ECR-478) are along the north-south red line corridor.

5.5.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

Along Segment 5, the grain size major mode of surface sediments determined using SPI ranged from silt and clay (>4 phi) to coarse sand (1 to 0 phi) with a predominance of fine sand (3 to 2 phi) (68 percent of SPI images) (Figure 75). Example SPI/PV images showing typical fine sand sediments in Segment 5 are provided in Image 63. Coarse (1 to 0 phi) and medium sand (2 to 1 phi) were present in 18 percent of the SPI images. Within Segment 5, only one SPI image at station ECR-477 had a grain size mode of silt and clay (<4 phi).



The SPI image from station ECR-474 showed surface sediments consisting of medium to fine sands with fine shell fragments. A possible feeding void structure filled with turbid porewater (blue arrow) suggested Stage III infaunal succession. The PV image showed a fine sandy bottom, a slightly rippled surface and evidence of decapod tracks. Hermit crabs (Paguroidea; orange arrows), hydroids (white arrows), and a surface burrow (black arrow) were observed on the sediment surface. SPI image width = 15cm. PV image area = 0.11 m^2.

Image 63 SPI and PV Images showing fine sand sediments from Segment 5 station ECR-474.

5.5.6.2 | PRISM PENETRATION DEPTH

The distribution of SPI camera prism penetration (in centimeters) in Segment 5 surface sediments is presented in Figure 75. Mean penetration depth is the distance that the SPI camera prism penetrates the sediment providing a relative measure of sediment water content and shear strength of surface sediments. Lower prism penetration was generally observed across Segment 5 due to the abundance of sand in surface sediments ranging from medium to fine sand. Sands can have a higher sediment bearing capacity than silt and clay, resulting in lower SPI camera prism penetration. Penetration depths in Segment 5 ranged from no penetration near station ECR-478, to 11 cm at station ECR-477 with a Segment average of 6.4 cm (± 2.6 cm, n = 21). Note that a SPI image collected near station ECR-478 showed the presence of coarse to medium sand with pebbles, and low (3 cm) SPI prism penetration.

5.5.6.3 | SURFACE BOUNDARY ROUGHNESS

Segment 5 mean small-scale boundary roughness values (surface relief) is presented in Figure 75. ranged from 0 to 2.0 cm with a Segment average of 1.0 cm (±0.41 cm, n = 21). The highest mean boundary roughness values (1.5 cm) were measured at stations ECR-469, and ECR-472(Figure 75). The larger boundary roughness was due to the presence of coarse sediment, which suggested strong hydrodynamic conditions near the sediment surface are indicative of physical roughness. Physical roughness was predominant across Segment 5, with 86 percent of the SPI images classified with physical roughness.

5.5.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. The Segment 5 mean aRPD depths, presented in Figure 76, ranged from 0.9 to 10.2 cm with a Segment average of 4.0 cm (±2.5 cm, n = 21). Deeper aRPD depths (5.3 cm ±1.7 cm, n=10) were measured in the southern portion of the Segment where water depths were also deeper (-24 to -42 m MLLW). Shallower aRPD depths (2.9 cm ±2.5 cm, n=11) were measured in nearshore areas where water depths ranged from -3 to -15 m MLLW.

5.5.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 5 sediments, was predominantly Stage III (41 percent of SPI images), the advanced successional stage where larger head-down deposit feeding organisms (and feeding voids) were present (Figure 76). Several locations showed Stage I communities coexisting with the Stage III communities (Stage I on III), which was observed in 23 percent of the SPI images.

Stage I succession only, the initial pioneering stage, was only observed at station ECR-469 and located in an area with medium sand. Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at stations ECR-478 and ECR-469. Successional stage could not be determined (classified as indeterminate) at stations ECR-478, ECR-473, and ECR-472 due to low SPI prism penetration and the presence of coarse sediment.

5.5.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 5 since potential indicators for high SOD were lacking.

5.5.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The Segment 5 mean OSI values presented in Figure 76 range from +5 to +11. OSI values could not be calculate at stations ECR-473 and ECR-472 because of indeterminate aRPD depths due to low or no SPI prism penetration, or indeterminate successional stage.

OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. The vast majority (94 percent) of OSI values in Segment 5 were +6 or higher except for station ECR-478, which had an OSI of +5. This location showed the presence of medium or coarse sand and a shallow aRPD, which is a habitat type that can remain in an earlier infaunal successional stage.

5.5.7 | PV RESULTS

The PV images were collected at 11 Segment 5 stations (Figure 72). At Segment 5 stations, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.1 m^2 (± 0.01 m^2).

5.5.7.1 | BEDFORMS

Physical bedforms were observed at ten of the 11 Segment 5 sampling stations (Attachment G-2). Bedform ripples were observed at 4 of these 11 stations with ripples (Image 64) present primarily in muddy sand bottoms and are representative of mobile sediment beds of Segment 5.

Biological bedforms were observed at two of the 11 Segment 5 stations (Attachment G-2) with muddy sand, muddy medium sand and shell rubble bottoms (Image 65). Note that both the physical and biological bedforms where observed at one of the Segment 5 stations.

Image 64 Bioturbated muddy sand bottom with fecal mounds, gastropod trails and ripples at Segment 5 station ECR-B477.

Image 65 Shell rubble bottom with live Crepidula stacks (green arrows) and Ascidiacea tunicates (red arrows at Segment 5 station ECR-B-470.

5.5.7.2| FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 5 stations are provided in Attachment G-2. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 5 stations is shown in Figure 77. Dominant taxa observed at Segment 5 stations is discussed below.

Image 66 shows the red algae *Grinella americana* and *Agardhiella subulate*, and the filamentous green alga *Rhizoclonium riparium* found at only one of the 11 Segment 5 stations (ECR-B-478). The filamentous red alga *Ceramium rubrum* was observed at station ECR-B-476 (Image 67).

Other unidentified marine macrophytes observed at Segment 5 stations included four red algae, one calcareous alga, one green alga and what resembles a kelp fragment (brown alga). Floral coverage was observed to be less than five percent at stations where these algae were present. Occasional dead eelgrass leaf blade detritus was observed along Segment 5 but no live eelgrasses were observed.

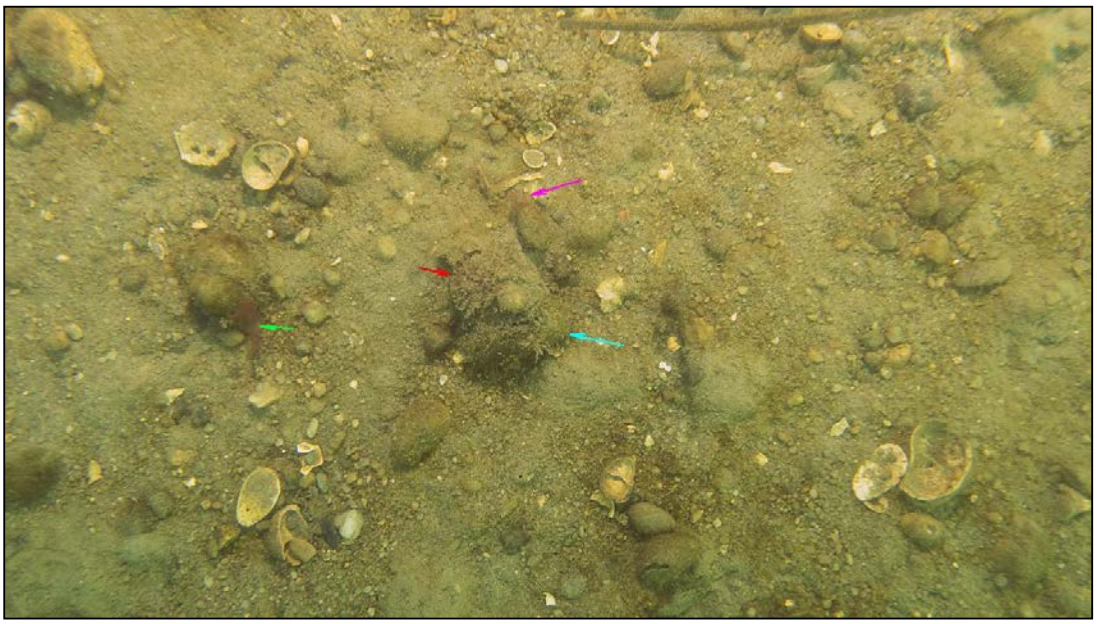


Image 66 Sandy gravel bottom at Segment 5 station ECR-B-478, with red algae [Agardhiela subulata and Grinella americana (red and pink arrows)], the green alga Rhizoclonium riparum (blue arrow) attached to cobble and shall hash and a drifting piece of unidentified red alga (green arrow).

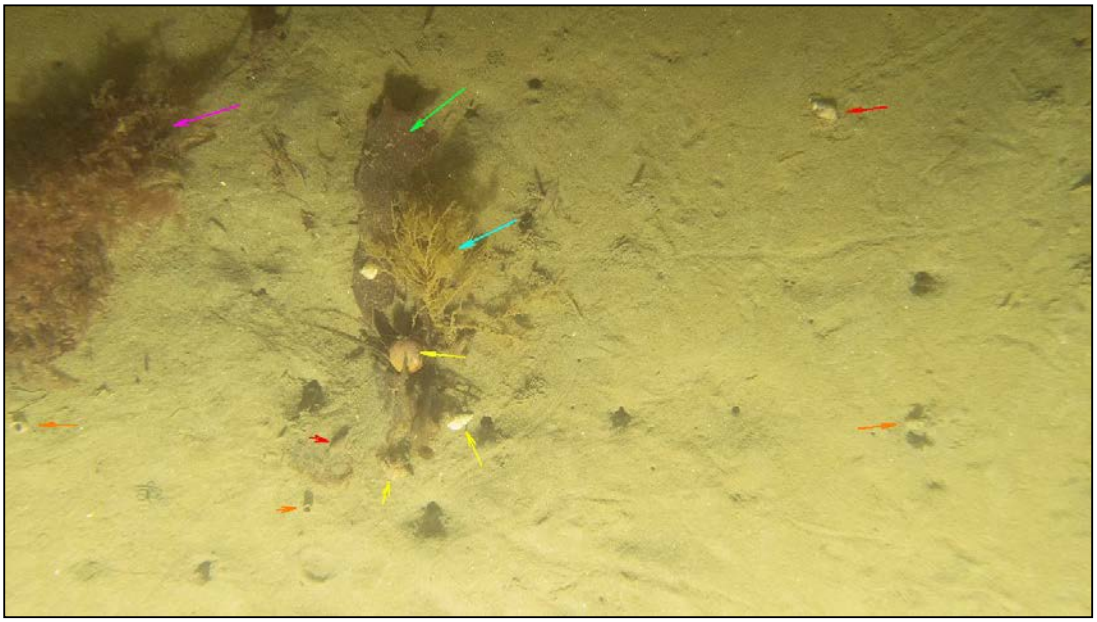


Image 67 Muddy fine sand with a hydroid stalk (blue arrow), gastropods (red arrows), Paguroidea (yellow arrows), Chaetopterus polychaete tubes (orange arrows), brown alga fragment (green arrow) and a red alga Ceramium rubrum at Segment 5 station ECR-476.

The northern star coral *Astrangia poculata* was observed at Segment 5 station ECR-B-471 (Attachment G-2) attached to cobble (Image 68). The coral coverage at the station was very low, being estimated at two percent.

Stalks of the *Sertularia* hydroid were observed at six Segment 5 stations attached to cobble (Image 69). The highest faunal cover for *Sertularia* hydroid stalks was estimated at 24 percent at station ECR-B-478 (Image 69).

Colonial tunicates (Class Ascidiacea, family Didemnidae), light grey in color (Image 68), were observed in 6 out of 11 Segment 5 stations (Attachment G-2). Colonial tunicates had the highest faunal cover of 15 percent with a total of 61 individual colonies counted at Segment 5 stations.

Gastropod mud snails (*Ilyanassa* sp.) were observed at three of the 11 Segment 5 stations with an abundance of approximately nine individuals.

Stacks of *Crepidula fornicata* were observed at three of the 11 Segment 5 stations with an abundance of 58 individuals.

The hermit crab *Pagurus* sp. were observed in 6 out of 11 Segment 5 stations with a total abundance of 12 individuals.

Image 68 Gravel and shell hash bottom with Arbacia punculata urchins (red arrows), northern star coral (green arrow) and colonial Ascidiacea tunicates (blue arrows) at Segment 5 station ECR-471.

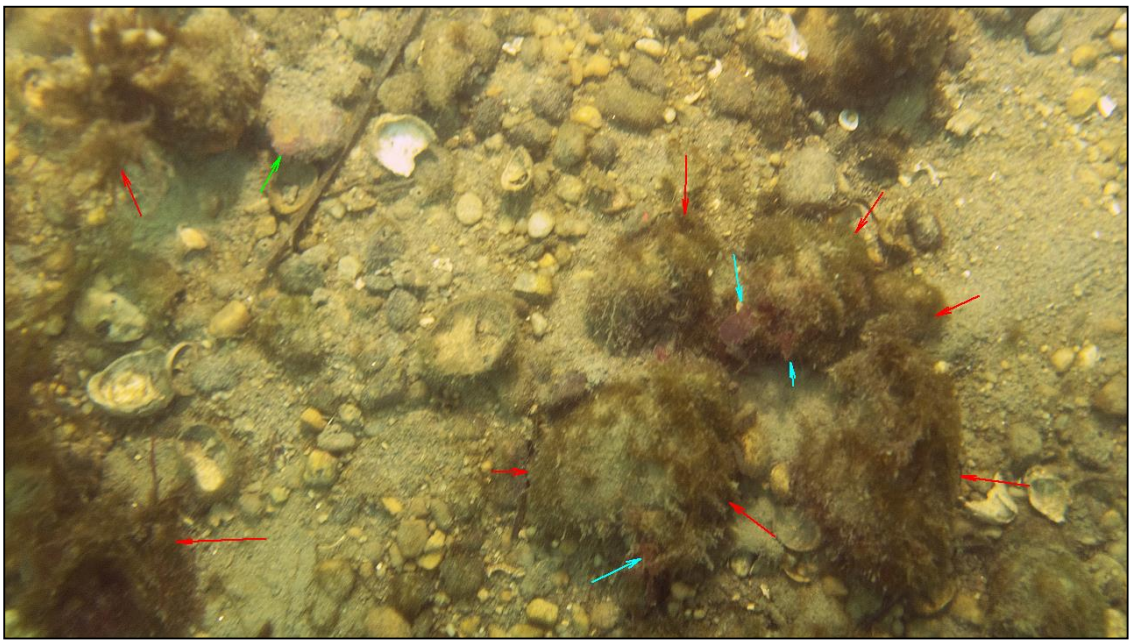


Image 69 Sandy gravel bottom with hydroids, unidentified red algae (blue arrows) and calcareous alga (green arrow) attached to cobble at Segment 5 station ECR-B-478.

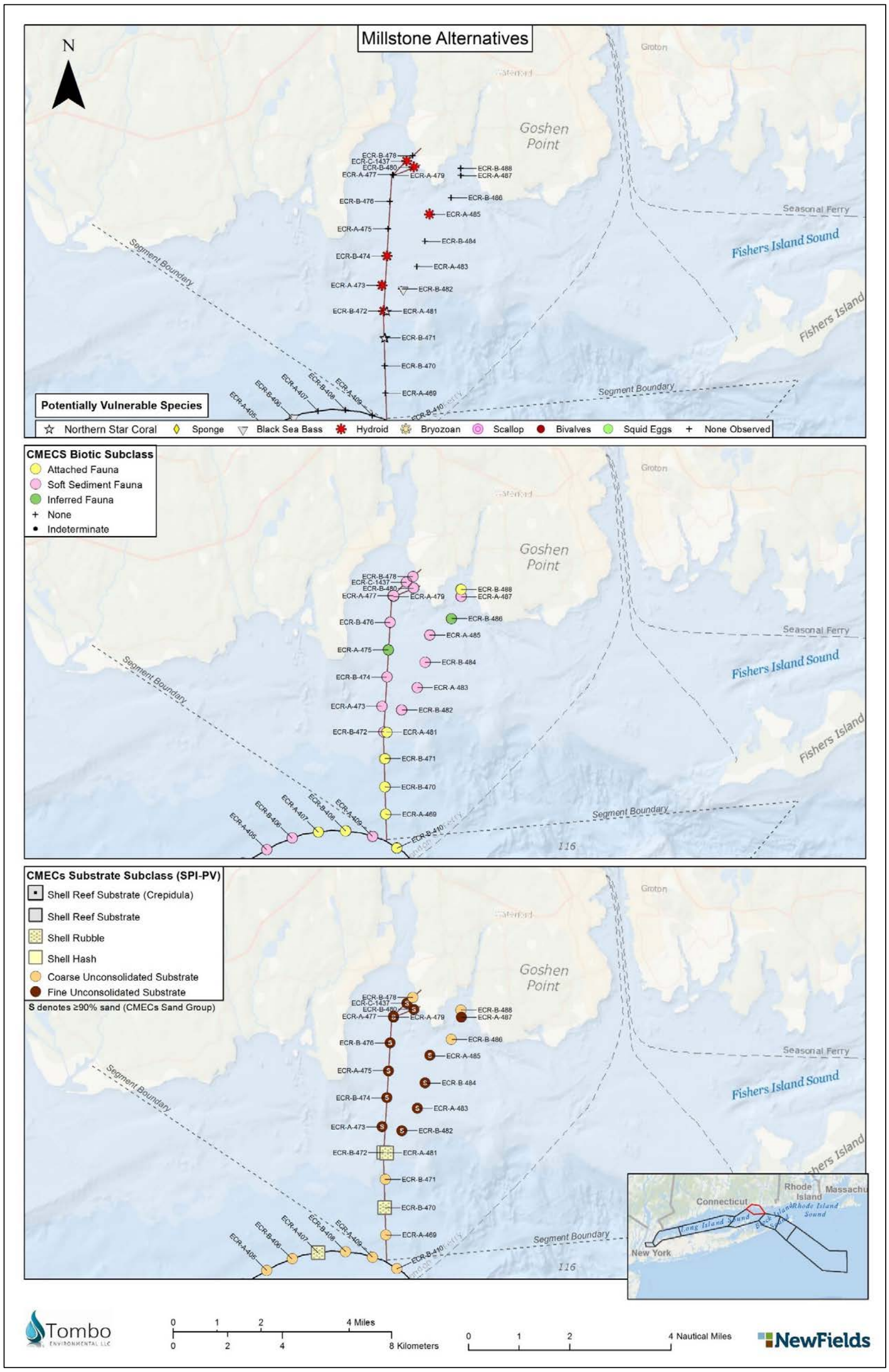


Figure 77 Plan View (PV) imaging results along Segment 5. Segment 5 stations (stations ECR-1437, ECR-469 through ECR-478) are along the north-south red line corridor.

5.5.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The PVS to project impacts observed in Segment 5 include the northern star coral, *Astrangia poculata*, based on meeting NOAA (2021) criteria of being a long-lived and habitat-forming species. The northern star coral was observed at Segment 5 station ECR-B-471 (Image 68).

5.5.7.4| NON-NATIVE TAXA

The only possible non-native species observed in five out of the 11 Segment 5 stations was a colonial tunicate of the family Didemnidae (Attachment G-2). The observed tunicate could possibly be *Didemnum vexillum* a species thought to be native to Japan that has been reported from waters of the western North Atlantic.

5.5.8| CMECS CLASSIFICATIONS

5.5.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/tow camera video/towed video camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. The Physiographic Setting for Segment 5 within Long Island Sound was classified as Sound.

For the Physiographic Setting, Segments within Long Island Sound (Segments 1 through 6), were classified as Sound, and those outside of Long Island Sound (Segments 7 and 8) were classified as Continental Shelf.

Both Geoform Levels 1 and 2 were taken into account for the classifications of each station along the ECR, with modifications made in certain instances. The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and level 2 represents features smaller than 0.4 mi^2 (1 km^2). (Mittermayr, 2020).

The Segment 5 seabed had a flat overall topography consisting of unconsolidated substrate (ranging in size from silt to boulders) and stations were classified as Level 1 Flat geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

At the smaller scale (less than 0.4 mi^2 [1 km^2] in size), the Geoform Level 2 classification consisted of three categories. The first two categories are of geologic origin, and these included 1) Flat and 2) Boulder Field Geoforms. The Flat Geoform, is as described above, and was seen at 5 of the 11 Segment 5 stations in this Segment. The second classification was the Boulder Fields Geoform is applied to areas and described as an area dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. It should be noted that Boulder Fields classification is listed as a Level 1 Geoform, meant for regions greater than 1 km^2 in size. It was deemed appropriate given their presence and associated epifauna, often including the northern star coral, *Astrangia poculata*. The Boulder Field Geoform was observed at three Segment 5 stations.

The remaining three Segment 5 stations in this Segment were classified as the Burrow/Bioturbation Geoform (of biogenic origin), consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna.

Geoform classifications for the stations in Segment 5 are summarized and illustrated in Table 63 and Figure 78.

Table 63 Geoform components based on drop/towed camera video for Segment 5 (note: Secondary Millstone corridor is not included).

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sound	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-B-474, ECR-B-476, ECR-B-1436
				Geologic	Boulder Field	ECR-B-478, ECR-C-1432, ECR-C-1434
					Flat	ECR-B-470, ECR-B-472, ECR-C-1433, ECR-C-1435, ECR-C-1437

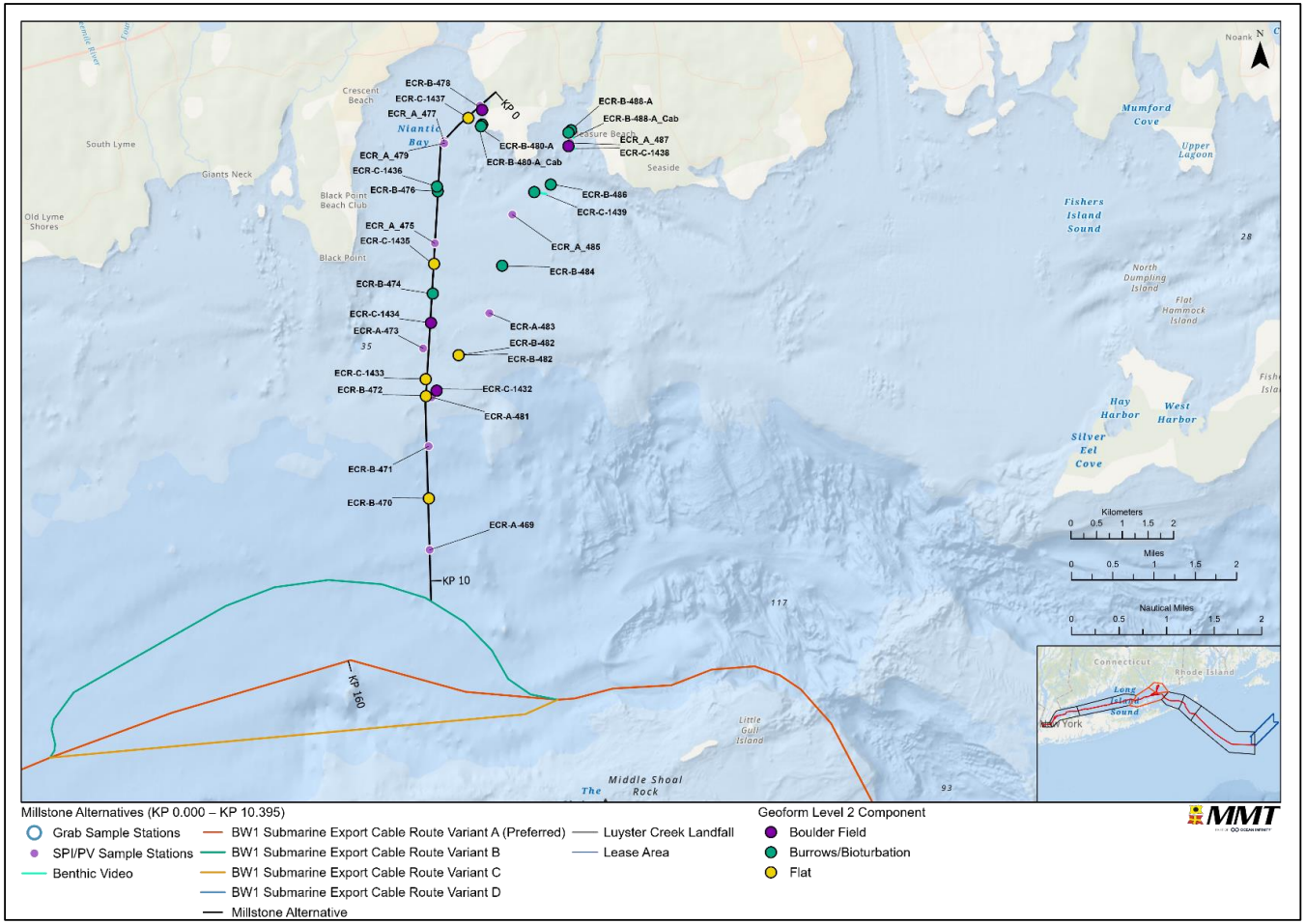


Figure 78 Overview of classified CMECS Geoform Level 2 Component based on drop/towed camera video in Segment 5.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/tow camera benthic video data (Table 66 and Figure 79). The entire Segment 5 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Eight (8) of the 11 stations in Segment 5 associated with Soft Sediment Fauna were the same as those with the Burrows/Bioturbation and Flat Level 2 Geoforms. There did not appear to be any dominant macrofauna at these stations except at station ECR-C-1437 where the gastropod *Crepidula* spp. (likely *Crepidula fornicata*), was prevalent.

The Biotic Subclass of the other three stations was classified as Attached Fauna, being present where Boulder Field was the Level 2 Geoform. Attached Fauna was further categorized into the Biotic Group, Diverse Colonizers and then the Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders including sponge, bryozoans, colonial tunicates, and anemones, and the northern star coral (*Astrangia poculata*). Additional specifics are provided in Attachment B – Field Sampling Log.

Table 64 CMECS Biotic components based on drop/towed camera video in Segment 5.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-B-470, ECR-B-472, ECR-B-474, ECR-B-476, ECR-C-1433, ECR-C-1435, ECR-B-1436, ECR-C-1437
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-B-478; ECR-C-1432, ECR-C-1434

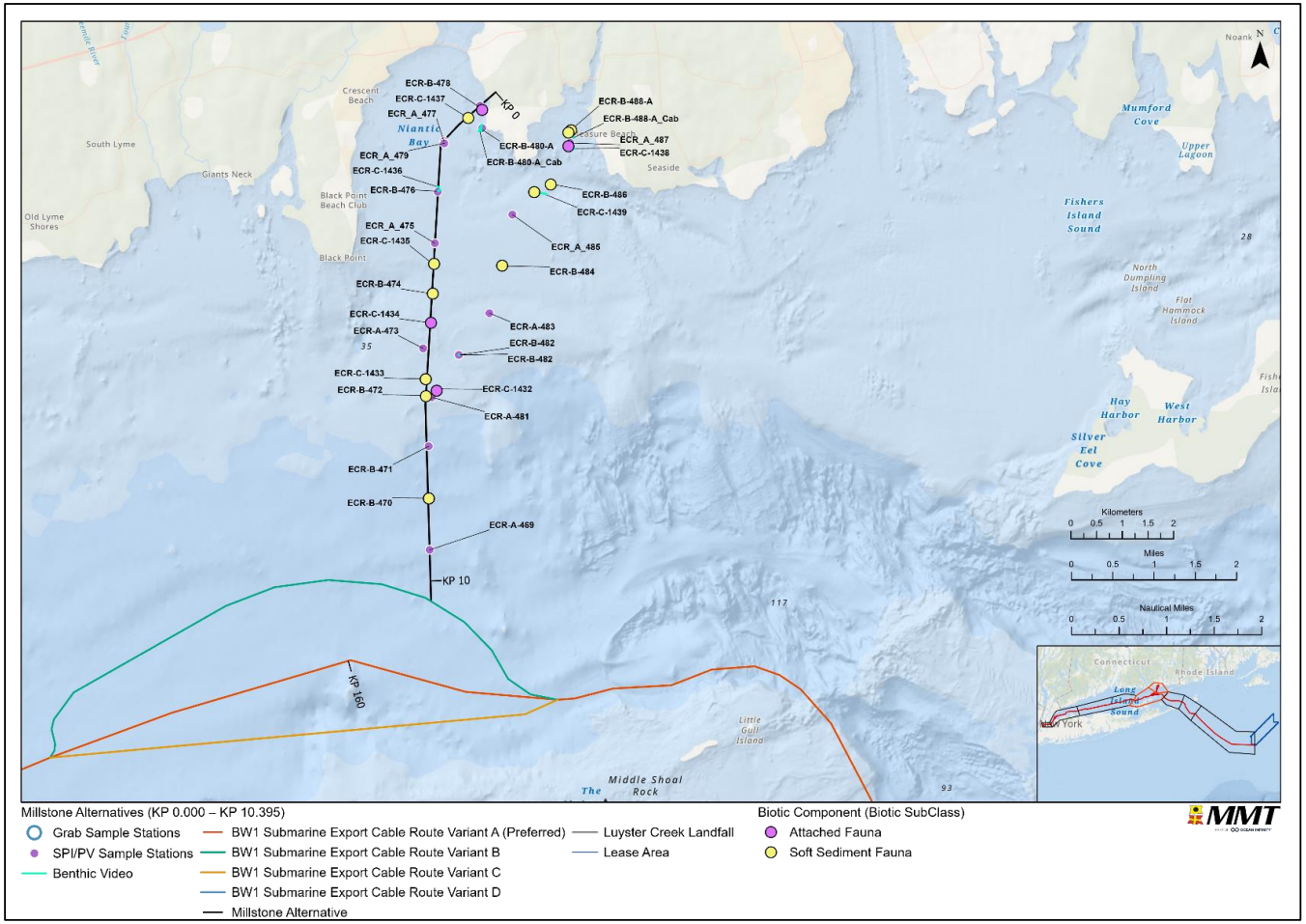


Figure 79 Overview of classified CMECS Biotic Component based on drop/towed camera video in Segment 5.

5.5.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Eleven (11) benthic grab stations were sampled (including an alternate landfall corridor) along Segment 5. Grab samples were successfully obtained at ten stations; One station (ECR-B-478) yielded no successful grabs after multiple attempts due to interference with cobble/gravel substrate. NMFS-modified CMECS substrate classifications for Segment 5 station ECR-B-478 was derived from SPI and/or PV imagery (Section 5.5.8.3 and Attachment F and Attachment G).

CMECS and NMFS-modified substrate classifications were derived from PSD results for 7 of 10 stations with successful grab samples. Three of these 10 stations, ECR-B-470, ECR-B-472, and ECR-B-482, were determined to contain substantial (>50 percent) surficial biogenic (shell) material in the benthic grab content imagery and were therefore classified based on this (Image 70).

CMECS substrate component classifications for benthic grab stations (including an secondary landfall corridor) within Segment 5 are presented in Table 65 and shown in Figure 80. The NMFS-modified CMECS substrate component classifications for Segment 5 stations are provided in Table 66 and shown in Figure 81. This Segment yielded three benthic grab samples with biogenic substrate types, three coarse unconsolidated substrate types, and four with fine unconsolidated substrate types. Substrate types included Shell (Clam) Hash, Gravelly Muddy Sand, Muddy Sand, and Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS) substrates.

Coarse unconsolidated substrates and biogenic substrates are considered indicative of complex habitats under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*, while fine substrate types are indicative of soft-bottomed habitats. Sampling stations that yielded samples containing coarse substrate types were located closer to shore than those which yielded fine substrate types. Coarse unconsolidated Gravelly substrates contained primarily pebble/granule as the gravel component. Biogenic substrates were found in samples at three stations.

PSD data for stations ECR-B-476 and ECR-C-1437 were converted from USCS to Wentworth prior to CMECS and NMFS-modified CMECS substrate classification. Due to the different sieve sizes used between the two analytical methods, the precise mm-based cut-offs for particle size fractions vary by 0.02 to 0.075 mm (0.0008 to 0.003 inches). The overall characterization of substrate types was not affected by methodological differences with the exception of an indeterminate CMECS subgroup determination for station ECR-B-476 due to the lack of silt and clay fractions using the USCS method.

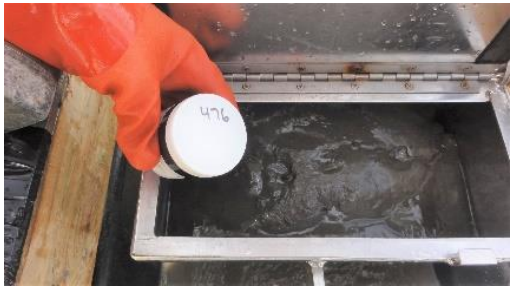
		
a. Shell (Clam) Hash (ECR-B-470)	b. Gravelly Muddy Sand (ECR-B-486)	c. Muddy Sand (ECR-B-476)
d. Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS; (ECR-B-474)		

Image 70 Grab content images showing representative substrate types encountered at benthic grab sampling stations along Segment 5.

Table 65 CMECS substrate component classifications for benthic grab stations sampled from Segment 5. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: stations along the secondary landfall corridor are shaded in blue.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	**Substrate Class**	**Substrate Subclass**	**Substrate Group**	**Substrate Subgroup**
ECR-B-470	Biogenic	Shell	Shell Hash	Clam Hash	N/A
ECR-B-472	Biogenic	Shell	Shell Hash	Clam Hash	N/A
ECR-B-482	Biogenic	Shell	Shell Hash	Clam Hash	N/A
ECR-B-1437	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-486	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-488	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-476	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	*Indeterminate*[1]
ECR-B-474	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-480-A	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-484	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand

[1] PSD data for ECR-B-476 were converted from USCS to Wentworth prior to CMECS substate classification. Due to the lack of hydrometer-based differentiation of silt and clay fractions with the USCS method, an indeterminate CMECS subgroup determination was applied to ECR-B-476.
N/A: Not Applicable; QC: Quality Control.

Table 66 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled Segment 5. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars. Note: stations along the secondary landfall corridor are shaded in blue.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-470	Shell	Shell Hash	N/A	N/A	N/A
ECR-B-472	Shell	Shell Hash	N/A	N/A	N/A
ECR-B-482	Shell	Shell Hash	N/A	N/A	N/A
ECR-B-1437	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-486	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-488	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-476	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-474	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-480-A	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-484	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A

N/A: Not Applicable; QC: Quality Control.

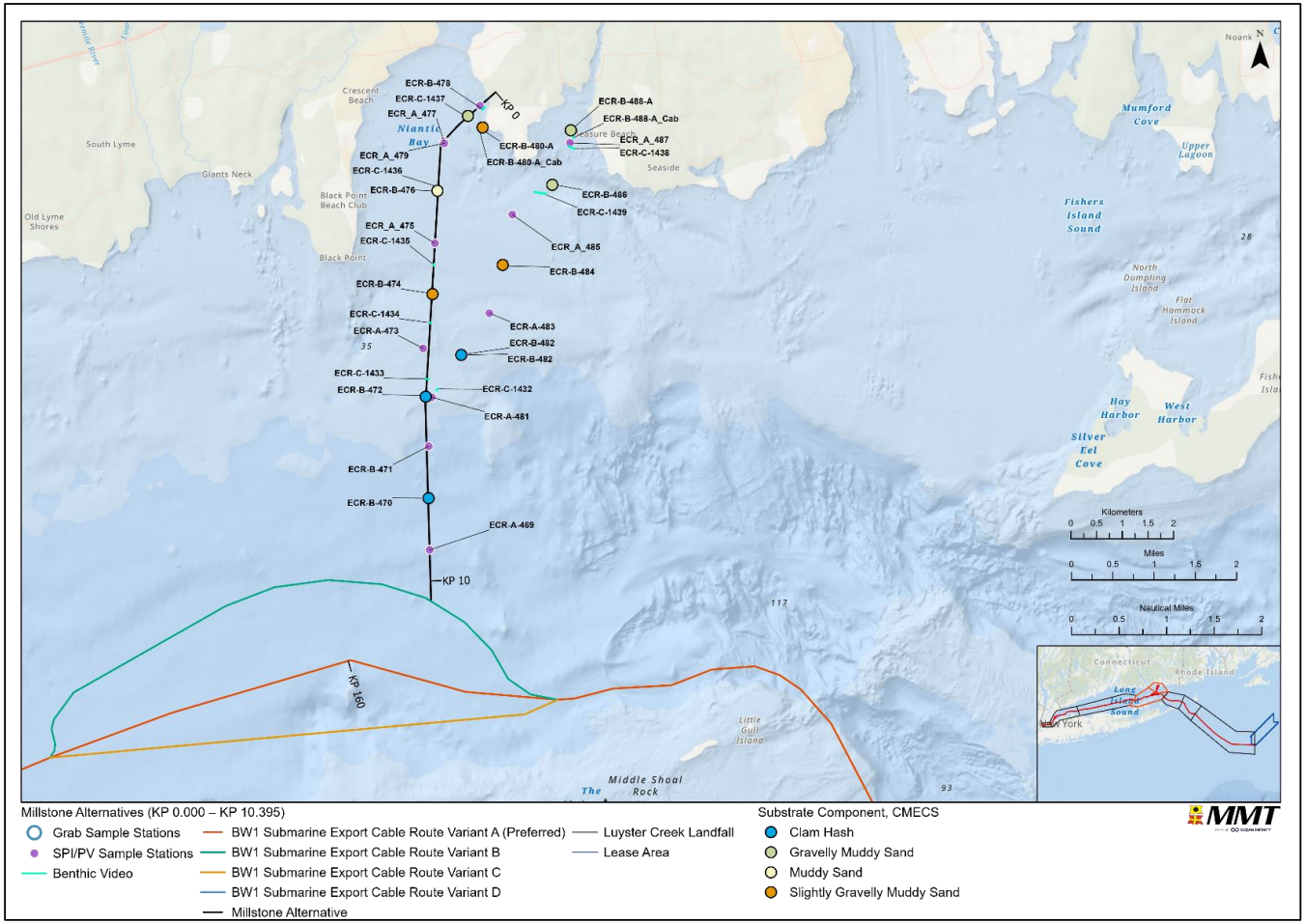


Figure 80 CMECS substrate component classifications for benthic grab stations sampled from Segment 5.

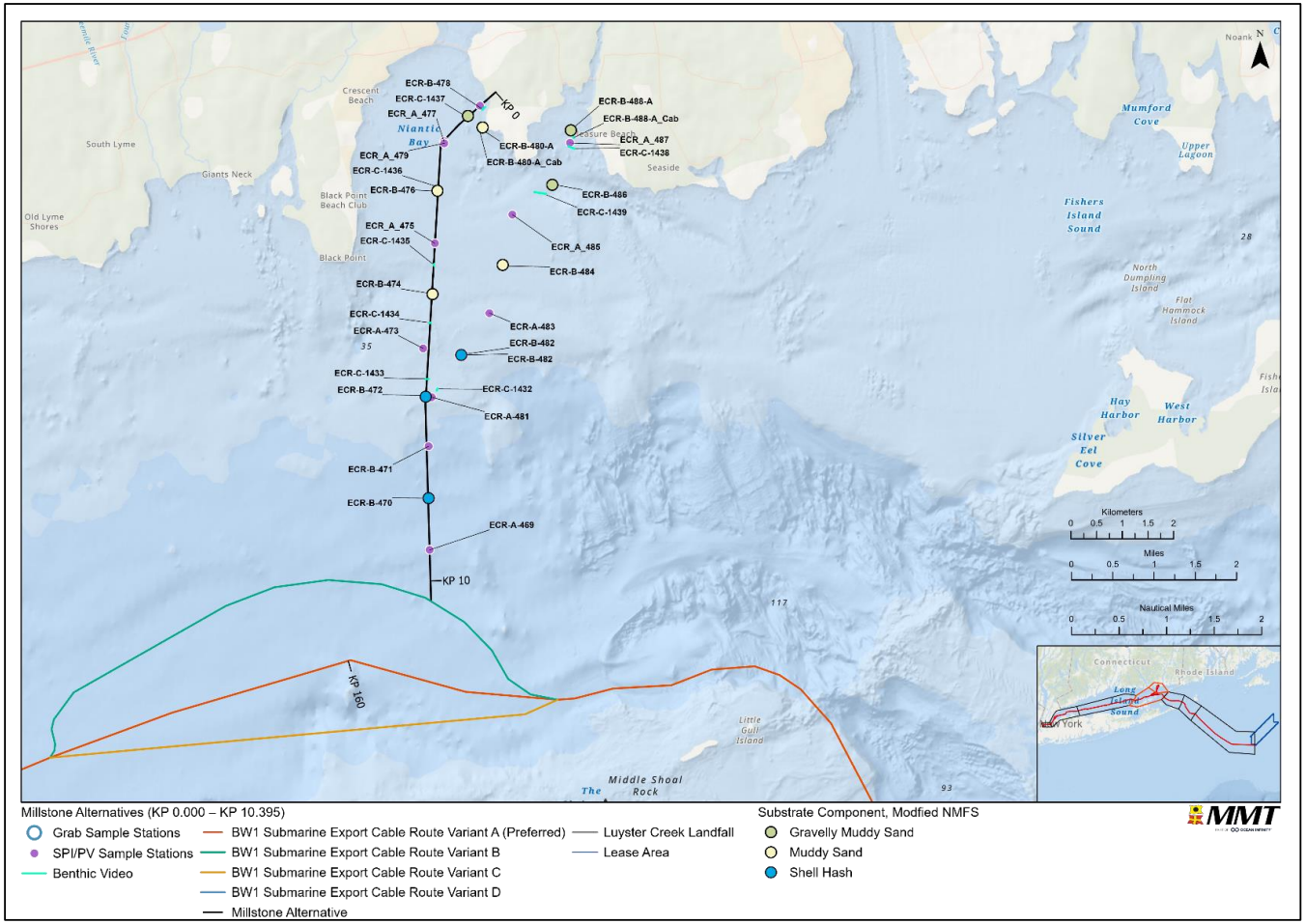


Figure 81 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled from the Segment 5.

5.5.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). CMECS Unconsolidated Mineral Substrate was present at nine of the 11 Segment 5 stations while the CMECS Shell Substrate class type was observed at two of the 11 Segment 5 stations (Table 67).

CMECS Fine Unconsolidated Substrate, mostly fine/very fine sands, were observed at six of the 11 Segment 5 stations (Table 67) and extended throughout Segment 5 (Figure 77, CMECS Substrate Subclass panel).

CMECS Coarse Unconsolidated Substrate, composed of gravelly mixes and sandy gravel (Table 67), was present at three of the 11 Segment 5 stations (Figure 77, CMECS Substrate Subclass panel).

CMECS Shell Rubble and CMECS Shell Hash subclass types were each observed at one of the Segment 5 stations (Table 67).

Table 67 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 5.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	9	82%	Fine Unconsolidated Substrate	6	55%	Sand	6	55%	Fine/Very Fine Sand	6	55%
									Medium Sand	0	0%
									Very Coarse/Coarse Sand	0	0%
						Muddy Sand	0	0%	--	--	--
						Sandy Mud	0	0%	--	--	--
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	3	27%	Gravels	0	0%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	0	0%
									Gravel Pavement	0	0%
						Gravel Mixes	3	27%	Sandy Gravel	3	27%
									Muddy Sandy Gravel	0	0%
									Muddy Gravel	0	0%
						Gravelly	0	0%	Gravelly Sand	0	0%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	2	18%	Shell Reef Substrate	0	0%	Crepidula Reef Substrate	0	0%	--	--	--
			Shell Rubble	1	9%	--	1	9%	--	1	9%
			Shell Hash	1	9%	--	1	9%	--	1	9%

5.5.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Subclass Soft Sediment Fauna biotic component was observed at 7 of the 11 Segment 5 sampling stations (Figure 77, CMECS Biotic Subclass panel) (Attachment G-1). The Soft Sediment Fauna component included *Pagurus* beds, Didemnaide tunicate beds, Sertularia beds, *Crepidula* beds, *Chaetopterus* beds, and *Ilyanassa* beds (Attachment G-1).

The CMECS Subclass Attached Fauna biotic component was observed at 3 of the 11 Segment 5 stations (Figure 77, CMECS Biotic Subclass panel) (Attachment G-1). The Attached Fauna component included Astrangiidae corals, Didemnaide tunicates, *Crepidula fornicata* gastropods, and *Arbacia punctulata* urchins (Attachment G-1).

The CMECS Subclass Inferred Fauna biotic component was observed and mapped at one Segment 5 stations based on the presence of *Arenicola* castings (Figure 77, CMECS Biotic Subclass panel) (Attachment G-1).

The CMECS Class Aquatic Vegetation was observed at 4 of the 11 Segment 5 stations with the presence of filamentous algae, and algal sheets. Although some aquatic vegetation was observed at Segment 5 stations, they were not the dominant biota grouping; none of the Segment 5 stations were mapped as CMECS Class Aquatic Vegetation (Figure 77, CMECS Biotic Subclass panel).

5.6| BLOCK ISLAND SOUND - THE RACE TO NY STATE WATERS

Segment 6 includes sample stations along the BW1 Variant A submarine export cable corridor from The Race to the New York state waters boundary (Figure 82).

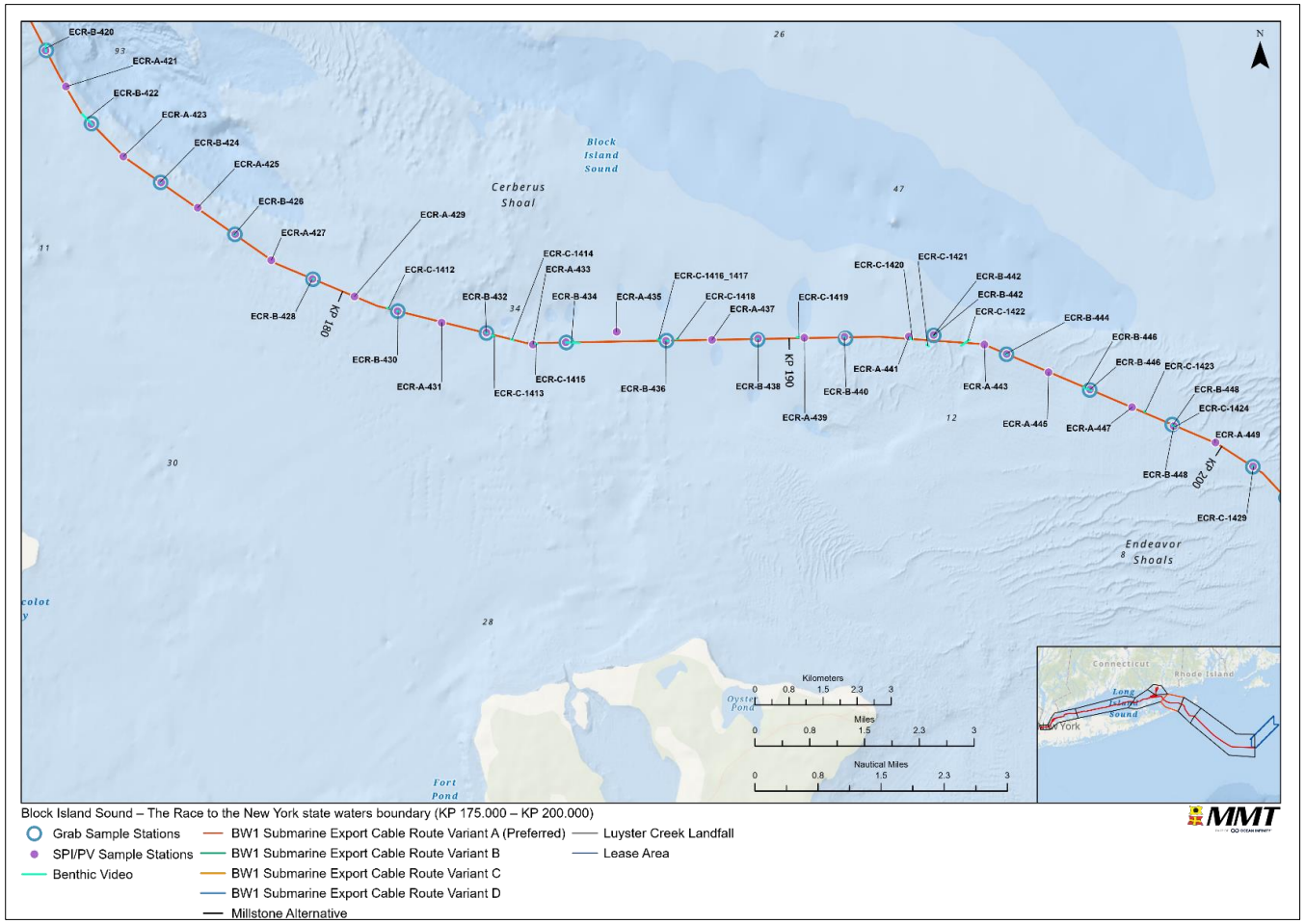


Figure 82 Overview of the Segment 6 sample stations.

5.6.1| BENTHIC VIDEO

The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitat from Segment 6 are provided in Image 71, Image 72 and Image 73.

The Segment 6 seabed was characterized by a range of substrates, from fine sandy silt to coarser sand substrate and occasional areas of gravel, with additional areas of cobble and boulder present covered in epiphytic growth. There were areas of concentrated shell (some consisting of intact shells, shell fragments and shell hash). There were also areas of fine sediments where bioturbation, in the form of tracks and burrows, is evident and included the presence of tube-building amphipods and polychaetes, and bivalve siphons protruding from the sediment. Undulating sand wave features were also present within this Segment. Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed throughout these areas.

No consolidated hard substrates were observed within Segment 6. It appears that some of the emergent sessile taxa (e.g., hydroids) were attached to boulders buried by sand movement and not to continuous hardbottom features based on their distribution pattern. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 3.3 ft (1 m) within the water column.

Macroinvertebrates observed included various mollusks - slipper snails (*Crepidula* spp.), various whelks (*Busycotypus* sp. and/or *Busycon* spp.), and unidentified bivalves; crustaceans - hermit crabs (*Pagurus* spp.), spider crabs (*Libinia* sp.), potential ghost shrimp (*Gilvossius* spp.), mantis shrimp (*Squilla* spp.), attached barnacles; and echinoderms - sea urchins (*Arabacia* sp.) and, sand dollars. Attached taxa observed included bryozoans, colonial tunicates, hydroids, anemones, and various sponges. The northern star coral (*Astrangia poculata*) was observed on boulders at six Segment 6 stations: ECR-B-446, ECR-C-1413, ECR-C-1419, ECR-C-1420, ECR-C-1421, and ECR-C-1422.

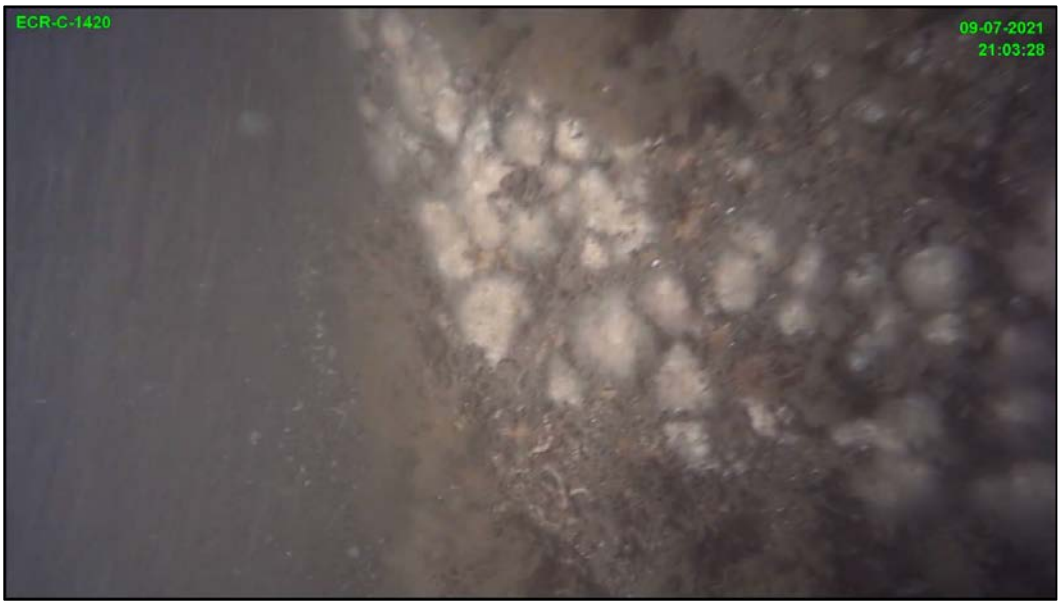


Image 71 Representative image from Segment 6 displaying a boulder with attached epifauna including the northern star coral (Astrangia poculata).

Image 72 Representative image from Segment 6 displaying an area of mixed cobble, boulder and concentrated shells (mostly slipper snails) and shell hash. The boulders have attached epifauna including the northern star coral (Astrangia poculata).

Image 73 Representative image from Segment 6 displaying an area of sand ripples, with coarser sand and shell hash commonly seen in the troughs.

5.6.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 6 are provided in Attachment B. Twelve (12) of the 14 Segment 6 benthic grab stations yielded sediment samples. The collection of grab samples was unsuccessful at stations ECR-B-446 and ECR-B-448 due to fouling of the grab from cobble/gravel substrate.

None of the 12 Segment 6 benthic samples collected had any distinctive odor. Details are provided in Attachment B with the other noted visual observations.

None of the benthic grabs had the presence of anthropogenic debris. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of ≥2.8 in (7 cm).

Several grabs were observed to contain shell and shell fragments and gravel (Attachment B; Image 74), while others lacked notable surficial features (Image 75).

Image 74 Representative surficial grab sample from Segment 6 station ECR-B-444 displaying slipper snails, shell fragments, gravel and sand substrates.

Image 75 Representative surficial grab sample from Segment 6 station ECR-B-428 displaying mostly fine sand.

5.6.3| PARTICLE SIZE DISTRIBUTION

The PSD data based on the Wentworth scale (Table 21) is presented in Table 68 for Segment 6. A total of 12 samples collected within Segment 6 were analyzed for PSD (Figure 82); an additional QC sediment sample was collected at one Segment 6 station. Samples from all 12 Segment 6 stations had some type of gravel – combined Pebbles and/or Granules. Samples from three stations had a gravel component of 5 percent or greater with two of those stations having a total gravel component greater than 25 percent - ECR-B-436 with 28.5 percent and ECR-B-444 with 47.9 percent.

Eleven (11) of the 12 Segment 6 stations had sediment sample compositions that consisted of a greater than 50 percent of a combined sand particle fraction, of which 10 stations exceeded 75 percent. No stations had a combined Silt and Clay fraction that exceeded 20 percent.

The total gravel, total sand, and silt + clay for the Segment 6 stations was calculated and are presented in Figure 83. Figure 83 introduces TOC results, as more thoroughly presented in Section 5.6.4, relative to the percentage of total gravel, total sand, and silt + clay. TOC concentrations were relatively low (<1.0 percent) and variable at Segment 6 stations.

Table 68 Percentages of particle size classes according to Wentworth (1922) from benthic grab stations in Segment 6. Grayed columns show sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-422	--	--	0.4	0.5	0.9	4.4	17.6	40.1	24.1	2.5	88.7	8	2.4	10.4
ECR-B-424	--	--	--	1	1.0	3.3	12.7	31.9	38.1	2.8	88.8	7.6	2.6	10.2
ECR-B-426	--	--	--	0.1	0.1	2.3	19.6	31.5	32.3	3.3	89.0	8.4	2.5	10.9
ECR-B-428	--	--	0.3	--	0.3	0.3	0.7	8.5	72.8	5.6	87.9	9.7	2.1	11.8
ECR-B-430	--	--	--	0.1	0.1	0.1	0.3	19.9	69	1.2	90.5	7.7	1.7	9.4
ECR-B-432	--	--	2.5	2.9	5.4	9.8	7.2	15.1	51.5	3.6	87.2	6	1.4	7.4
ECR-B-434	--	--	0.1	0.3	0.4	1.8	4.7	38.9	39.8	2.7	87.9	9.5	2.2	11.7
ECR-B-436	--	--	15.9	12.6	28.5	11.9	10.5	22.9	14.6	1.2	61.1	7.6	2.8	10.4
ECR-B-438	--	--	--	0.2	0.2	0.2	1.1	17.8	69	2	90.1	6.8	2.9	9.7
ECR-B-440	--	--	--	1.8	1.8	8.7	28.9	39.3	2.4	0.1	79.4	11.9	6.9	18.8
ECR-B-440-QC	--	--	1.8	--	1.8	6.6	29.7	51.1	3.1	0.1	90.6	4.5	3.1	7.6
ECR-B-442	--	--	--	0.5	0.5	11.2	39.9	37.5	3	0.2	91.8	6.8	0.9	7.7
ECR-B-444	--	--	39.1	8.8	47.9	5.6	10.1	16.3	11.6	0.6	44.2	5	2.9	7.9

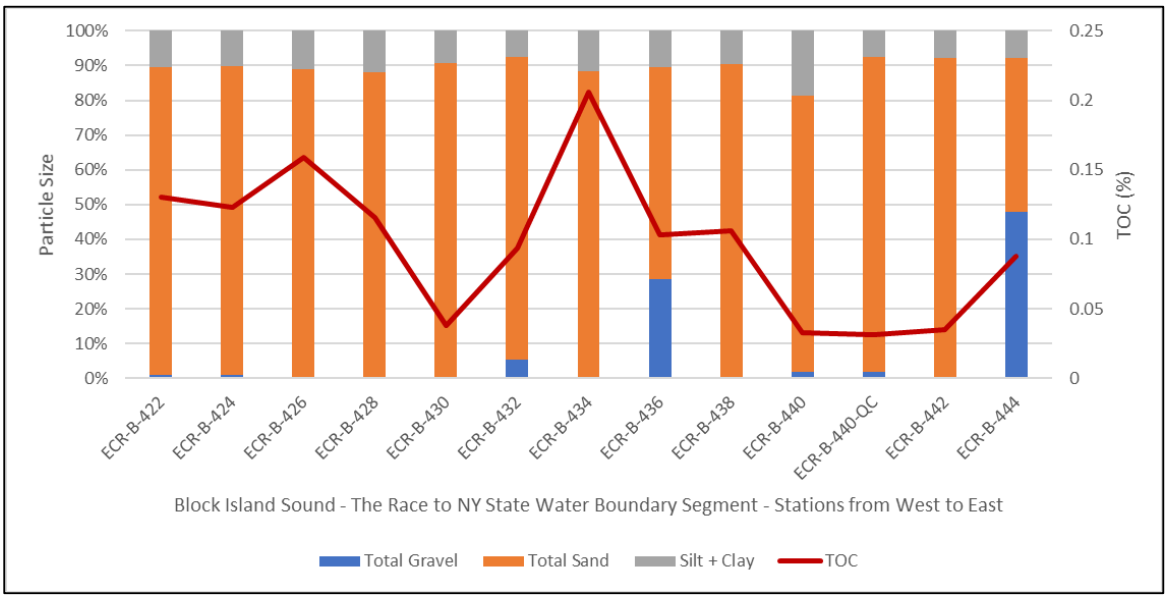


Figure 83 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in Segment 6 sediment samples with stations presented West to East.

5.6.4| TOTAL ORGANIC CARBON

Sediment TOC concentrations (exclusive of QC replicates) from Segment 6 benthic grab stations ranged from 0.03 to 0.21 percent (mean: 0.10 percent; SE: 0.01; Table 69). TOC concentrations from Segment 6 grab samples were relatively low (<1.0 percent) and variable. (Figure 83).

Table 69 Summary of total organic carbon (TOC) concentrations from benthic grab stations in Segment 6.

Station	TOC (percent)
ECR-B-422	0.13
ECR-B-424	0.12
ECR-B-426	0.16
ECR-B-428	0.12
ECR-B-430	0.04
ECR-B-432	0.09
ECR-B-434	0.21
ECR-B-436	0.10
ECR-B-438	0.11
ECR-B-440	0.03
ECR-B-440-QC	0.03
ECR-B-442	0.04

5.6.5| INFAUNA FROM GRAB SAMPLES

The 12 stations sampled along Segment 6 yielded 1,568 individuals and 109 total infauna taxa from six phyla: Annelida, Arthropoda, Chordata, Echinodermata, Mollusca, and Nemertea. A total of 70 taxa were identified to species level another 39 to LPIL.

5.6.5.1| BIOMASS

Biomass was measured for 10 taxonomic classes of infauna present in the samples. Total infauna biomass for the 12 sampling stations was 184.0 g. The mean biomass per station was (15.3 g ±43.4 SD). Three of the 10 classes including Gastropoda, Bivalvia, and Polychaeta collectively accounted for 99 percent of the total infauna biomass in the samples (Table 70). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 84. Polychaeta biomass exhibited a uniform pattern over Segment 6 stations with no aggregation observed. Gastropod biomass was aggregated near the end of the Segment (stations ECR-B-434, ECR-B-438, ECR-B-444) and bivalve biomass was clumped in the center and beginning of the Segment. The gastropod biomass was contributed by numerically dominant *Crepidula fornicata* and the bivalve biomass was due to small numbers of larger individuals (e.g., *Astarte undata*, *Crassinella lunulata*).

Table 70 Summary Statistics for infauna biomass collected from Segment 6 stations.

Class	Total	Percent	Mean	SD
Gastropoda	164.31	89.00	13.693	39.513
Bivalvia	14.84	8.00	1.237	3.551
Polychaeta	2.171	1.00	0.181	0.204
Malacostraca	1.49	1.00	0.125	0.129
Ophiuroidea	1.05	1.00	0.088	0.305
Nemertea *incertae sedis*	0.09	<1.00	0.007	0.023
Echinoidea	0.034	<1.00	0.003	0.005
Holothuroidea	0.013	<1.00	0.001	0.004
Ascidiacea	0.01	<1.00	<0.001	0.002
Clitellata	<0.01	<1.00	<0.001	<0.001

SD = Standard deviation

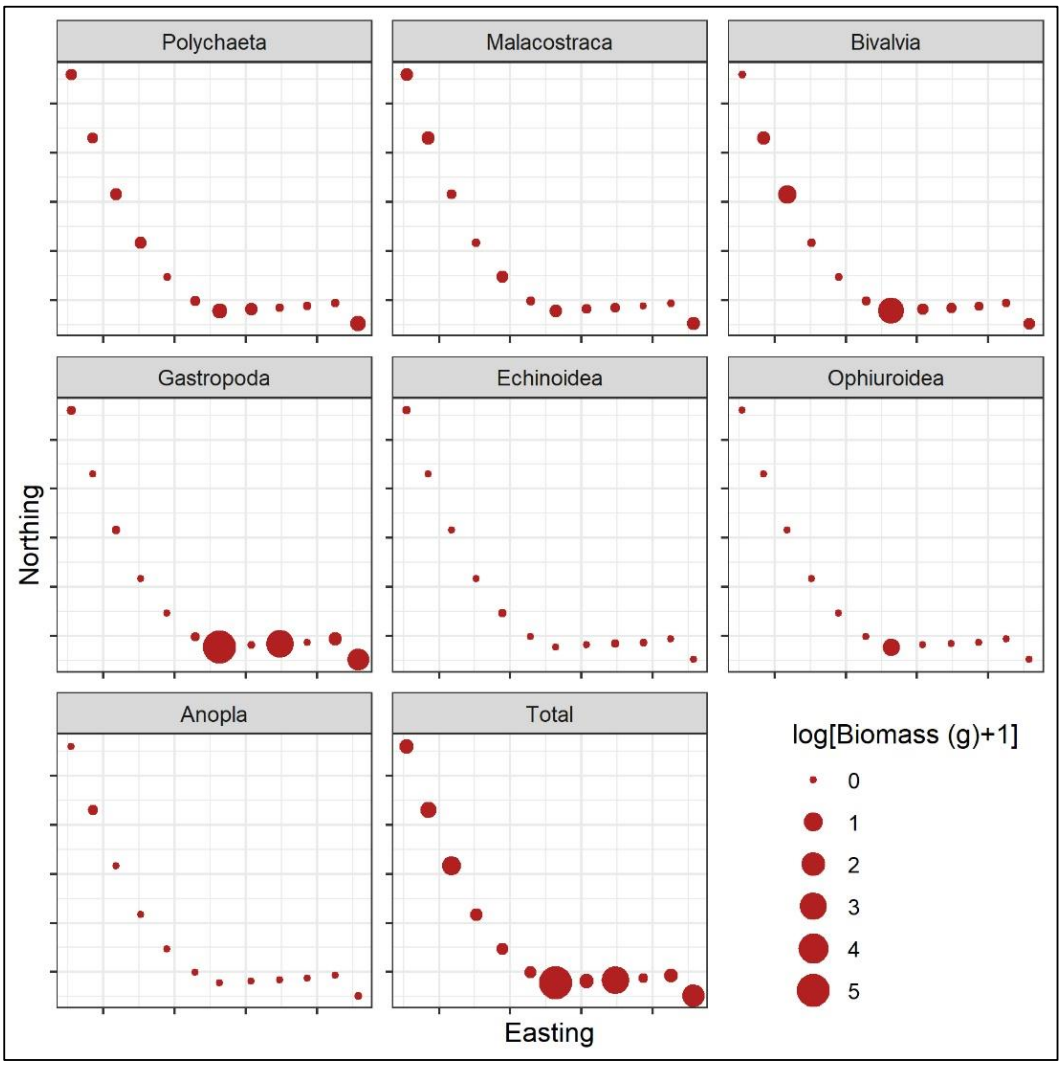


Figure 84 Biomass (g) of infauna organisms for the Classes Polychaeta, Malacostraca, Bivalvia, Gastropoda, Echinoidea, Ophiuroidea, and Nemertea incertae sedis plotted on the station positions along Segment 6.

5.6.5.2| UNIVARIATE STATISTICAL ANALYSES

Species level identifications for 70 of 109 taxa included 1,978 individuals or 63.0 percent of the 3,136 total. All diversity indices were calculated using this set of species. Diversity indices did not vary greatly across samples as depicted in Figure 85. The number of species per sample averaged 15.3 and ranged from 3 to 25. The Margalef's species richness (d) values ranged from 0.8 to 4.3; diversity (H') ranged from 0.95 to 2.76; Fisher's alpha ranged from 1.5 to 8.7. Evenness measured with Pielou's J was moderate across all stations averaging 0.78 ranging from 0.48 to 0.93.

The ten most abundant species sampled are shown in Table 71. These species collectively account for 41.8 percent recorded along Segment 6. Numerically dominant species include five polychaete annelids, two arthropods, and three mollusks. The most abundant species include *Crepidula fornicata* (gastropod mollusk), *Protohaustorius wigleyi* (amphipod crustacean), *Caulleriella sp.* (polychaete worm), *and Illyanassa trivittata* (gastropod mollusk). Spatial patterns of abundance for these ten taxa are shown in Figure 86.

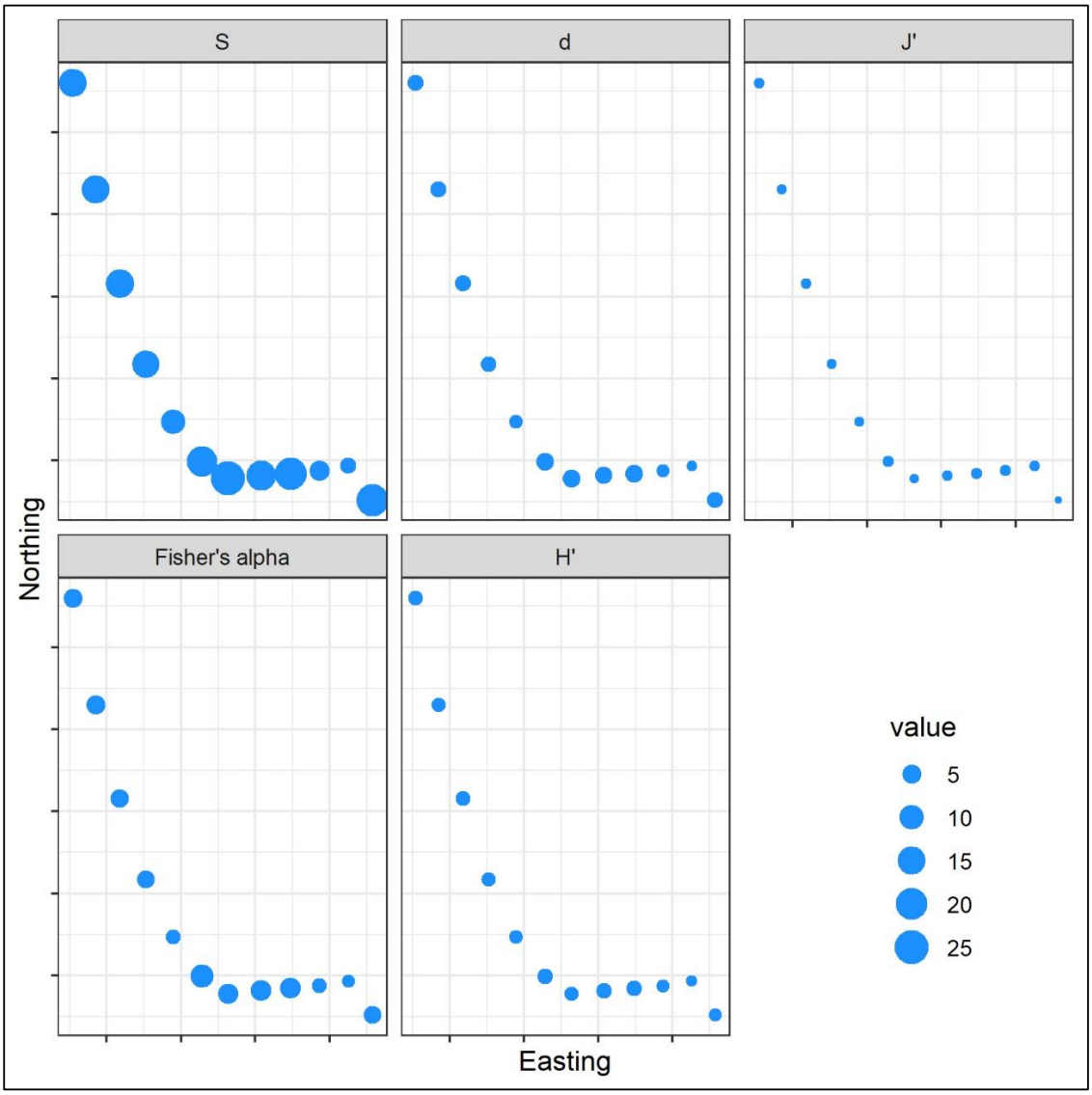


Figure 85 Number of taxa (S), Margalef's species richness (d), evenness (J'), Fisher's alpha, and species diversity (H') plotted on the station positions along Segment 6.

Table 71 Numerically dominant species collected in grab samples along Segment 6.

Phylum	Species	Number of Individuals	Percent of Total Individuals
Mollusca	*Crepidula fornicata*	596	19.0
Arthropoda	*Protohaustorius wigleyi*	144	4.6
Annelida	*Caulleriella sp. J*	96	3.1
Mollusca	*Ilyanassa trivittata*	92	2.9
Mollusca	*Astyris multilineata*	80	2.6
Arthropoda	*Rhepoxynius hudsoni*	76	2.4
Annelida	*Carazziella hobsonae*	66	2.1
Annelida	*Ampharete finmarchica*	60	1.9
Annelida	*Aricidea wassi*	54	1.7
Annelida	*Tharyx acutus*	48	1.5

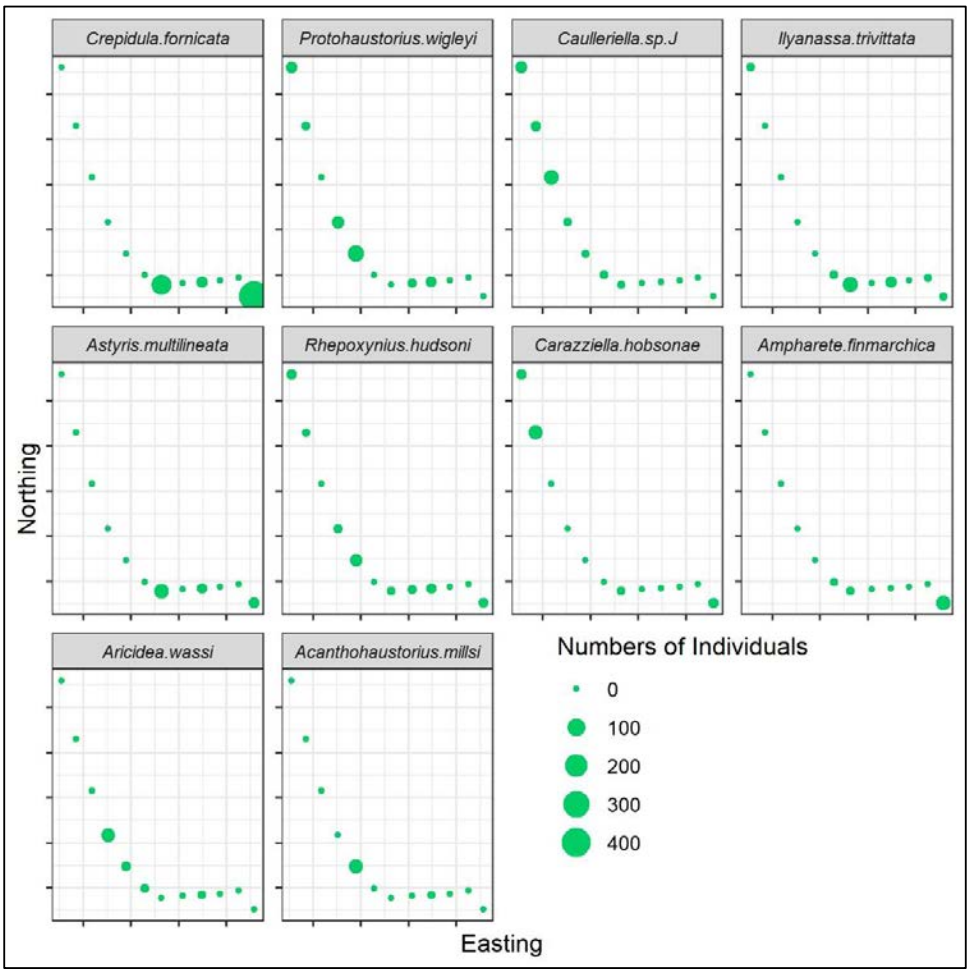


Figure 86 Number of individuals of the ten most abundant species in the samples plotted on the station positions along Segment 6.

5.6.5.3| MULTIVARIATE STATISTICAL ANALYSES

Cluster analysis applied with the SIMPROF routine identified five groups of stations with significantly similar species compositions (Figure 87). Groups e and d were composed of six and three samples, respectively. The remaining three groups (a, b, and c) were single stations. The samples comprising group d were characterized by very high abundances *Crepidula fornicata* (gastropod mollusk), *Ampharete finmarchica* (polychaete worm), and *Astyris multilineata* (gastropod mollusk). Group e samples did not contain these three abundant species and were characterized by a broader group of species (Figure 87). Groups a and b were distinguished from other groups of samples by absence of common species mentioned above. These two groups are located next to each other near the eastern end of the segment. Group c differed from all other stations by presence and abundance of amphipods (*Protohaustorius wigleyi*, *Acanthohaustorius millsi*, *Bathyporeia quoddyensis*), and the sand dollar *Echinorachnius parma*). Group c is located near the middle of the segment adjacent to a series of samples from Group e.

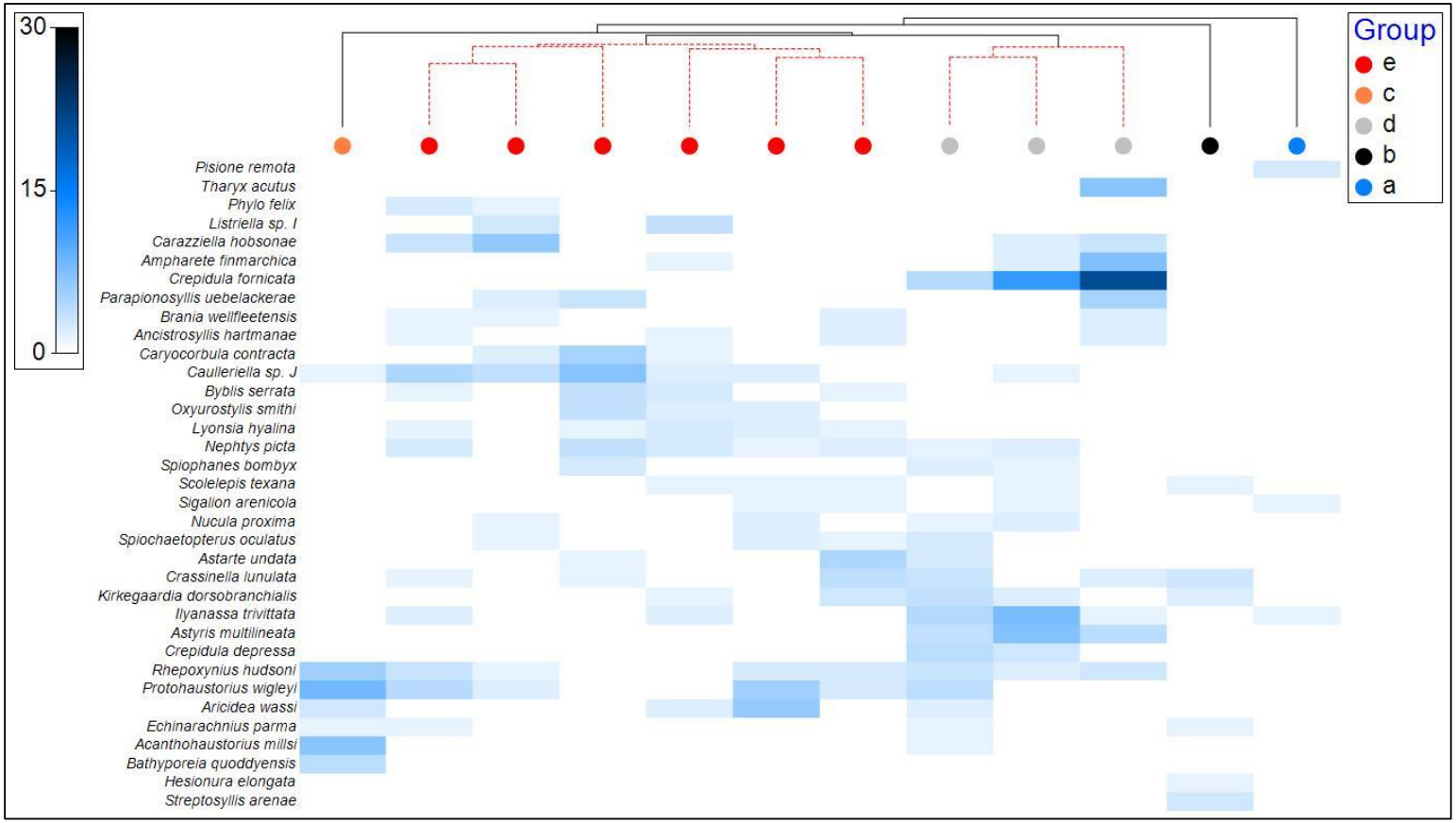


Figure 87 Results of normal cluster analysis of Segment 6 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in Segment 6 samples.

5.6.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

NMDS ordination of the Segment 6 samples in SIMPROF groups demonstrated the wide variability among the samples driven by the compositional variation (Figure 88). Overlying vectors for TOC and percent fines point towards the top left of the plot whereas the vectors for percent sand and percent gravel in opposite directions left or right. None of the vectors revealed statistically significant results for the various sedimentary variable indicating no correlations with the SIMPROF groupings.

SIMPROF groups plotted on the station positions showed a patchy pattern over Segment 6 (Figure 89).

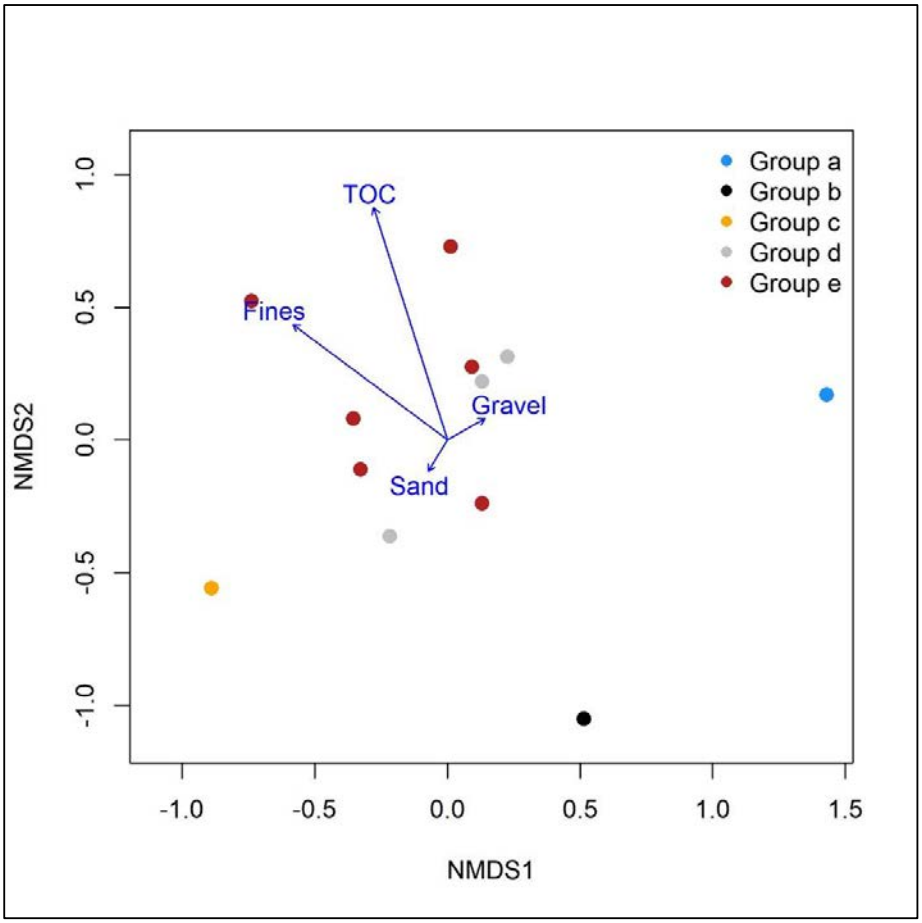


Figure 88 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand, gravel, and fines sediment; and total organic carbon (TOC) in the Segment 6 samples.

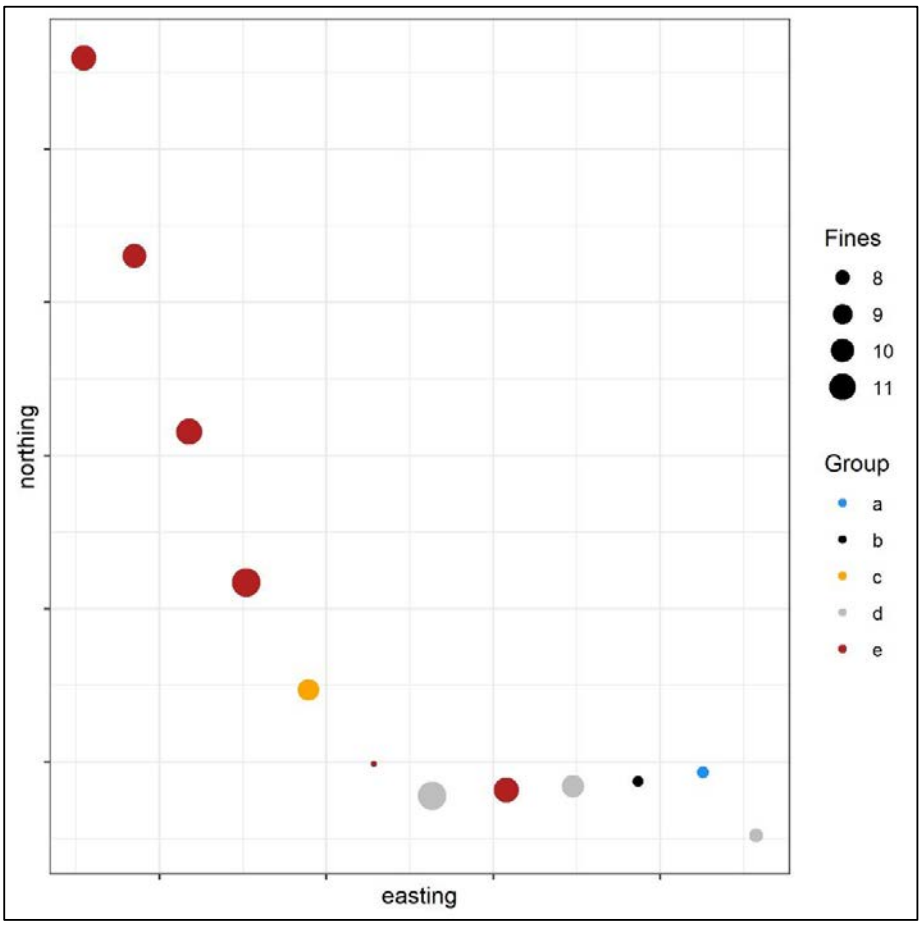


Figure 89 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 6. The size of the symbols is proportional to percent fines.

5.6.6| SPI RESULTS

SPI images were collected at a total of 26 stations along Segment 6 (stations ECR-422 through ECR-447). The results for the SPI image analysis are found in Attachment H. Selected parameters for Segment 6 are plotted in Figure 90 (grain size, penetration, and surface boundary roughness) and Figure 91 (apparent redox potential discontinuity, infauna succession, and organism sediment index).

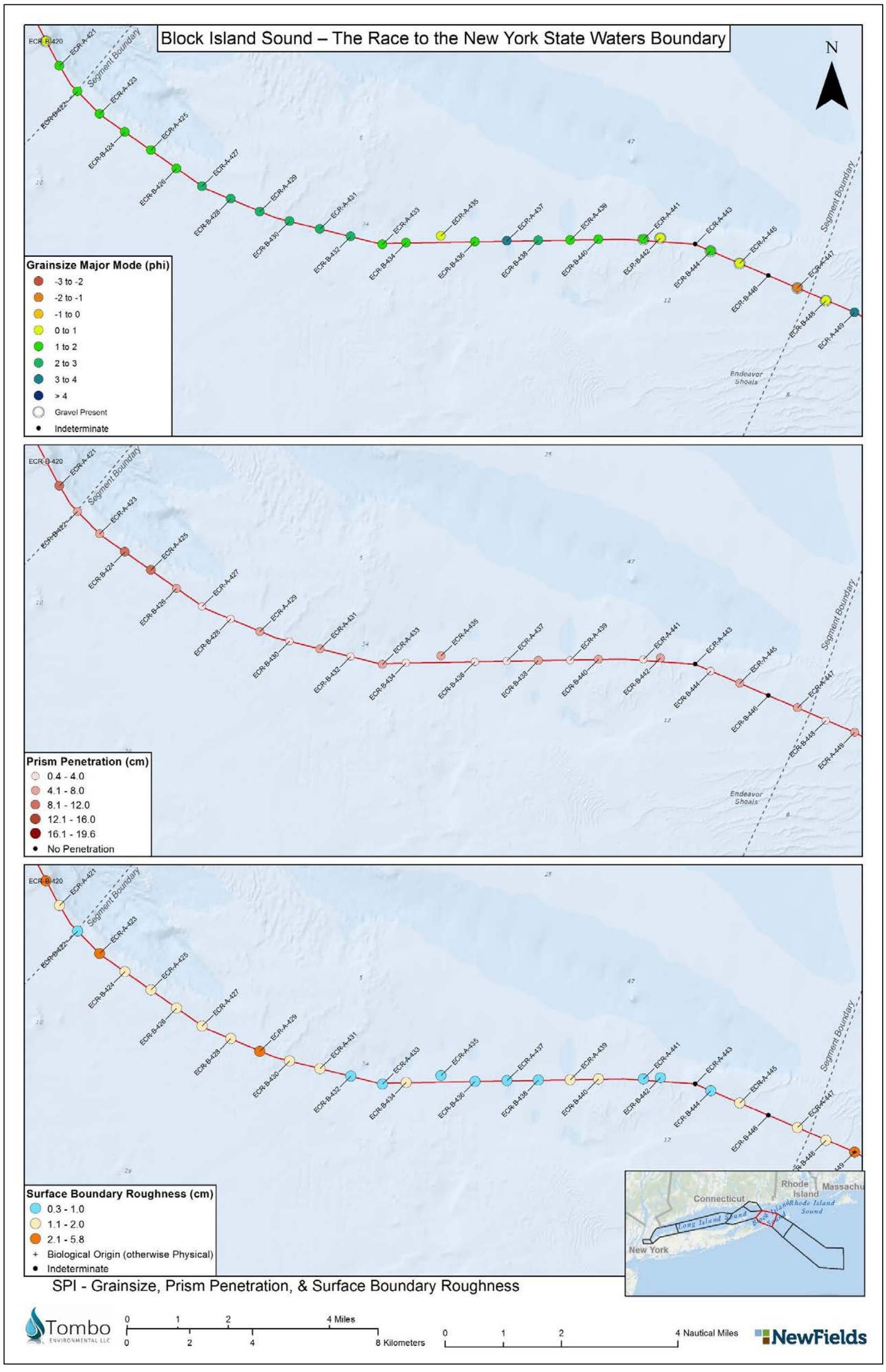


Figure 90 Sediment Profile Imaging (SPI) results for for grain size, penetration, and surface boundary roughness along Segment 6. Segment 6 stations (stations ECR-422 through ECR-447) are along the red line corridor between Segment Boundaries.

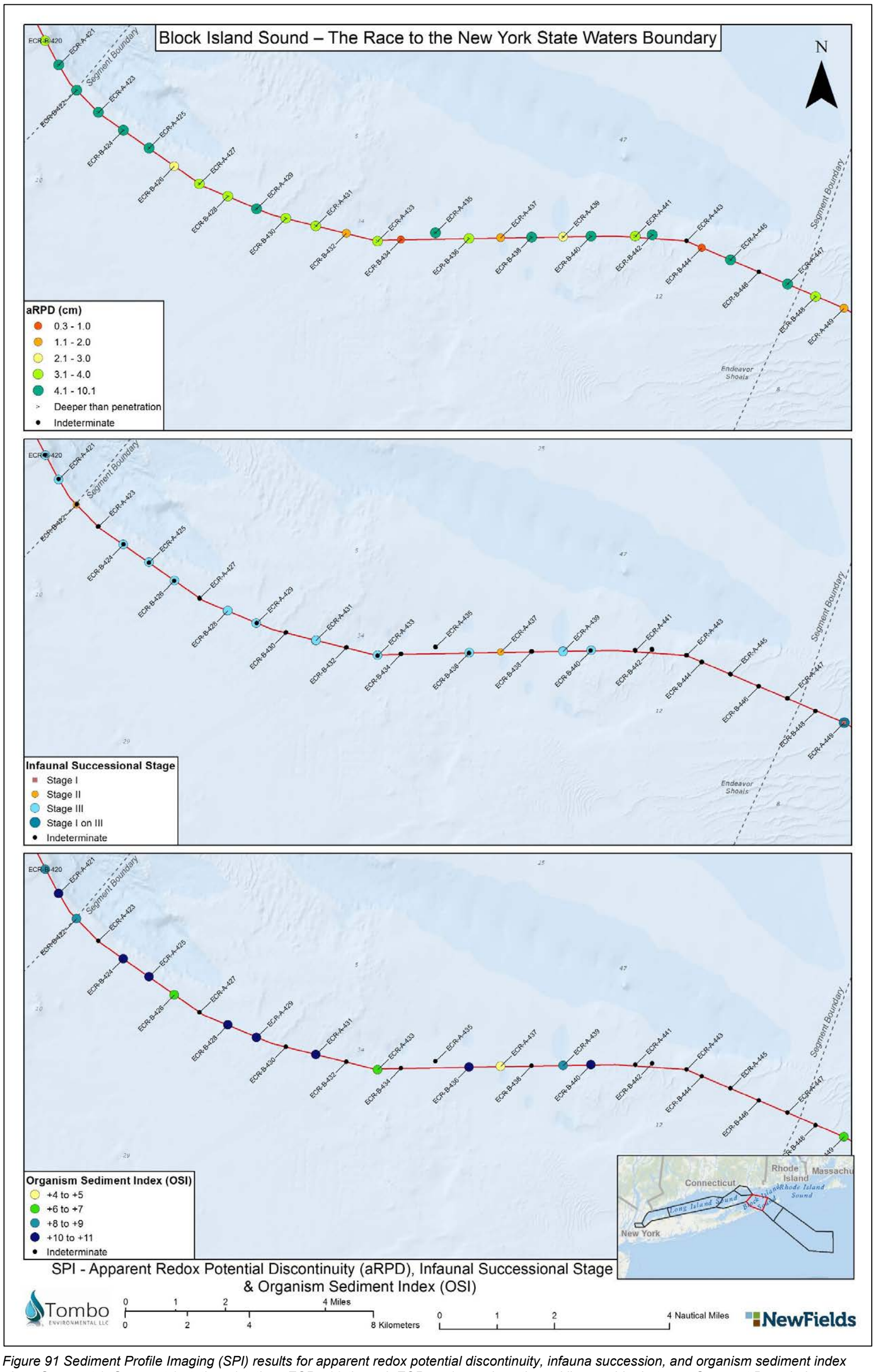


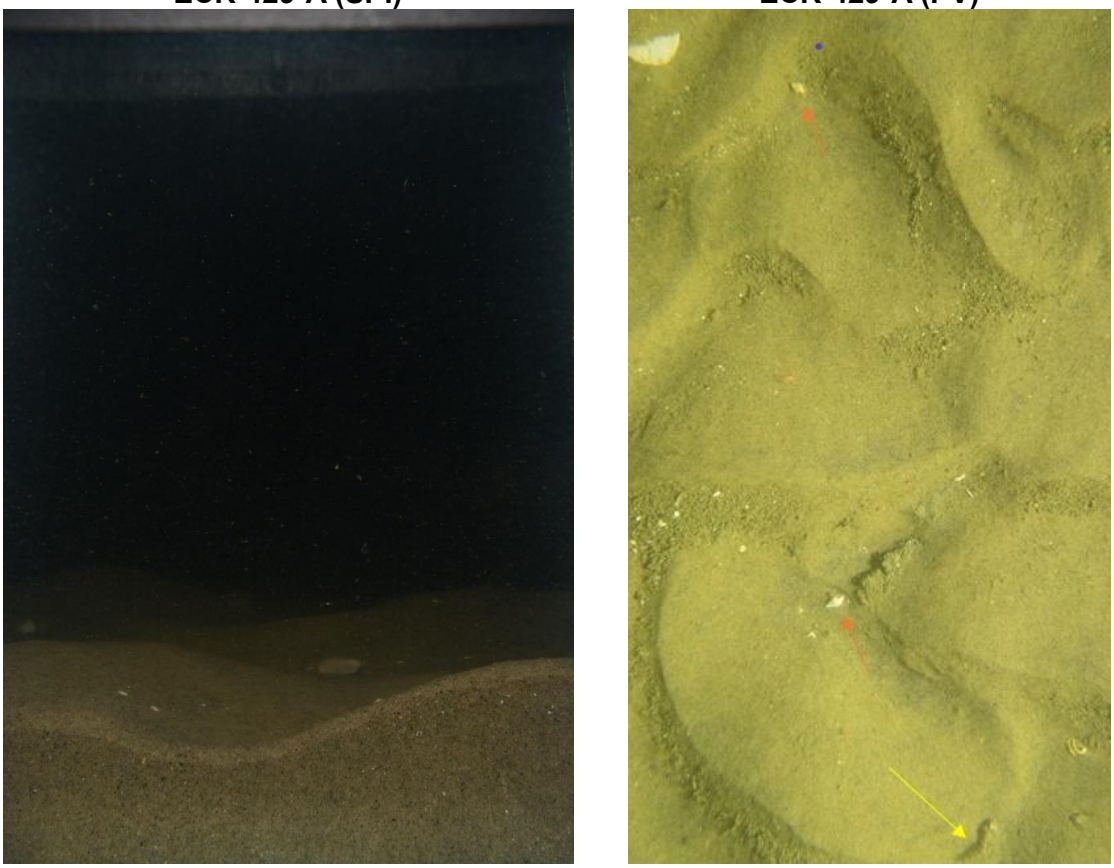
Figure 91 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 6. Segment 6 stations (stations ECR-422 through ECR-447) are along the red line corridor between Segment Boundaries.

5.6.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode (i.e., the dominant grain size) of surface sediments determined using SPI was predominantly fine sand (3 to 2 phi) (34 percent of SPI images) and medium sand (2 to 1 phi) (32 percent of SPI images) (Figure 90). Example SPI/PV images showing typical fine sand sediments in Segment 6 are provided in Image 76.

Stations ECR-435, ECR-442, and ECR-445 had a grain size mode of coarse sand (1 to 0 phi). Gravels (-1 to -2 phi) were observed at station ECR-447, the last station to the east along Segment 6. Grain size mode was indeterminate at stations ECR-443 and ECR-446 due to no penetration by the SPI camera prism. The seafloor at these stations appeared to consist of cobbles or a hard substrate.

ECR-429-A (SPI) **ECR-429-A (PV)**



The SPI and PV images from station ECR-429 showed surface sediments consisting of fine sands with a rippled surface. The PV image showed an accumulation of coarse-grained particles and shells along the ridges of the ripples. Two gastropods (orange arrows) and a small black sea bass (*Centropristis striata*) (yellow arrow) were visible. SPI image width = 15cm. PV image area = 0.11 m^2 (estimated).

Image 76 SPI and PV Images from Segment 6 station ECR-429 showing typical fine sand sediments.

5.6.6.2 | PRISM PENETRATION DEPTH

The distribution of SPI camera prism penetration (in centimeters) in Segment 6 surface sediments is presented in Figure 90. Mean penetration depth is the distance that the SPI camera prism penetrates the sediment and provided a relative measure of sediment water content and shear strength of surface sediments.

The camera prism penetration depths presented in Figure 90 ranged from no penetration at stations ECR-443 and ECR-446 to 10.5 cm at station ECR-425, with a Segment 6 average of 4.3 cm (±2.1 cm, n = 52). Lower prism penetration was generally observed across Segment 6 due to the prevalence of fine or medium sand in surface sediments.

5.6.6.3 | SURFACE BOUNDARY ROUGHNESS

Mean small-scale boundary roughness values (surface relief) for the 26 Segment 6 stations, presented in Figure 90, ranged from 0 to 2.9 cm with a Segment mean of 1.2 cm (±0.64 cm, n = 46). The highest mean boundary roughness values (2.1 to 2.9 cm) were measured at stations ECR-423, -424, -429, -430, -431, and -440 (Figure 90). The larger boundary roughness was due to a sloped surface, which may be related to surface ripples (physical roughness). Physical roughness was predominant across Segment 6, with 96 percent of the images classified with physical roughness.

5.6.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. The mean aRPD depths for the 26 Segment 6 stations, presented in Figure 91, ranged from 0.4 to 10.1 cm with a Segment average of 4.3 cm (±2.3 cm, n = 46) Indeterminate aRPD depths at stations ECR-443 and ECR-446 were due to little to no SPI prism penetration in cobbles or a hard bottom substrate.

The aRPD depths along Segment 6 were relatively deep, similar to Segment 4 (4.3 cm (±1.7 cm, n = 88) and Segment 5 (4.0 cm ±2.5 cm, n = 21) where surface sediments were comprised mostly of sand. As discussed in Section 4.3.4.1, the aRPD in coarse-grained surface sediments can be relatively deep, but difficult to measure due to the lack of optical contrast between oxidized and reduced particles (absence of silt/clays and organic matter).

5.6.6.5 | INFAUNAL SUCCESSIONAL STAGE

The majority of infaunal successional stage determinations in Segment 6 sediments were indeterminate (69 percent of the SPI images) due to under penetration or no penetration of the SPI prism. In images with adequate prism penetration, Stage III, the advanced successional stage where larger head-down deposit feeding organisms (and feeding voids) were present, was most common, identified within 25 percent of the SPI images (Figure 91).

Stage I succession only, the initial pioneering stage, was observed at station ECR-437 which was located near the center of the Segment where coarse sand was present. Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at stations ECR-422 and ECR-437.

5.6.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogenesis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 6 since potential indicators for high SOD were lacking.

5.6.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The mean OSI values, presented in Figure 91, range from +4 to +11. OSI values could not be calculated at 14 of the Segment 6 stations because of indeterminate aRPD depths due to low or no SPI prism penetration, or indeterminate successional stage. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. The vast majority (94 percent) of OSI values in Segment 6 were +6 or higher. An OSI value of +4 was measured at station ECR-437 due to the presence of compact fine and medium sand, shallow aRPD, and surface ripples suggesting periodic movement of surface sediments. This habitat type observed at station ECR-437 can often remain in an earlier infaunal successional stage.

5.6.7 | PV RESULTS

The PV images were collected at 26 stations along Segment 6 (Figure 82). At Segment 6 stations, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.1 m^2 (± 0.02 m^2).

5.6.7.1 | BEDFORMS

Physical bedforms were observed at each of the 26 Segment 6 stations and 98 percent of the Segment 6 PV images. Biological bedforms were observed at one of the Segment 6 stations (Attachment G-1) with a live *Crepidula* reef substrate (Image 77).

Bedform ripples were observed at 20 of the 26 Segment 6 stations (Attachment G-2). Ripples (Image 78) were present primarily in muddy sand bottoms and are representative of mobile sediment beds of Segment 6.

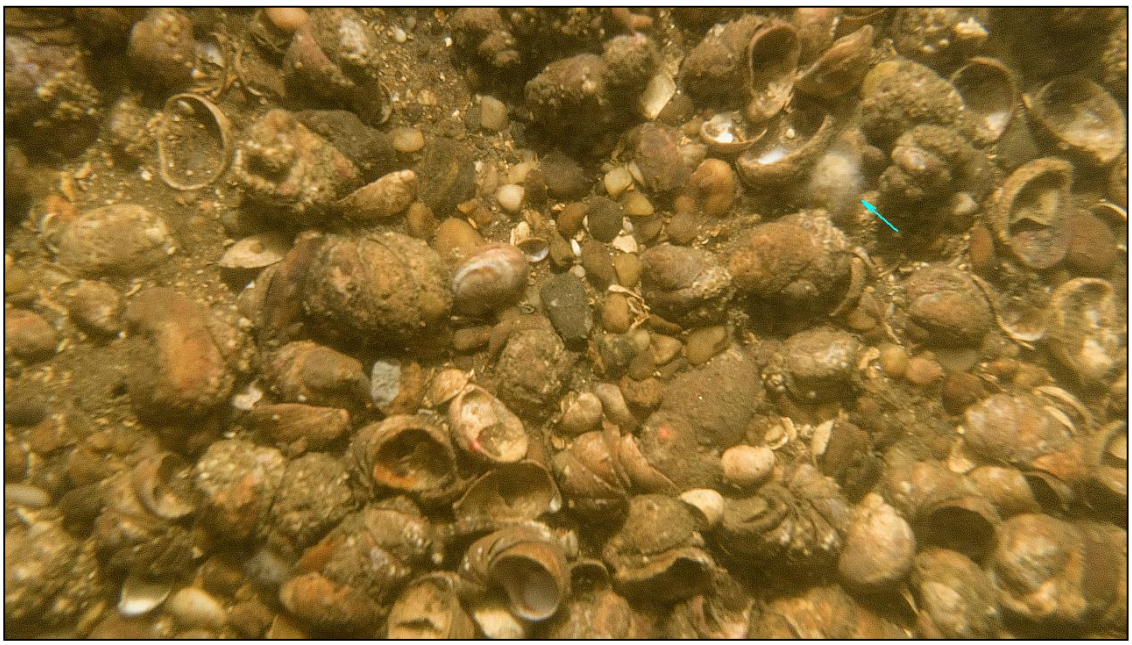


Image 77 Live Crepidula reef with northern star coral (blue arrow) at Segment 6 station ECR-A-443.

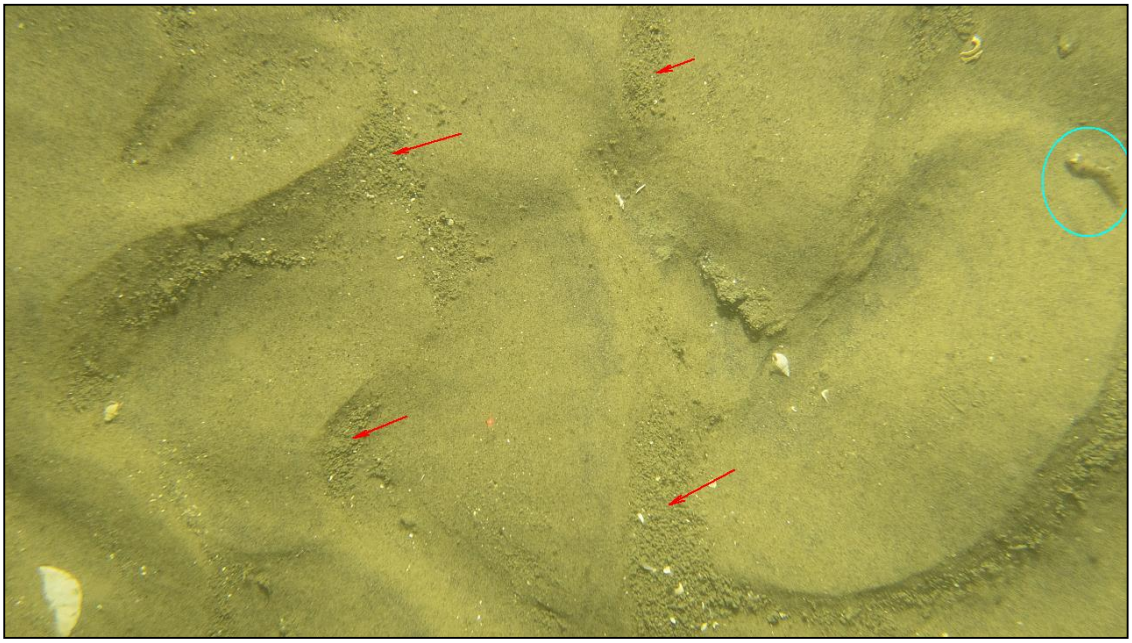


Image 78 Muddy sand ripples with light silty deposits on the lee side of the ripple (red arrows). Juvenile black sea bass (blue circle) at Segment 6 station ECR-A-429.

5.6.7.2| FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 6 stations are provided in Attachment G-1. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 6 stations is shown in Figure 92. The biological assemblage observed in PV images from Segment 6 stations was not considered diverse with generally low faunal coverages. No marine macrophytes or seagrasses were observed in Segment 6. Dominant fauna observed along Segment 6 are as follows:

- Barnacles (*Balanus* sp.) were observed at four Segment 6 stations with the highest faunal cover of approximately 20 percent at station ECR-B-444 (Image 79);
- Astrangiidae corals (*Astrangia poctulata*) were observed at two of the 26 Segment 6 stations with an overall abundance of five individuals;
- Stacks of *Crepidula fornicata* were observed at six of the 26 Segment 6 stations with two stations classified as Soft Sediment Fauna and four stations classified as Attached Fauna. Highest faunal cover of *C. fornicata* was estimated to be 40 percent with a total of 439 individuals counted within Segment 6;
- The Paguroidea hermit crab was observed at 15 of the 26 Segment 6 stations with a total of 30 individuals;
- Stalks of the *Sertularia* hydroid were observed at two of the 26 Segment 6 stations with a total of 12 individual stalks counted (Image 80);
- The gastropod *Ilyanassa* sp. was observed at five of the 26 Segment 6 stations with a total of 13 individual snails; and
- Other fauna observed included three black sea bass (*Centropristis striata*), five Triglidae (sea robin), one juvenile flounder, one squid and one shrimp (Attachment G-2).

Image 79 Stacks of live Crepidula fornicata (red arrows), barnacles (green arrows) and juvenile flounder (blue circle) Segment 6 station ECR-B-444.

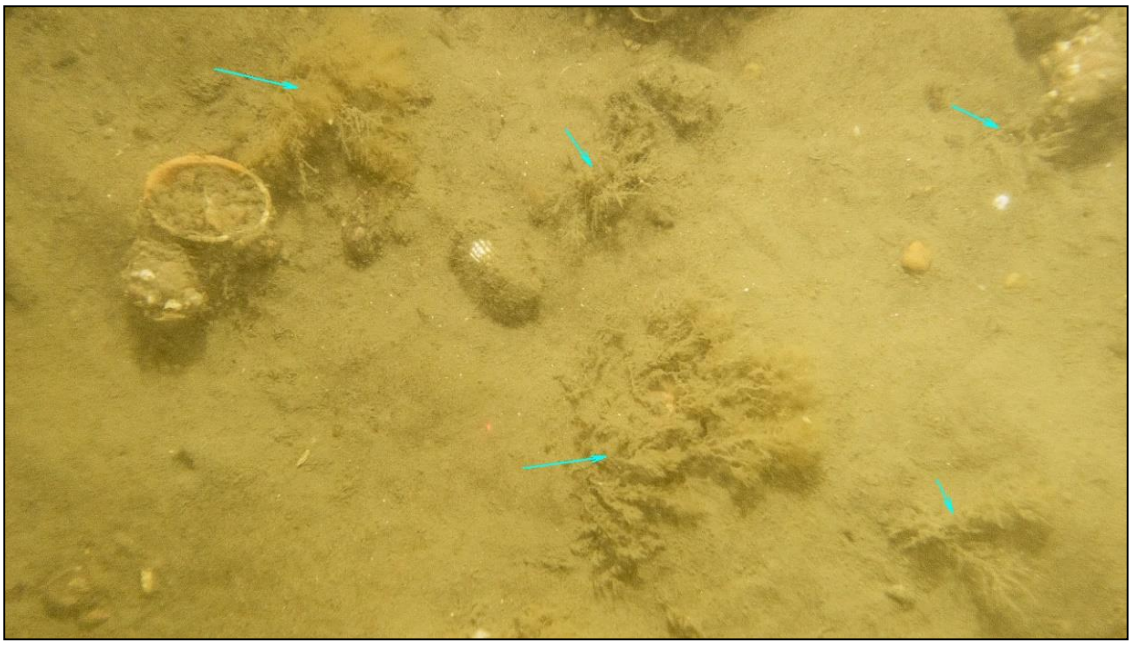


Image 80 Sertularia hydroids (blue arrows) at Segment 6 station ECR-B-434.

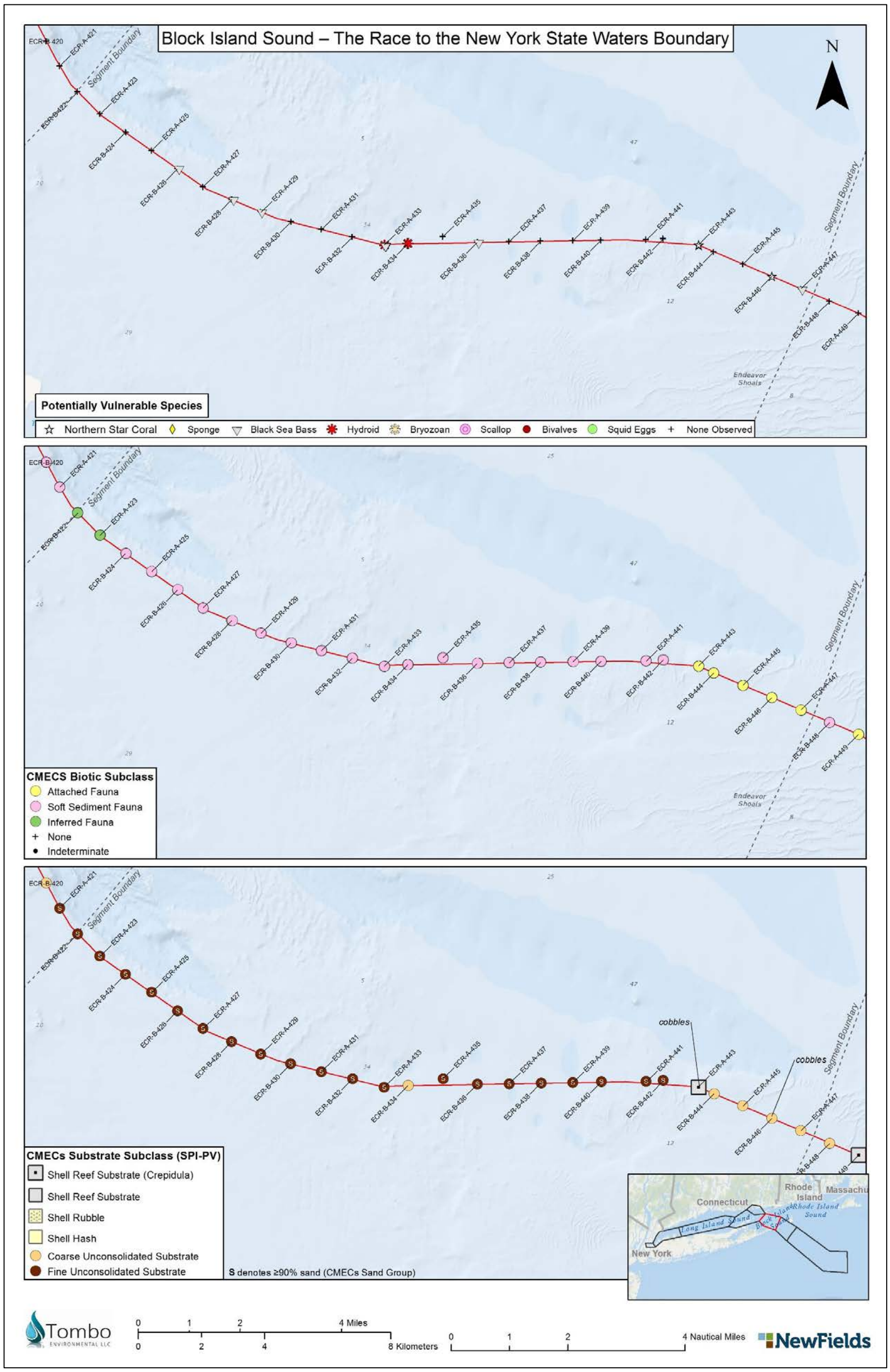


Figure 92 Plan View (PV) imaging results along Segment 6. Segment 6 stations (stations ECR-422 through ECR-447) are along the red line corridor between Segment Boundaries.

5.6.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The potentially vulnerable species to project impacts observed along Segment 6 included the northern star coral *Astrangia poculata* colonies at stations ECR-A-443 and ECR-B-446 (Image 81 and Figure 92). In addition, three juvenile black seabass (*Centropristis striata*), that may possibly be considered a PVS, were observed in Segment 6 (Attachment G-2).

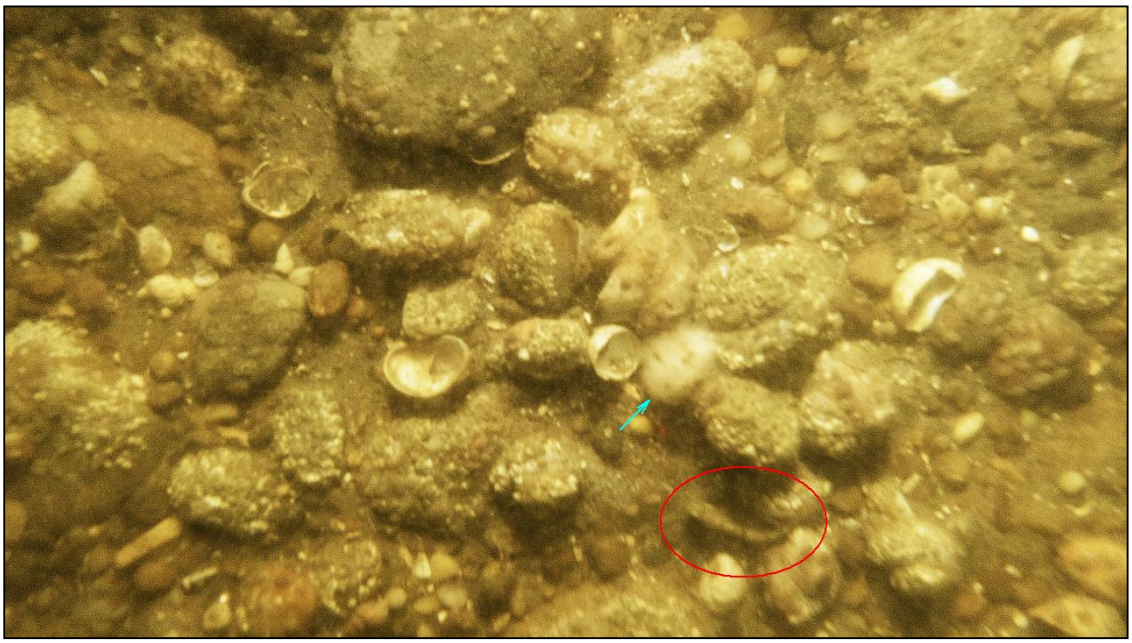


Image 81 Sandy gravel bottom with cobble and shell debris substrate supporting the northern star coral (blue arrow) and a juvenile black bass (red circle) at Segment 6 station ECR-B-446.

5.6.7.4| NON-NATIVE TAXA

No non-native species were observed in Segment 6.

5.6.8| CMECS CLASSIFICATIONS

5.6.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/tow camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. For the Physiographic Setting for Segment 6 within Long Island Sound was classified as Sound. The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and Level 2 represents features smaller than 0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 6 had a flat overall seafloor topography consisting of unconsolidated substrate (ranging in size from silt to boulders) and stations were classified as Level 1 Flat Geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

At the smaller scale (less than 0.4 mi^2 [1 km^2] in size), the Geoform Level 2 classification consisted of three (3) categories. Two categories are of geologic origin, and these included 1) Flat and 2) Boulder Field Geoforms. The Flat Geoform, as described above, was observed at 4 of the 23 Segment 6 stations. The Boulder Fields Geoform is applied to areas dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. The Boulder Field Geoform was observed at nine Segment 6 stations.

The remaining ten Segment 6 stations were classified as the Burrow/Bioturbation Geoform (of biogenic origin), consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna.

Geoform classifications for Segment 6 are summarized and illustrated in Table 72 and Figure 97.

Table 72 Geoform components based on drop/towed camera video for Segment 6.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Sound	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-B-424, ECR-B-426, ECR-B-428, ECR-B-430, ECR-B-432, ECR-B-436, ECR-B-438, ECR-B-440, ECR-C-1412, ECR-C-1418
				Geologic	Boulder Field	ECR-B-442, ECR-B-446, ECR-C-1413, ECR-C-1414, ECR-C-1415, ECR-C-1416|1417, ECR-C-1419, ECR-C-1420, ECR-C-1421
					Flat	ECR-B-422. ECR-B-434, ECR-B-444, ECR-C-1422

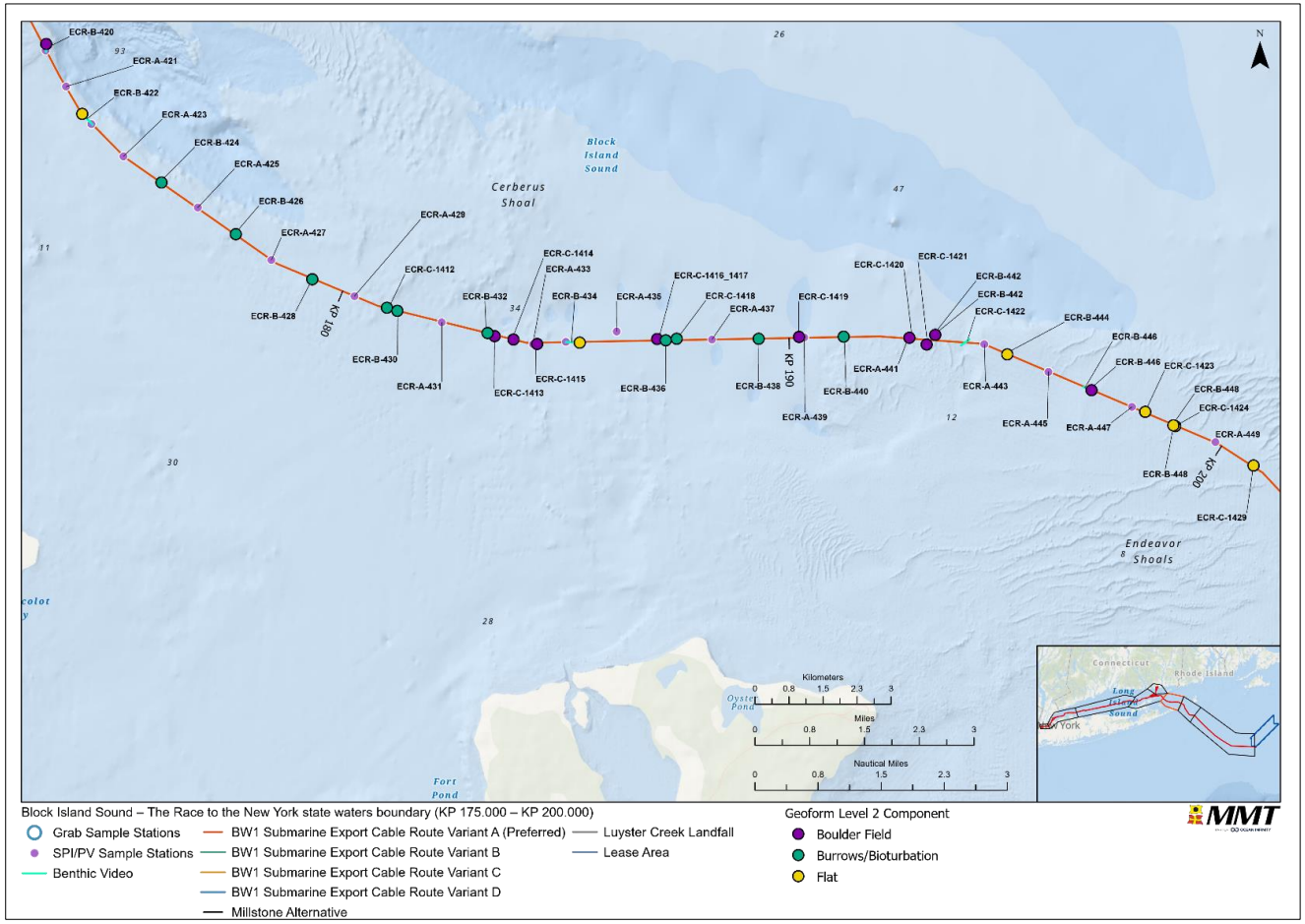


Figure 93 Overview of classified CMECS Geoform Level 2 Component based on drop/towed camera video in Segment 6.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/tow camera benthic video data (Table 73 and Figure 94).

The entire Segment 6 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Fourteen (14) of the 23 Segment 6 stations were associated with Soft Sediment Fauna (the same stations classified as Burrows/Bioturbation and Flat Level 2 Geoforms). There did not appear to be any dominant macrofauna at these stations.

The other nine Segment 6 stations were classified as Attached Fauna, with Attached Fauna being present where Boulder Field was the Level 2 Geoform. Attached Fauna was further categorized into the Biotic Group, Diverse Colonizers and Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders including sponges, hydroids, bryozoans, tunicates, and the northern star coral (*Astrangia poculata*) that was present on boulders at seven of the Segment 6 stations.

Table 73 CMECS Biotic components based on drop/towed camera video in Segment 6.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-B-422, ECR-B-424, ECR-B-426, ECR-B-428, ECR-B-430, ECR-B-432, ECR-B-434, ECR-B-436, ECR-B-438, ECR-B-440, ECR-B-444, ECR-C-1420, ECR-C-1421, ECR-C-1422
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-B-442, ECR-B-446, ECR-C-1413, ECR-C-1414, ECR-C-1415, ECR-C-1416|1417, ECR-C-1419, ECR-C-1420, ECR-C-1421

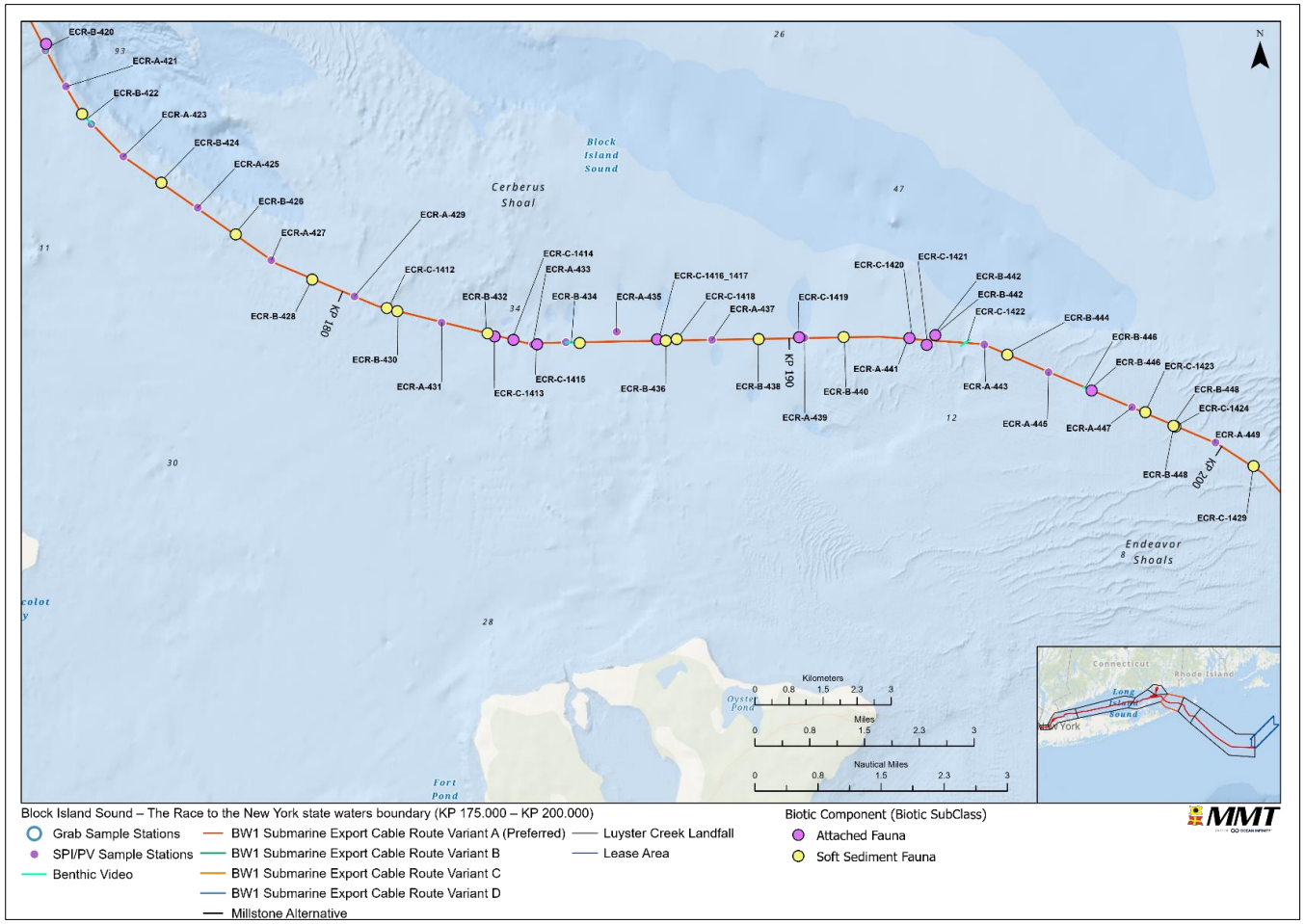


Figure 94 Overview of classified CMECS Biotic Component based on drop/towed camera video in Segment 6.

5.6.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Thirteen (13) benthic grab stations were sampled along Segment 6. Grab samples were successfully obtained at 12 stations; one station (ECR-B-444) yielded no successful grabs after multiple attempts due to fouling from cobble/gravel. NMFS-modified CMECS substrate classification for ECR-B-446 was derived from SPI and/or PV imagery – see Section 5.6.8.3 and Attachment F and Attachment G.

CMECS and NMFS-modified substrate classifications were derived from PSD results for 11 Segment 6 stations. After a review of grab-mounted video for, station ECR-B-444 was determined to consist of substantial (>80 percent) gravel) and was classified using grab-mounted video imagery (Image 82).

CMECS substrate component classifications for benthic grab stations sampled along Segment 6 are presented in Table 74 and shown in Figure 95. NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 6 are presented Table 75 and shown in Figure 96. This Segment yielded benthic grab samples which contained coarse unconsolidated (23 percent of samples; n=3) and fine unconsolidated (77 percent; n=10) substrate types. Substrate types included Muddy Sandy Gravel, Gravelly Muddy Sand, Gravelly Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), and Slightly Gravelly Sand (CMECS)/Fine/Very Fine, Medium (QC replicate only), and Very Coarse/Coarse Sand (NMFS-modified CMECS) substrates.

Benthic grab samples from Segment 6 stations contained fine unconsolidated substrate (75 percent; n=12), which is indicative of soft-bottomed habitats (NOAA Fisheries 2021). Coarse unconsolidated substrates (25 percent of samples; n=3) and biogenic substrates are considered indicative of complex habitat under definitions found in NMFS' (2021) Updated Recommendations for Mapping Fish Habitat. Sampling stations that yielded samples containing coarse unconsolidated or biogenic substrate types were interspersed in Segment 6. Coarse unconsolidated Gravel Mixes and Gravelly substrates contained primarily pebble/granule as the gravel component.

The primary benthic grab sample and QC replicate from station ECR-B-440 were both classified as Fine Unconsolidated Substrates. However, a difference in the sand and silt components between the primary sample (ECR-B-440) and QC replicate (ECR-B-440-QC) resulted in different substrate classification at the substrate subgroup (CMECS) and group and subgroup (NMFS-modified CMECS) levels.

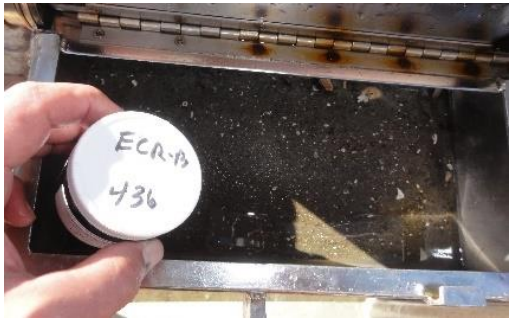
		
a. Muddy Sandy Gravel (ECR-B-444)	b. Gravelly Muddy Sand (ECR-B-436)	c. Gravelly Sand (ECR-B-432)
c. Gravelly Sand (ECR-B-432)	e. Slightly Gravelly Sand (CMECS)/Fine/Very Fine Sand (NMFS-modified CMECS; ECR-B-430)	f. Slightly Gravelly Sand (CMECS)/Very Coarse/Coarse Sand (NMFS-modified CMECS; ECR-B-442)

Image 82 Grab content images showing representative substrate types encountered at benthic grab sampling stations along Segment 6.

Table 74 CMECS substrate component classifications for benthic grab stations sampled along Segment 6. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	**Substrate Class**	**Substrate Subclass**	**Substrate Group**	**Substrate Subgroup**
ECR-B-444	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mix	Muddy Sandy Gravel
ECR-B-436	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-432	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand
ECR-B-422	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-424	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-426	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-428	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-434	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-440	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-430	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-438	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-440-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-442	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand

[1] Substrate subclass modified to better convey the substrate present. N/A: Not Applicable; QC: Quality Control.

Table 75 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 6. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-444	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mix	Muddy Sandy Gravel	Granule/Pebble
ECR-B-436	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-432	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	Granule/Pebble
ECR-B-422	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-424	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-426	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-428	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-434	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-440	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-430	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	N/A
ECR-B-438	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	N/A
ECR-B-440-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-442	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/ Coarse Sand	N/A

[1] Substrate subclass modified to better convey the substrate present. N/A: Not Applicable; QC: Quality Control.

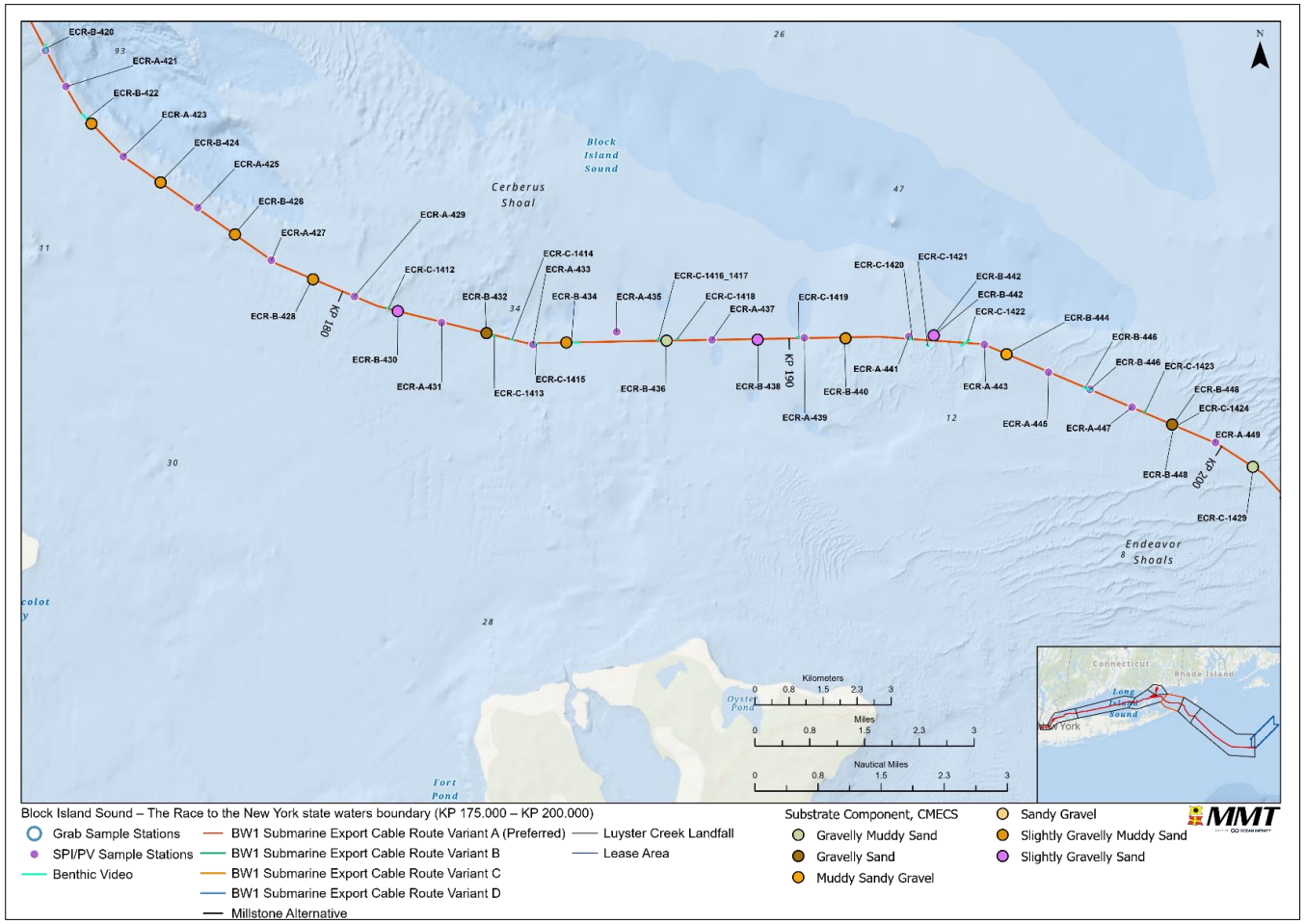


Figure 95 CMECS substrate component classifications for benthic grab stations sampled along Segment 6.

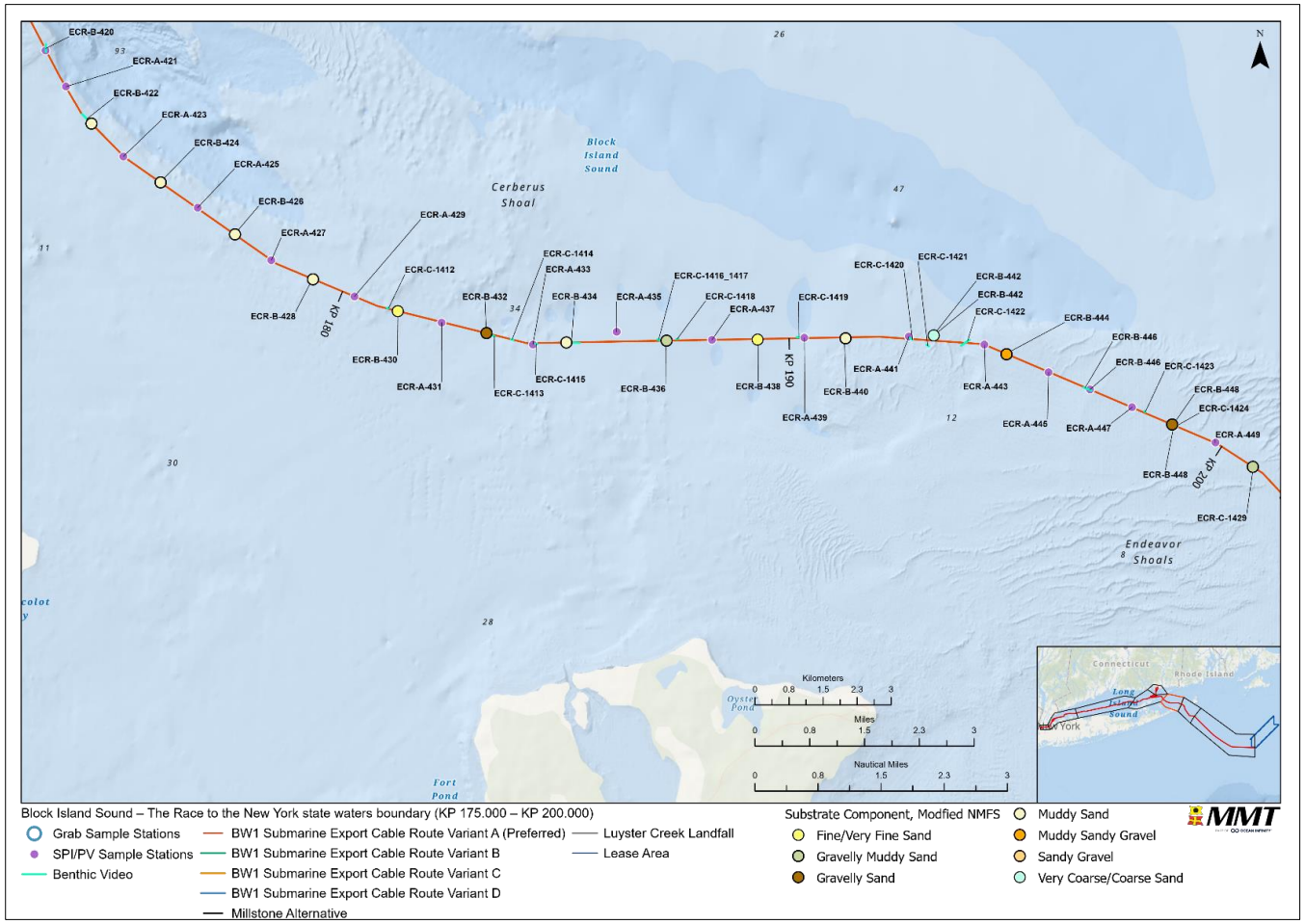


Figure 96 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 6.

5.6.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). CMECS Unconsolidated Mineral Substrate class type was observed at 25 out of 26 Segment 6 stations while the CMECS Shell Substrate class type was observed at only one of the 26 Segment 6 stations (Table 76).

CMECS Fine Unconsolidated Substrate subclass type, mostly fine/very fine sands, with medium and very coarse/coarse sand, was observed at 20 Segment 6 stations (Table 76) and extended throughout Segment 6 (Figure 90, CMECS Substrate Subclass panel).

CMECS Coarse Unconsolidated Substrate subclass type, composed of gravelly sand and pebble granule (Table 76), was present at 5 of the 26 Segment 6 stations (Figure 90, CMECS Substrate Subclass panel).

CMECS Shell Reef Substrate subclass type was present at Segment 6 station ECR-A-443, as *Crepidula* Reef Substrate group (Image 77) (Table 76).

Table 76 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 6.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	25	96%	Fine Unconsolidated Substrate	20	77%	Sand	20	77%	Fine/Very Fine Sand	15	58%
									Medium Sand	3	12%
									Very Coarse/Coarse Sand	2	8%
						Muddy Sand	0	0%	--	--	--
						Sandy Mud	0	0%	--	--	--
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	5	19%	Gravels	4	15%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	4	15%
									Gravel Pavement	0	0%
						Gravel Mixes	0	0%	Sandy Gravel	0	0%
									Muddy Sandy Gravel	0	0%
									Muddy Gravel	0	0%
						Gravelly	1	4%	Gravelly Sand	1	4%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	1	4%	Shell Reef Substrate	1	4%	*Crepidula* Reef Substrate	1	4%	--	1	4%
			Shell Rubble	0	0%	--	--	--	--	--	--
			Shell Hash	0	0%	--	--	--	--	--	--

5.6.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Subclass Soft Sediment Fauna biotic component was observed at 19 of the 26 Segment 6 stations (Figure 77, CMECS Biotic Subclass panel) (Attachment G-1). The soft sediment Fauna component included *Pagurus* beds, *Sertularia* beds, *Crepidula* beds, and *Ilyanassa* beds.

The CMECS Subclass Attached Fauna biotic component was observed at five of the 26 Segment 6 stations (Figure 77, CMECS Biotic Subclass panel) and included *Balanus* barnacles, Astrangiidae corals, and stacks of *Crepidula fornicata*.

The CMECS Subclass Inferred Fauna biotic component was observed and mapped at 2 of the 26 Segment 6 stations (Figure 77, CMECS Biotic Subclass panel) and included *Arenicola* castings, decapod tracks and gastropod trails.

No CMECS Class Aquatic Vegetation was observed in Segment 6.

5.7| BLOCK ISLAND SOUND - NY STATE WATERS TO BLOCK ISLAND SOUND

Segment 7 includes sample stations along the BW1 Variant A submarine export cable corridor from the New York state waters boundary to Block Island Sound (Figure 97).

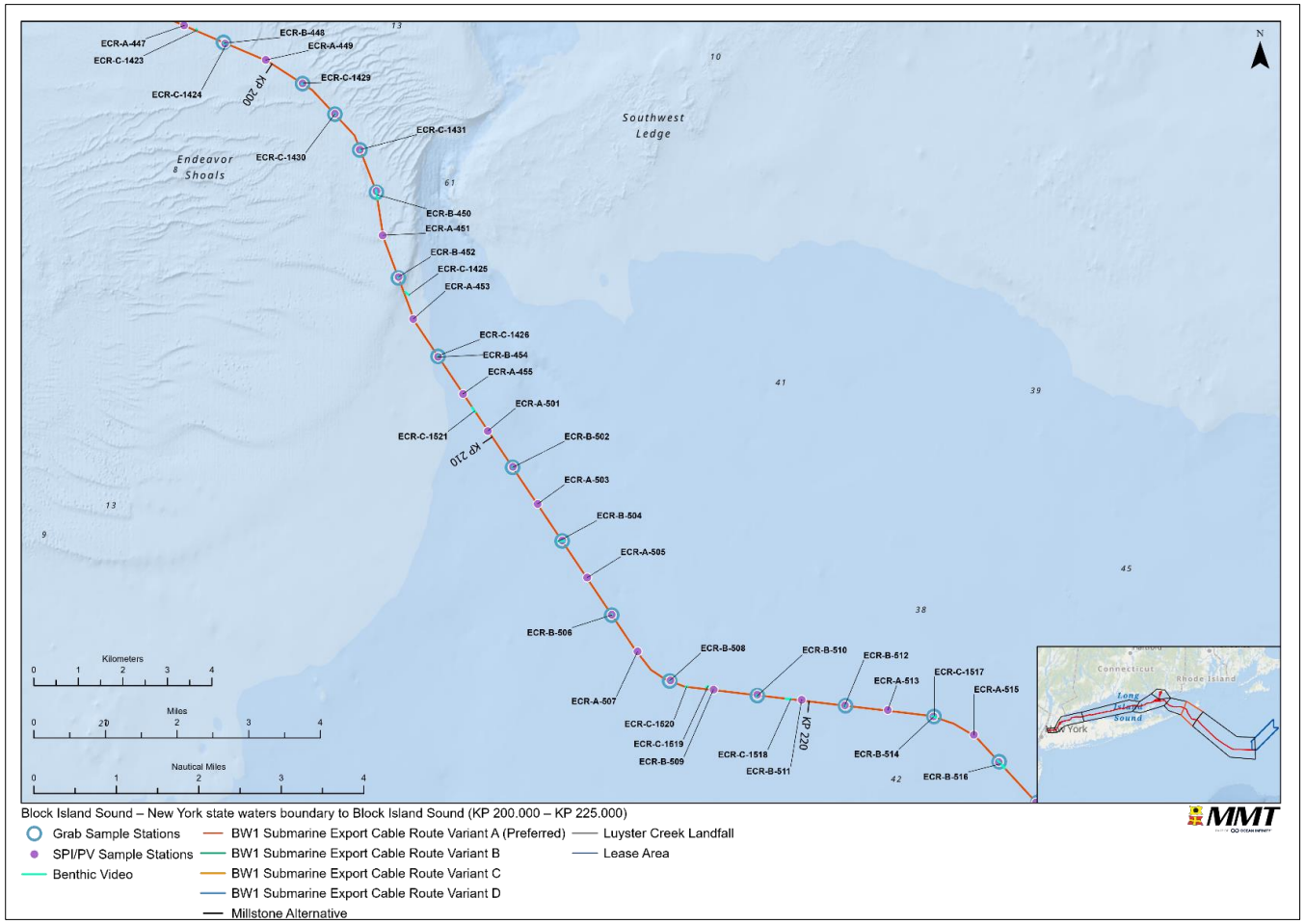


Figure 97 Overview of the Segment 7 sample stations.

5.7.1| BENTHIC VIDEO

The Segment 7 seabed was characterized by a range of substrates, from fine sandy silt to coarser sand substrate and occasional areas of gravel, with additional areas of cobble and boulder present covered in epiphytic growth. There were areas of concentrated shell (some consisting of intact shells, shell fragments and shell hash). There were also areas of fine sediments where bioturbation, in the form of tracks and burrows, is evident and included the presence of tube-building amphipods and polychaetes. Undulating sand wave features were present within Segment 7. Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed throughout these areas. The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitat from Segment 7 are provided in Image 83, Image 84 and Image 85.

No consolidated hard substrates were observed within Segment 7. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 1-m within the water column.

Macroinvertebrates observed included various mollusks - slipper snails (*Crepidula* spp.*),* as well as unidentified bivalves; crustaceans – hermit crabs (*Pagurus* spp.), spider crabs (*Libinia* sp.), attached barnacles; and echinoderms – sea stars and sand dollars (*Echinarachnius parma*). Attached taxa included bryozoans, colonial tunicates, hydroids, anemones and various sponges. The northern star coral (*Astrangia poculata*) was observed on boulders at station ECR-C-1431.

Image 83 Representative image from Segment 7 station ECR-C-1431 displaying several boulders on sand seafloor, with attached epifauna that included the northern star coral (Astrangia poculata).

Image 84 Representative image from Segment 7 displaying an area of mixed cobble and pebble and concentrated shells (mostly slipper snails) overlying a sand bottom.

Image 85 Representative image from Segment 7 displaying an area of sand bottom with scattered shell hash and several sea robins (Prionotus spp.) present in the image.

5.7.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 7 are provided in Attachment B. Thirteen (13) of the 14 Segment 7 benthic grab stations yielded sediment samples while the collection of benthic grab samples from station ECR-C-1431 was unsuccessful due to fouling of the grab from gravel substrate.

Four of the 13 stations of benthic samples collected had a distinctive odor and are provided in Attachment B with the other noted visual observations. The distinctive odor detected in some samples is the result of some anoxic sediment with subtle pungency differences due to the composition of the sediment primarily the amount of organic material; note that description of odor and degree of pungency is rather subjective.

None of the benthic grabs had the presence of anthropogenic debris. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of 2.8 in (7 cm).

Surficial features in the grabs varied, ranging from shell material to gravel and coarse sand (Attachment B; Image 86), while others lacked notable surficial features (Image 87).

Image 86 Representative surficial grab sample from Segment 7 station ECR-B-448 displaying gravel and pebbles in coarse sand.

Image 87 Representative surficial grab sample from Segment 7 station ECR-B-502 displaying mostly fine sand and limited shell hash that lacked notable surficial features.

5.7.3| PARTICLE SIZE DISTRIBUTION

The PSD data based on the Wentworth scale (Table 21) is presented in Table 77 for Segment 7. A total of 13 samples collected from stations within this Segment were analyzed for PSD; an additional QC sediment sample was collected at one Segment 7 station.

Samples from 12 of the 13 Segment 7 stations had some type of gravel – combined Pebbles or Granules (4 to 2 mm). Samples from six stations had a total gravel component of 10 percent or more, of which three exceeded 50 percent.

Eleven (11) of the 13 stations had sediment compositions that consisted of greater than 50 percent of a combined sand particle fraction, of which eight stations exceeded 75 percent. No stations had a combined Silt and Clay fraction that exceeded 50 percent, the highest fractions being seen at stations ECR-B-452 and ECR-B-454, with 26.1 percent and 33.9 percent, respectively.

The total gravel, total sand, and silt + clay was calculated and are presented in Figure 98. Most stations in this Segment had samples with a majority sand fraction composition. Figure 98 introduces TOC results, as more thoroughly presented in Section 5.7.4, relative to the percentage of total gravel, total sand, and silt + clay.

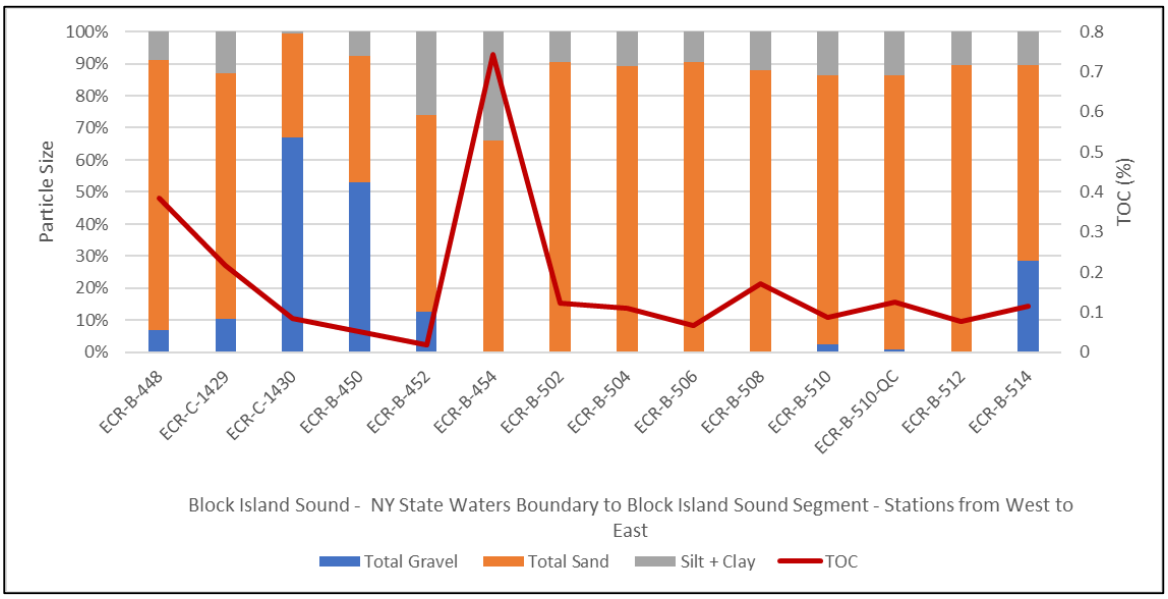


Figure 98 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Segment 7 presented West to East.

Table 77 Percentages of particle size classes according to Wentworth (1922) from concentrations from benthic grab stations in Segment 7. Grayed columns show sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-448	--	--	2.6	4.2	6.8	18.5	42.5	20.7	2.3	0.3	84.3	7.6	1.3	8.9
ECR-C-1429	--	--	6.3	4.2	10.5	8.5	15	39	13.6	0.4	76.5	11	2	13.0
ECR-C-1430	--	--	59.3	7.7	67.0	13.7	6.4	10.5	1.7	0.1	32.4	0.5	0.1	0.6
ECR-B-450	--	--	40.3	12.8	53.1	9.6	15.9	12.2	1.6	--	39.3	6.9	0.7	7.6
ECR-B-452	--	--	1.8	10.9	12.7	17.5	27.4	15.1	0.9	0.3	61.2	23	3.1	26.1
ECR-B-454	--	--	--	0.1	0.1	0.3	0.8	7.7	46.1	11.1	66.0	28.9	5	33.9
ECR-B-502	--	--	--	0.3	0.3	0.2	2.7	29.9	51.6	5.8	90.2	8.4	1.1	9.5
ECR-B-504	--	--	--	--	--	0.6	16.1	61.9	8.4	2.3	89.3	9.4	1.3	10.7
ECR-B-506	--	--	--	0.4	0.4	1.9	27.9	54.5	5.1	0.7	90.1	8.4	1.1	9.5
ECR-B-508	--	--	0.1	0.1	0.2	0.5	7.9	33.8	40.9	4.7	87.8	10.1	1.9	12.0
ECR-B-510	--	--	0.4	2.1	2.5	1.3	8.9	45.4	26.4	1.9	83.9	11.5	2.1	13.6
ECR-B-510-QC	--	--	0.4	0.4	0.8	1.1	7.5	44.7	30	2.2	85.5	11.3	2.4	13.7
ECR-B-512	--	--	--	0.1	0.1	0.2	4.6	43.2	39.8	1.6	89.4	9.1	1.4	10.5
ECR-B-514	--	--	3.1	25.5	28.6	33.9	13.7	7.8	4.8	0.7	60.9	9.4	1.1	10.5

5.7.4| TOTAL ORGANIC CARBON

Average TOC concentrations (exclusive of QC replicates) from Segment 7 benthic grab stations ranged from 0.02 to 0.74 percent (mean: 0.17 percent; SE: 0.05; Table 78). Mean average TOC concentration in this Segment was substantially lower than the mean average TOC concentration of the overall study area over all sampled sites (0.83 percent).

TOC concentrations were relatively low in Segment 7 (<1.0 percent) with the highest TOC concentration at station ECR-B-454, which also had a relatively higher fine sediment (silt + clay) composition (Figure 98).

Table 78 Summary of total organic carbon (TOC) concentrations from benthic grab stations in Segment 7.

Station	TOC (percent)
ECR-B-448	0.38
ECR-B-450	0.05
ECR-B-452	0.02
ECR-B-454	0.74
ECR-B-502	0.12
ECR-B-504	0.11
ECR-B-506	0.07
ECR-B-508	0.17
ECR-B-510	0.09
ECR-B-510-QC	0.13
ECR-B-512	0.08
ECR-C-1429	0.22
ECR-C-1430	0.08
ECR-B-514	0.12

5.7.5| INFAUNA FROM GRAB SAMPLES

Nine of the 13 successful benthic grab samples were selected for infaunal analyses. The nine Segment 7 stations yielded 4,460 individuals and 105 total infauna taxa from seven phyla: Annelida, Arthropoda, Cnidaria, Echinodermata, Mollusca, Nemertea, and Sipuncula. A total of 66 taxa were identified to species level another 39 to LPIL.

5.7.5.1| BIOMASS

Biomass was measured for nine taxonomic classes of infauna present in the samples. Total infauna biomass for the nine sampling stations was 541.3 g. Mean biomass per station was highly variable due to clumped distributions of some taxa (60.2 g ±174.0 SD). Three of the nine classes (including Gastropoda, Bivalvia, and Polychaeta) collectively accounted for 99 percent of the total infauna biomass in the samples (Table 79). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 99. Polychaeta biomass exhibited a uniform pattern over Segment 7 stations with no aggregation observed. Gastropod biomass was concentrated spatially because one station (ECR-B-1429) near the beginning of the Segment 7 yielded over 600 individual *Crepidula fornicata*. Bivalve biomass was also clumped along the beginning of Segment 7 due to 973 individual *Nucula proxima* from a single station (ECR-B-454). This single station represents about 57 percent of all *N. proxima* individuals collected from Segment 7 stations.

Table 79 Summary Statistics for infauna biomass collected from Segment 7.

Class	Total	Percent	Mean	SD
Gastropoda	521.98	0.97	65.25	184.41
Bivalvia	9.73	0.02	1.22	1.55
Polychaeta	5.32	0.01	0.67	0.87
Sipunculidea	1.55	0.00	0.19	0.55
Malacostraca	1.12	0.00	0.14	0.12
Anthozoa	0.59	0.00	0.07	0.21
Nemertea *incertae sedis*	0.21	0.00	0.03	0.07
Echinoidea	0.14	0.00	0.02	0.05
Holothuroidea	0.02	0.00	<0.001	0.01

SD = Standard deviation

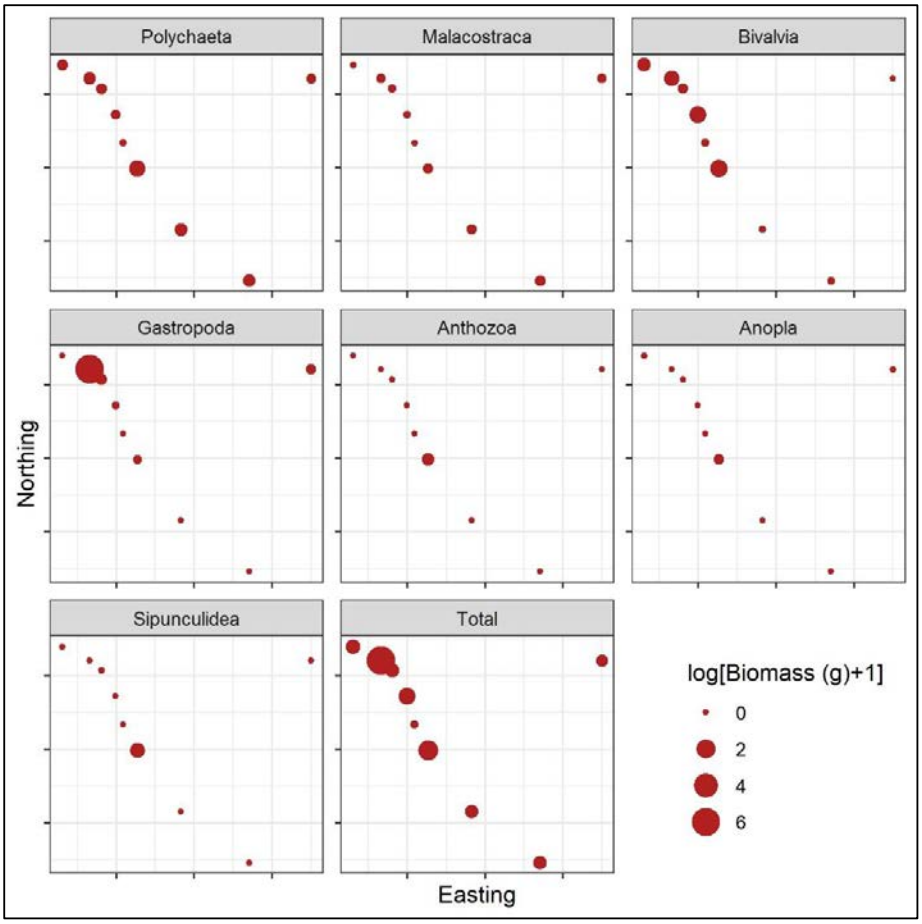


Figure 99 Biomass (g) of infauna organisms for the Classes Polychaeta, Malacostraca, Bivalvia, Gastropoda, Anthozoa, Nemertea incertae sedis, and Sipunculidea plotted on the station positions along Segment 7.

5.7.5.2| UNIVARIATE STATISTICAL ANALYSES

Species level identifications for 84 of the 139 taxa included 3,539 individuals or 60.0 percent of the 4,460 total. All diversity indices were calculated using this set of species. Diversity indices did not vary greatly across samples as depicted in Figure 100. The number of species per sample averaged 16.4 and ranged from 4 to 35. The Margalef's species richness (d) values ranged from 1.4 to 4.6; diversity (H') ranged from 0.84 to 2.33; Fisher's alpha ranged from 2.8 to 6.3. Evenness measured with Pielou's J was moderate across all stations averaging 0.59 ranging from 0.32 to 0.82.

The ten most abundant species sampled accounted for 84 percent of the infauna abundance along Segment 7 (Table 80). Numerically dominant species include four polychaete annelids, four arthropods, and two mollusks. The most abundant species, *Nucula proxima* (bivalve mollusk), *Crepidula fornicata* (gastropod mollusk), *Tharyx acutus* (polychaete worm), and *Byblis serrata* (amphipod crustacean) contributed 71.6 percent of the 3,539 individuals. Spatial patterns of abundance for these ten taxa are shown in Figure 101. The abundance concentration of *Crepidula fornicata* and *Nucula proxima* at individual stations is illustrated in Figure 101.

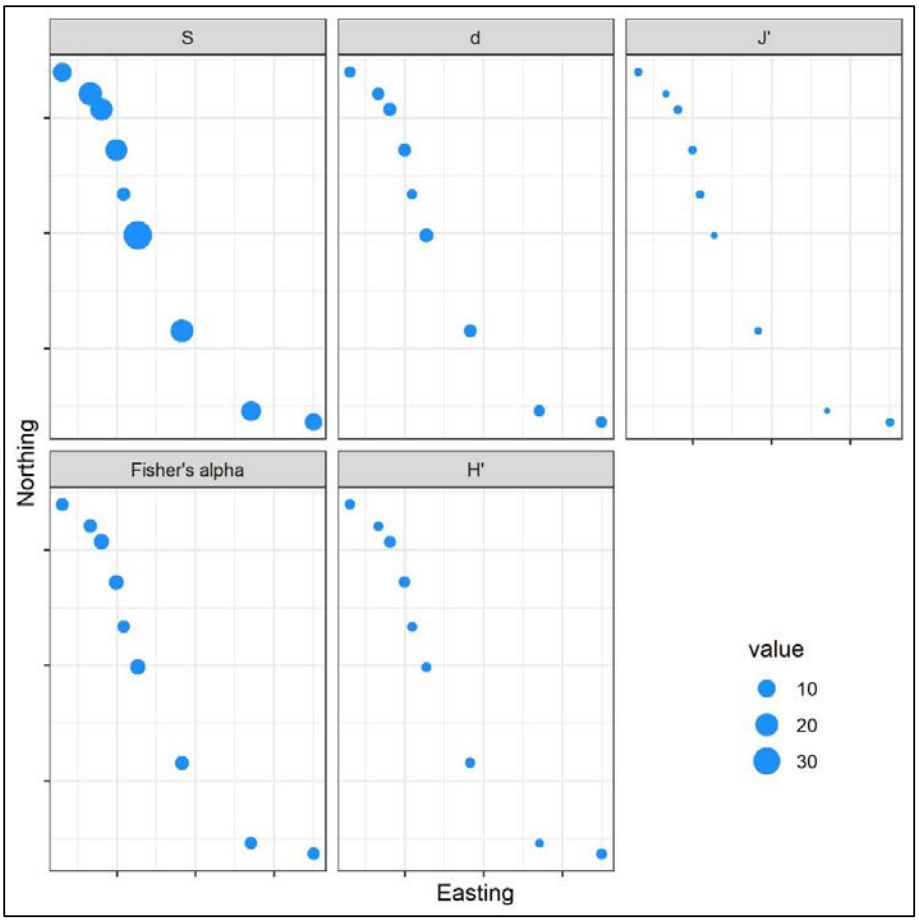


Figure 100 Number of taxa (S), Margalef's species richness (d), Fisher's alpha, evenness (J'), and species diversity (H') plotted on the station positions along Segment 7.

Table 80 Numerically dominant species collected in Segment 7.

Phylum	Species	Total	Percent
Mollusca	*Nucula proxima*	978	27.6
Mollusca	*Crepidula fornicata*	670	18.9
Annelida	*Tharyx acutus*	458	12.9
Arthropoda	*Byblis serrata*	428	12.1
Annelida	*Parexogone hebes*	136	3.8
Arthropoda	*Ampelisca vadorum*	90	2.5
Mollusca	*Astyris multilineata*	87	2.5
Mollusca	*Ilyanassa trivittata*	51	1.4
Annelida	*Nereis splendida*	50	1.4
Annelida	*Paradoneis lyra*	49	1.4

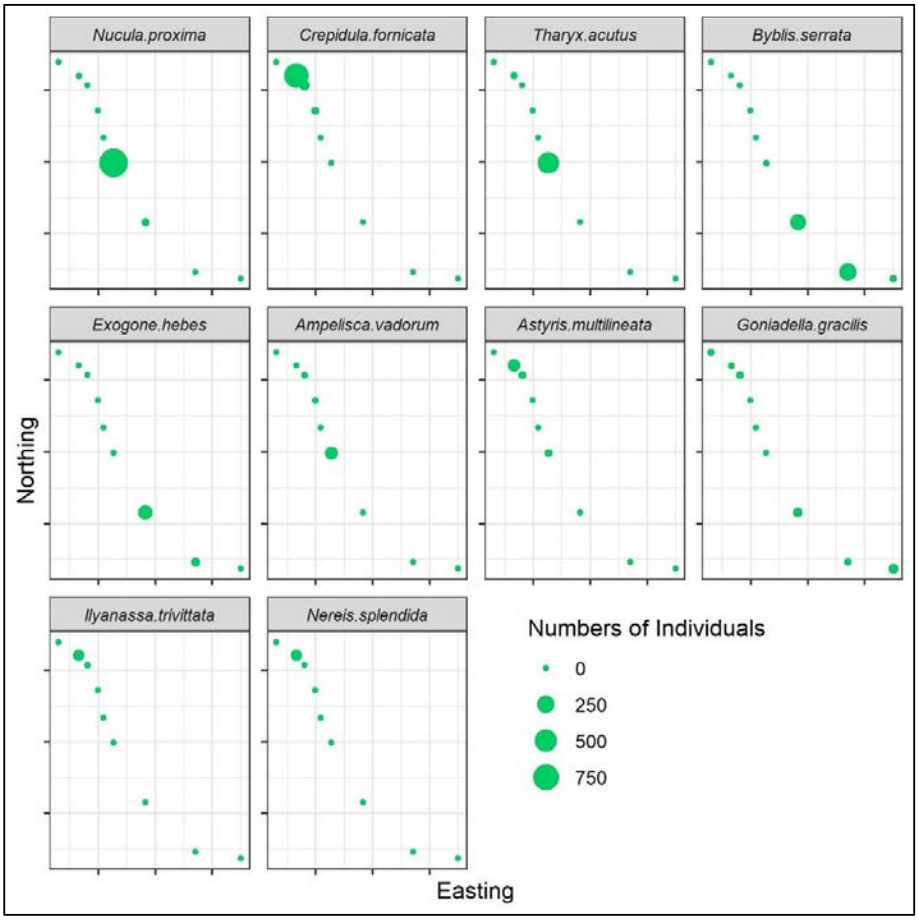


Figure 101 Numbers of individuals of the ten most abundant species in the samples plotted along Segment 7.

5.7.5.3| MULTIVARIATE STATISTICAL ANALYSES

The SIMPROF procedure identified three groups of stations with statistically similar species composition. Two of these groups (groups a and b) were single stations and the third (group c) was composed of seven stations (Figure 102). Group a separated from the other stations due to high abundances of *Nucula proxima*, *Tharyx acutus* (polychaete worm), and *Ampelisca vadorum* (amphipod crustacean) when compared to other Segment 7 stations (Figure 102). Group b was distinguished from other samples by high abundances of *Crepidula fornicata*, *Astyris multilineata* (gastropod mollusk), *Illyanassa trivittata* (gastropod mollusk) and *Nereis splendida* (polychaete worm). Group c samples were characterized by a broader group of species including *Unciola irrorata* (amphipod crustacean) and several polychaete worms (*Byblis serrata*, *Parexogone hebes*, *Goniadella gracilis*, and *Pisone remota*) (Figure 102).

Figure 102 Results of normal cluster analysis of Segment 7 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in Segment 7 samples.

5.7.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

The samples varied widely in the NMDS ordination (Figure 103). Although vectors for percent sand and gravel extend left and right, and vectors for TOC and fines extended downward, none of these vectors for sedimentary variables represent significant correlations of the SIMPROF groupings with percent sand (R^2=0.32, p>0.05); percent fines (R^2=0.06, p>0.05); percent gravel (R^2=0.17, p>0.05); or TOC (R^2=0.26, p>0.05). Group c samples reflected the broad group of species comprising the group. The two single station groups occupied unique positions in the NMDS ordination because of the high abundance of one species in each, *Nucula proxima* and *Crepidula fornicata*, respectively.

SIMPROF groups plotted on the station coordinates showed that Group c was distributed across most of Segment 7 which extends onto the inner continental shelf (Figure 104).

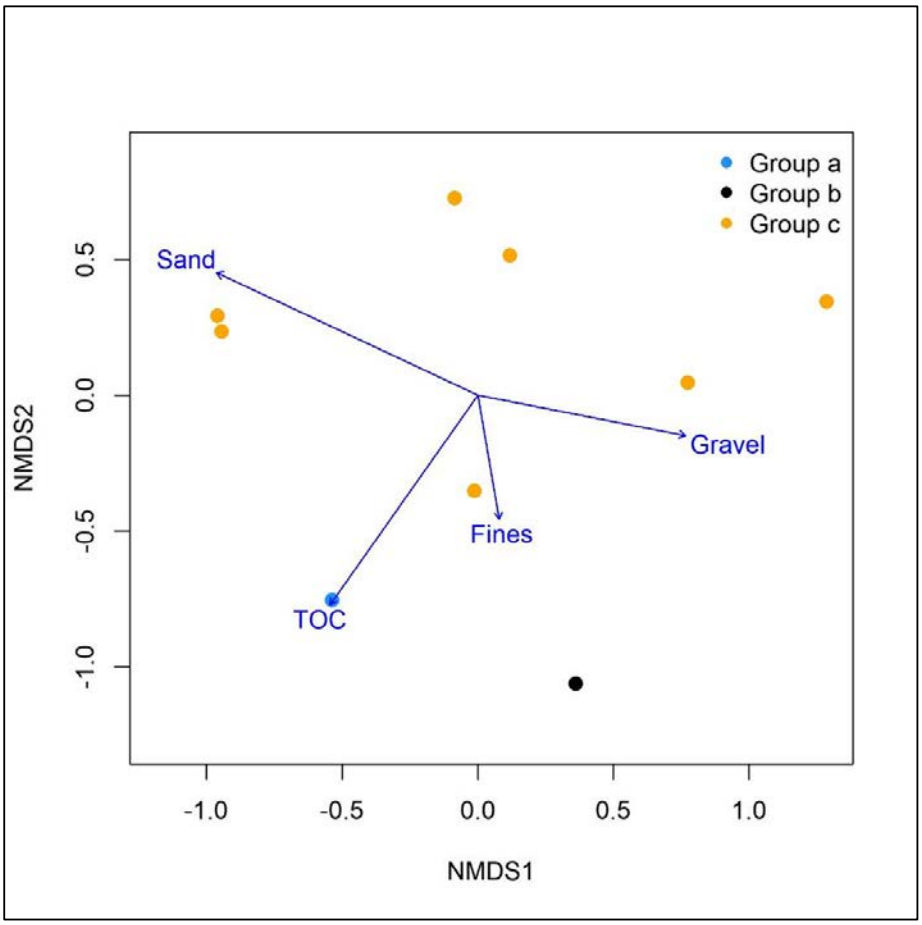


Figure 103 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand, gravel, and fines sediment; and total organic carbon (TOC) in the Segment 7 samples.

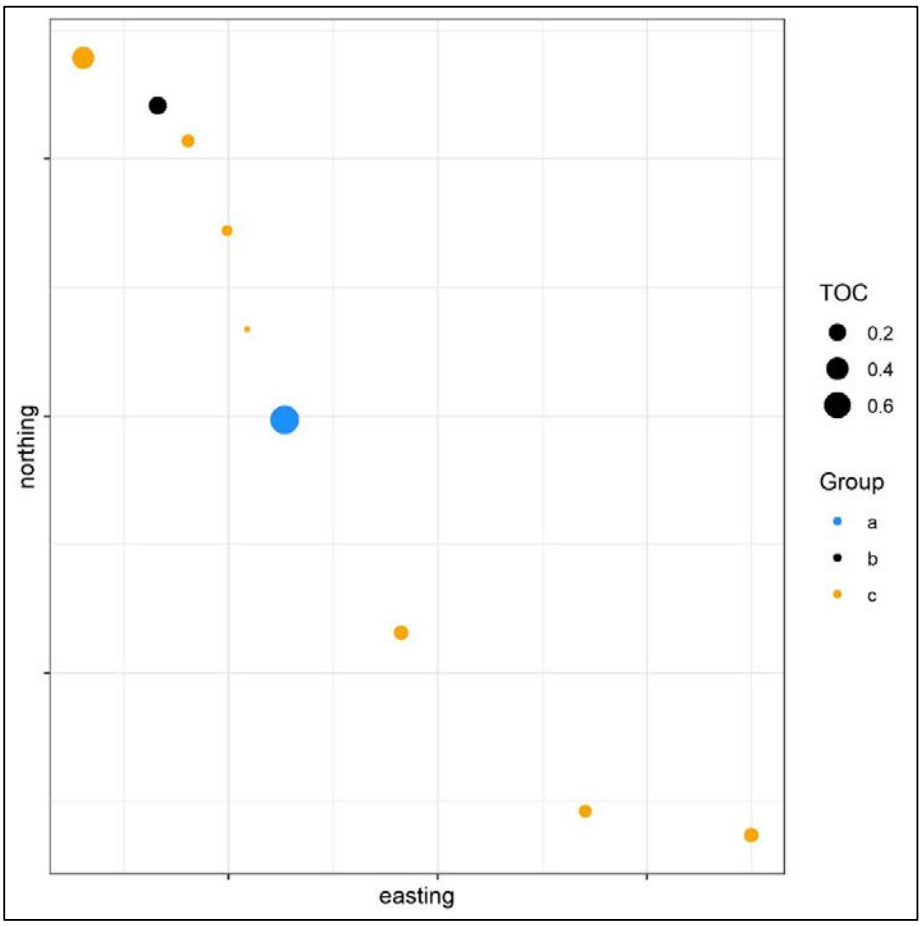


Figure 104 Cluster groups from similarity profiles analysis (SIMPROF) analyses for Segment 7 stations. The size of the symbols is proportional to total organic carbon (TOC) concentration (percent weight).

5.7.6| SPI RESULTS

SPI images were collected at a total of 24 Segment 7 stations (ECR-448 through ECR-514); SPI images were not collected at station ECR-1431 due to the presence of semi-consolidated substrate. The results for the SPI image analysis are found in Attachment H. Selected parameters for Segment 7 are plotted in Figure 105 (grain size, penetration, and surface boundary roughness) and Figure 106 (apparent redox potential discontinuity, infauna succession, and organism sediment index) and the results are summarized below.

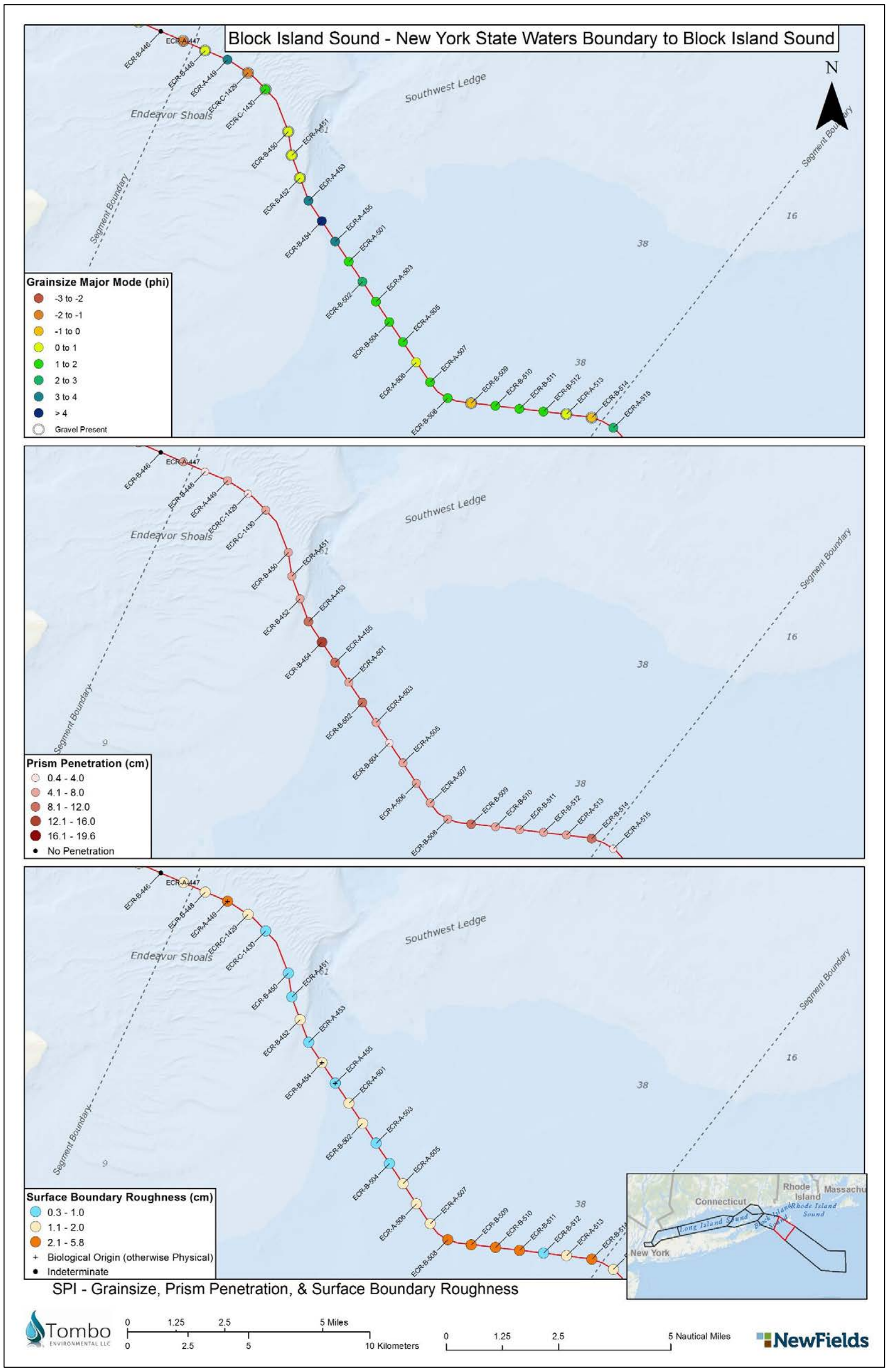


Figure 105 Sediment Profile Imaging (SPI) results for for grain size, penetration, and surface boundary roughness along Segment 7. Segment 7 stations (stations ECR-448 through ECR-514) are along the red line corridor between Segment Boundaries.

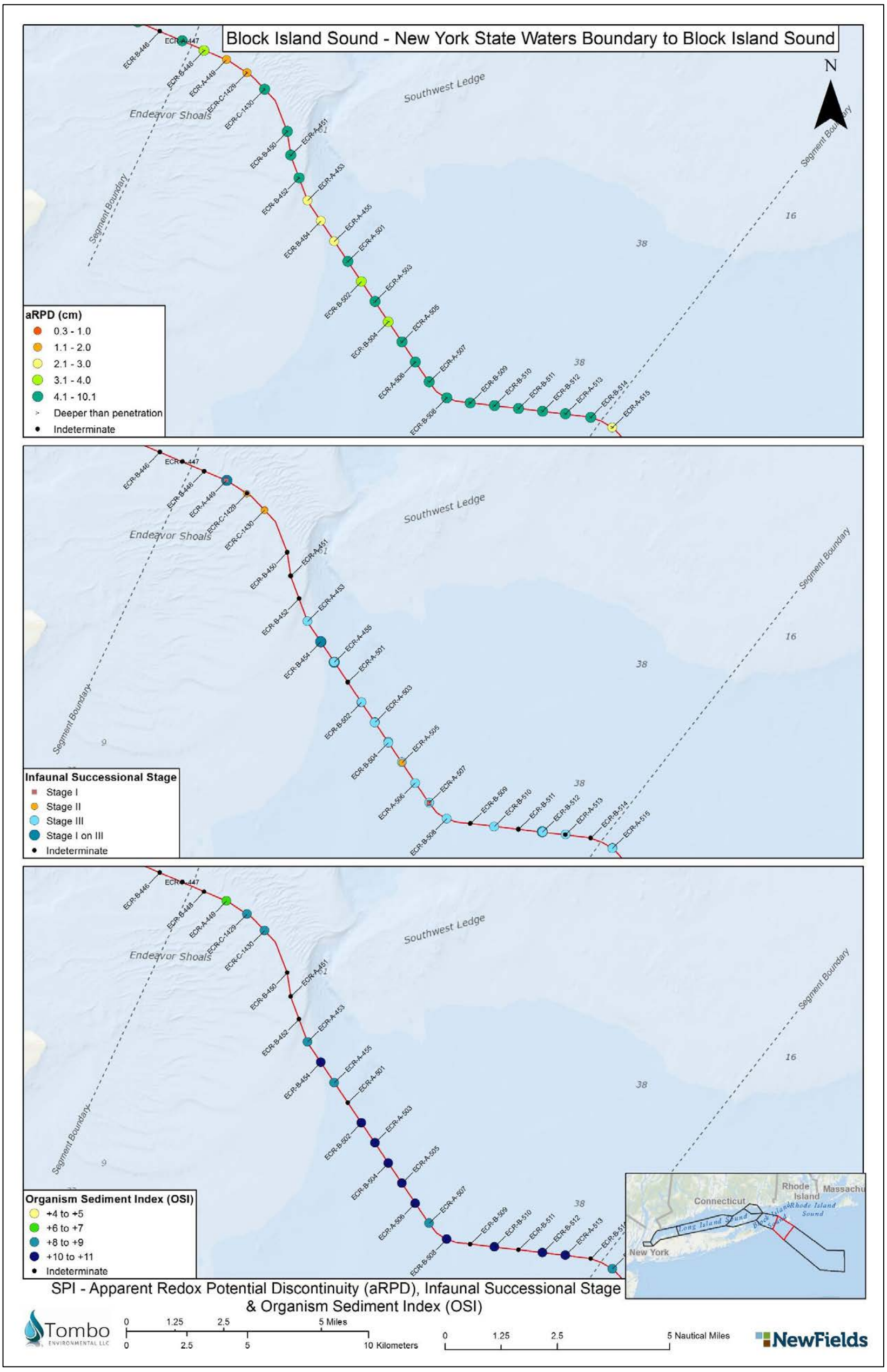


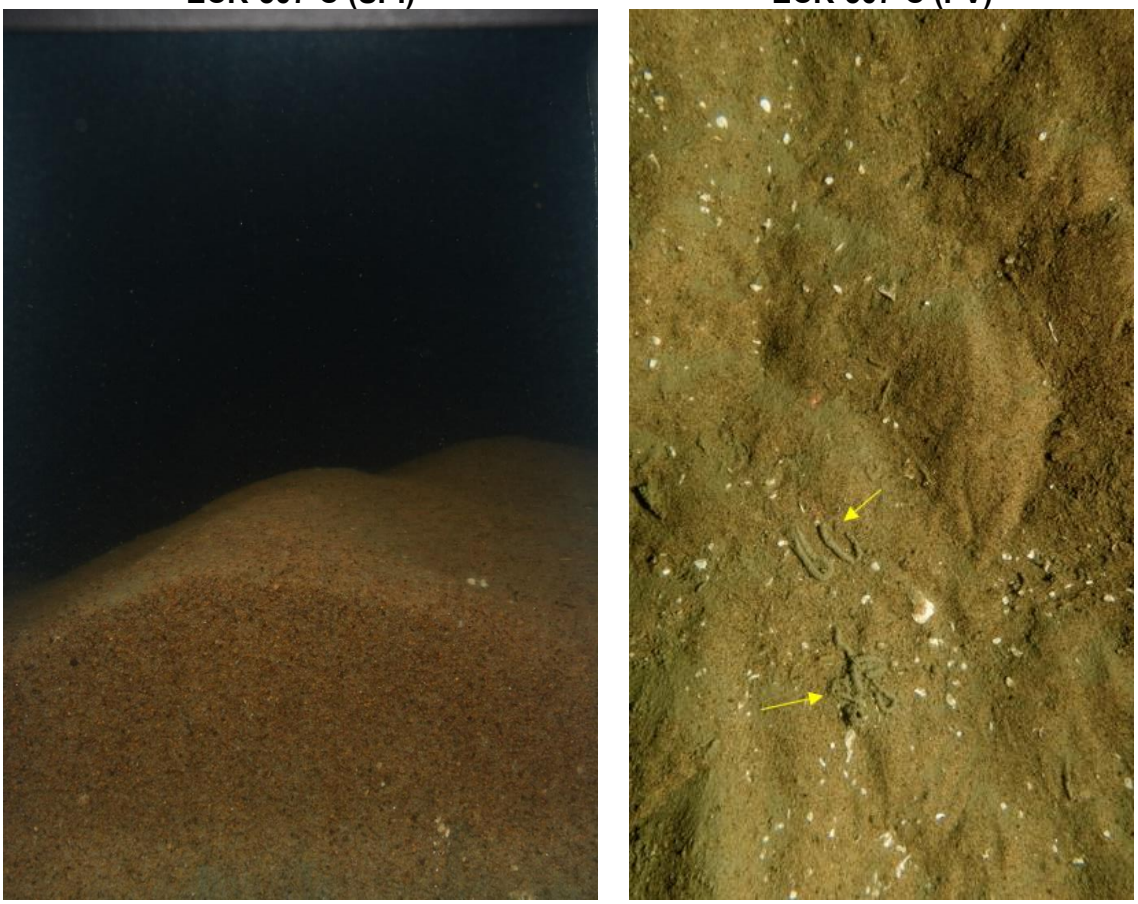
Figure 106 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 7. Segment 7 stations (stations ECR-448 through ECR-514) are along the red line corridor between Segment Boundaries.

5.7.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

The grain size major mode (i.e., the dominant grain size) of surface sediments determined using SPI was predominantly sand in Segment 7. Medium sand (2 to 1 phi) was observed in 37 percent of SPI images), and very fine (4 to 3 phi) and fine sand (3 to 2 phi) were present in 19 percent of the SPI images (Figure 105). Example of SPI/PV images showing typical medium sand sediments in Segment 7 are provided in Image 88.

Gravel (-1 to -2 phi) was observed at station ECR-1429. stations ECR-449 and ECR-454 had a grain size mode of silt and clay (>4 phi). Station ECR-454 appeared to be located near the base of a small submarine canyon, where fine-grained sediments may be transported and deposited.

ECR-507-C (SPI) **ECR-507-C (PV)**



The SPI image from station ECR-507 showed surface sediments consisting of medium sands with scattered fine shell fragments and a rippled surface. The PV image showed a sandy rippled surface with scattered shell particles on the surface. Fecal strands were also present (yellow arrows). SPI image width = 15cm. PV image area = 0.16 m^2.

Image 88 SPI and PV Images from Segment 7 station ECR-507 showing typical medium sand sediments.

5.7.6.2 | PRISM PENETRATION DEPTH

The distribution of SPI camera prism penetration (in centimeters) in the Segment 7 surface sediments is presented in Figure 105. Mean penetration depth is the distance that the SPI camera prism penetrates the sediment and provided a relative measure of sediment water content and shear strength of surface sediments.

The Segment 7 camera prism penetration depths presented in Figure 105 ranged from 0.3 cm at station ECR-1429 to 14.5 cm at station ECR-454 with a Segment average of 6.1 cm (±2.9 cm, n =48). In general, prism penetration depths were relatively shallow across the Segment 7 due primarily to the predominance of medium sand sediments. An area of deeper SPI prism penetration was observed at Segment 7 stations ECR-454 and ECR-455, characterized by silt and clay (>4 phi) sediments.

5.7.6.3 | SURFACE BOUNDARY ROUGHNESS

Mean small-scale boundary roughness values (surface relief) for Segment 7, presented in Figure 105, ranged from 0.3 to 7.2 cm with a Segment average of 1.6 cm (±1.1 cm, n = 48). The highest mean boundary roughness values (3.1 to 7.2 cm) were measured at stations ECR-509, ECR-510, and ECR-514 (Figure 105). The larger boundary roughness was due to a sloped surface, which may be related to surface ripples (physical roughness). Physical roughness was predominant across Segment 7, with 92 percent of the images classified as physical roughness.

5.7.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. The mean Segment 7 aRPD depths presented in Figure 106 ranged from 0.3 to 10.9 cm with a Segment average of 4.8 cm (±1.9 cm, n = 48).

The aRPD depths along Segment 7 were relatively deep, similar to the three Segments to the west which also had average aRPD depths greater than 4.0 cm. The surface sediments in all of these Segments were comprised mostly of sand. As discussed in Section 4.3.4.1, the aRPD in coarse-grained surface sediments can be relatively deep, but difficult to measure due to the lack of optical contrast between oxidized and reduced particles (absence of silt/clays and organic matter).

5.7.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 7 sediments was predominantly indeterminate due to under penetration or no penetration of the SPI prism. Stage IIIwas observed in 31 percent of the SPI images. Several images showed Stage I communities coexisting with the Stage III communities. Stage I on III, was observed in 10 percent of the SPI images.

Stage I succession only, the initial pioneering stage, was observed at Segment 7 stations ECR-449, and ECR-507. Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at 17 percent of the SPI images.

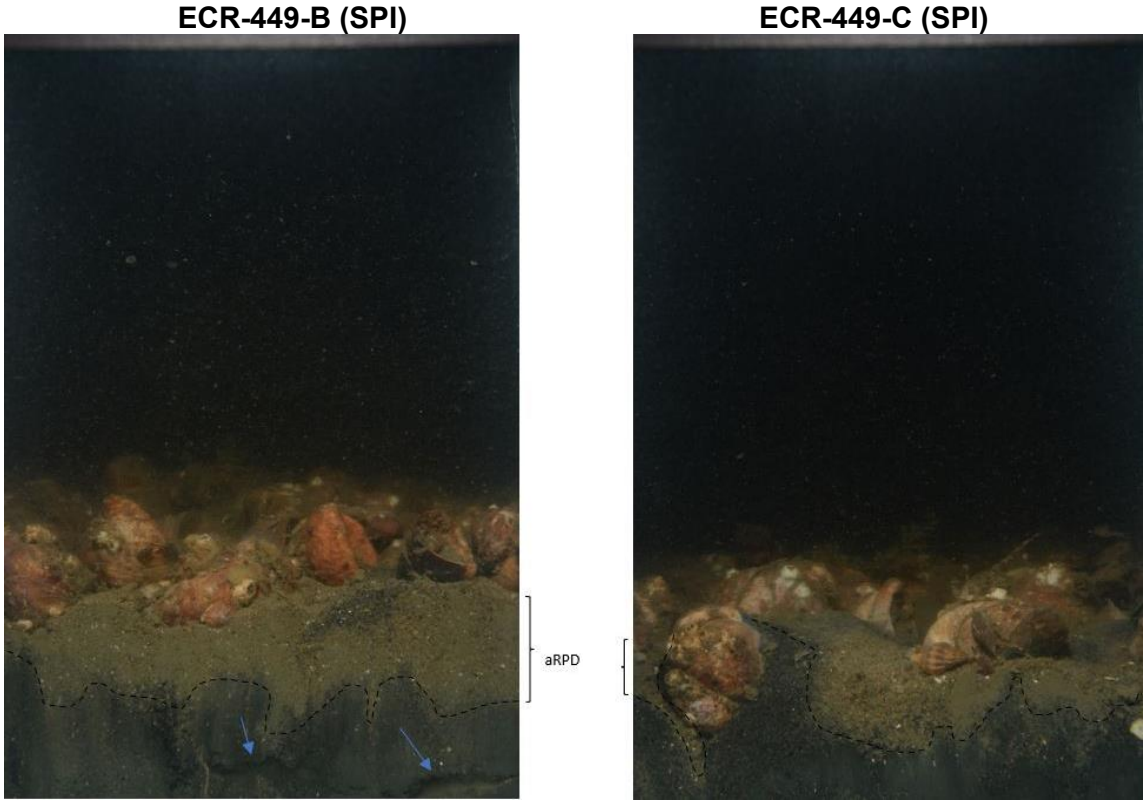
5.7.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogensis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 7 since potential indicators for high SOD were lacking.

5.7.6.7| ORGANISM-SEDIMENT INDEX CALCULATION

The mean Segment 7 OSI values presented in Figure 106 ranged from +2 to +11. OSI values could not be calculated at eight of the 24 Segment 7 stations because of indeterminate aRPD depths due to low or no SPI prism penetration, or indeterminate successional stage. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present.

The vast majority (97 percent) of OSI values in Segment 7 were +6 or higher. An OSI value of +2 was measured at station ECR-449 that showed the presence of fine sand covered by *Crepidula fornicata* shells. The coverage by shell hash may have minimized the depth of the aRPD and kept the sediment habitat in an earlier infaunal successional stage. It should be noted another SPI image at station ECR-449 showed a deeper aRPD and the OSI value was +9 (Image 89).



SPI images from station ECR-449 showed silty fine sands covered with *Crepidula fornicata* shells. Replicate B (image to the left) showed a relatively deep aRPD with feeding voids (Stage III succession) visible at depth (blue arrows) with an organism-sediment index (OSI) determined to be +9. Replicate C (image to the right) showed slightly lower SPI prism penetration and shallower aRPD with no apparent feeding voids; the OSI was determined to be +2. SPI image width = 15cm.

Image 89 SPI Images from Segment 7 station ECR-449 showing within station variability concerning prism penetration, aRPD depth, and organism-sediment index.

5.7.7 | PV RESULTS

The PV images were collected from 25 Segment 7 stations (Figure 97). At Segment 7 stations, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.1 m^2 (± 0.03 m^2).

5.7.7.1 | BEDFORMS

Physical bedforms were observed at 24 of the 25 Segment 7 PV sampling stations (Attachment G-1). Bedform ripples, present primarily in muddy sand bottoms (Attachment G-1), were observed at five of the 25 Segment 7 PV sampling stations and are representative of mobile Segment 7 sediment beds.

Biological bedforms were observed at Segment 7 station ECR-A-449 (Attachment G-2) with live *Crepidula* reef substrate (Image 90).

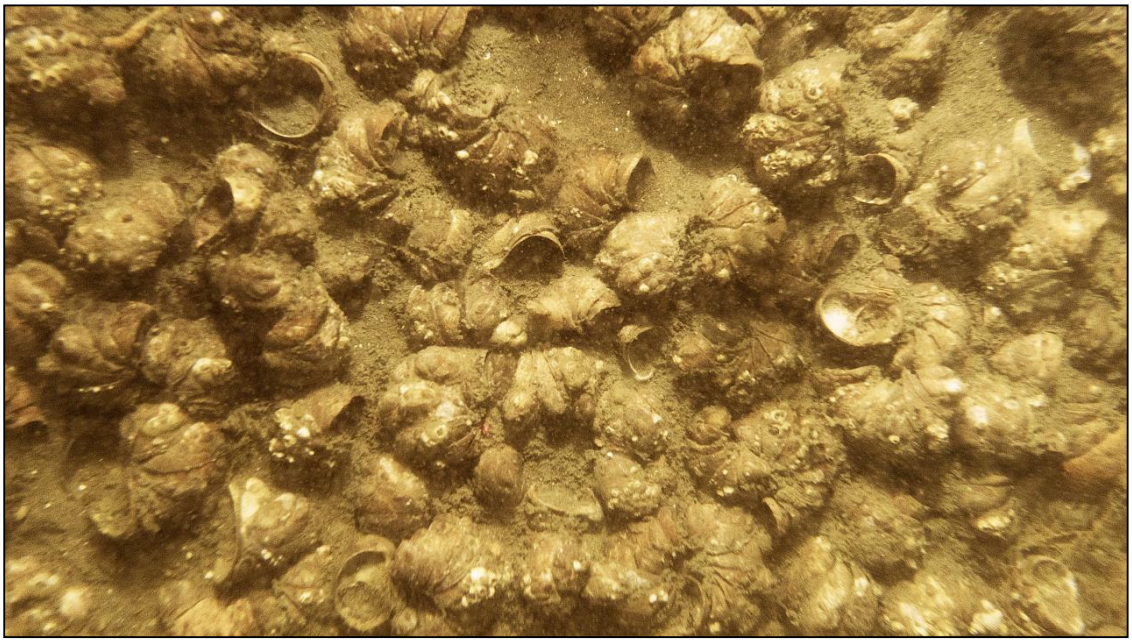


Image 90 Live Crepidula reef substrate observed at Segment 7 station ECR-A-449.

5.7.7.2 | FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 7 stations are provided in Attachment G-1. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 7 stations is shown in Figure 107. The biological assemblage observed in PV images from Segment 7 stations was not considered diverse with generally low faunal coverage. No marine macrophytes or seagrasses were observed in Segment 7. Dominant fauna observed along Segment 7 are as follows:

- Astrangiidae corals (*Astrangia poculata*) were observed at one of the 25 Segment 7 sampling stations with an estimated faunal cover of 25 percent provided by 17 individual coral colonies at station ECR-C-1431 (Image 91);
- A single *Sertularia* hydroid was observed at Segment 7 station ECR-C-1431 (Image 92);
- Stacks of *Crepidula fornicata* were observed at eight Segment 7 sampling stations with a estimated faunal cover of up to 50 percent. A total of 771 individual *Crepidula fornicata* were counted in Segment 7;
- The Paguroidea hermit crab were observed at nine Segment 7 sampling stations with a total of 12 individual hermit crabs;
- Sand dollars (*Echinarachnius parma*) were observed at three Segment 7 sampling stations with a estimated faunal cover of 10 percent at station ECR-A-453 (Image 93);
- Pennatulid sea pen beds were observed at two Segment 7 sampling stations with a total count of five sea pens; and
- *Ampelisca* bed was observed at Segment 7 station ECR-A-455 (Image 94).

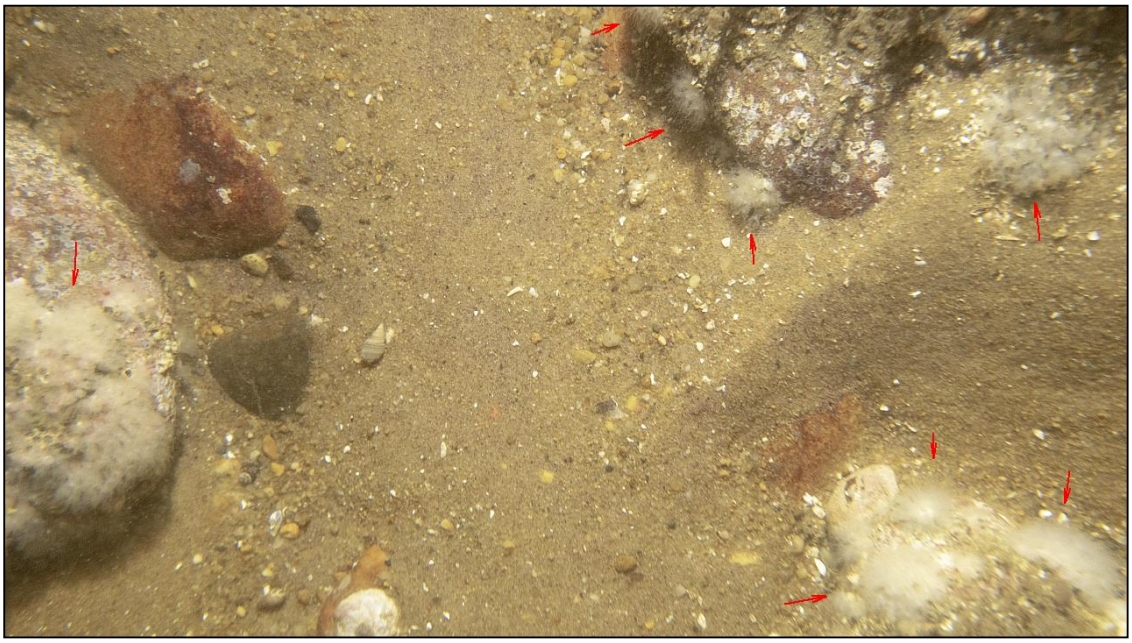


Image 91 Northern star coral attached to cobble on gravelly sand bottom at Segment 7 station ECR-C-11431.

Image 92 Northern star coral (red arrows), hydroid (blue arrow), Crepidula fornicata (orange arrow), and a Ilyanassa trivittata (green arrow) on gravelly sand bottom at Segment 7 station ECR-C-11431.

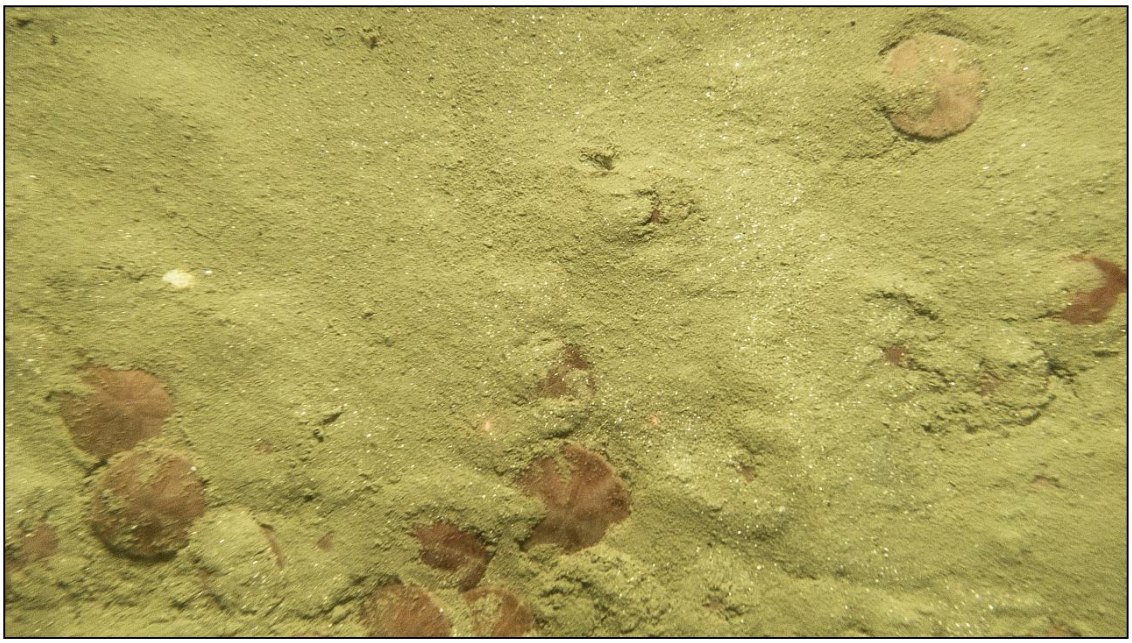


Image 93 Muddy sand with Echinarachnius parma sand dollars at Segment 7 station ECR-A-453.

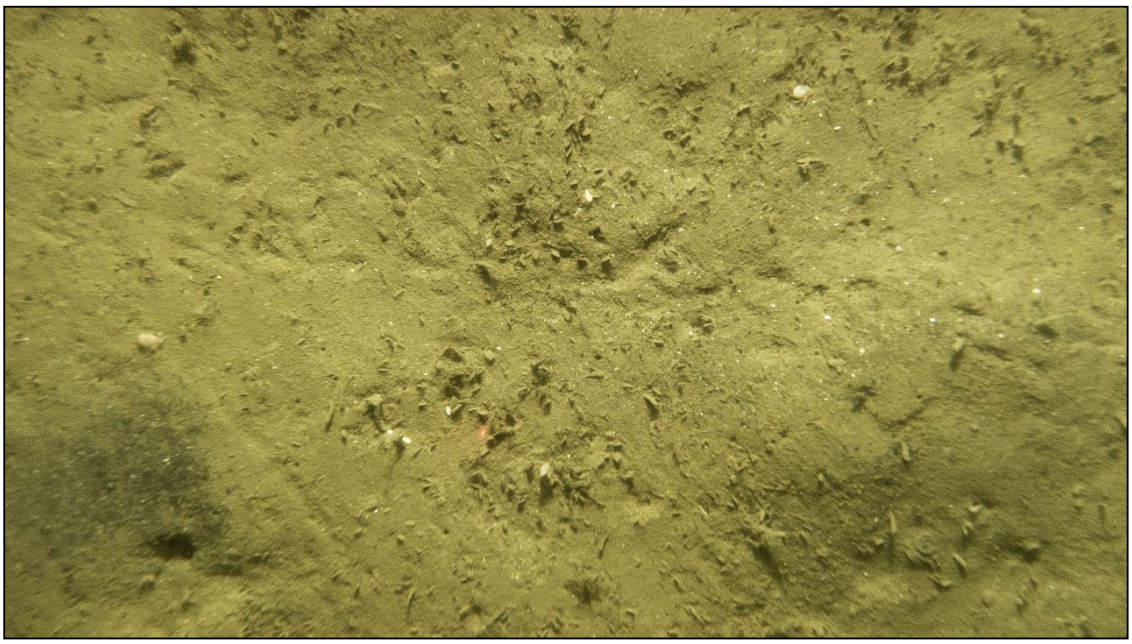


Image 94 Muddy sand with decapod tracks, gastropod trail and Ampelisca bed at Segment 7 station ECR-A-455.

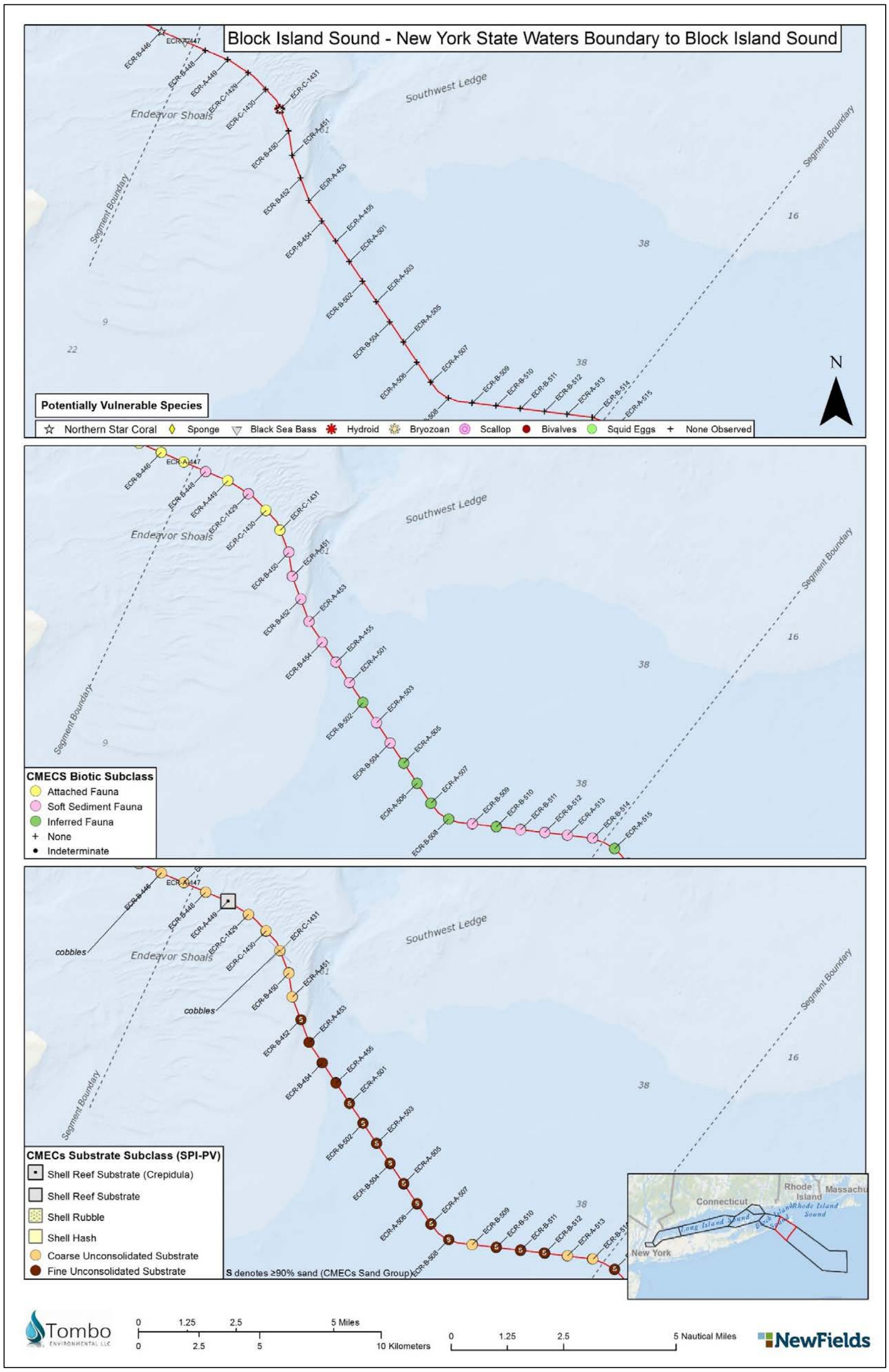


Figure 107 Plan View (PV) imaging results along Segment 7. Segment 7 stations (stations ECR-448 through ECR-514) are along the red line corridor between Segment Boundaries.

5.7.7.3 | TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The PVS to project impacts observed along Segment 7 included 17 northern star coral *Astrangia poculata* colonies at station ECR-C-1431 (Image 91 and Image 92) (Figure 107, Potentially Vulnerable Species panel).

5.7.7.4 | NON-NATIVE TAXA

No non-native species were observed in Segment 7.

5.7.8 | CMECS CLASSIFICATIONS

5.7.8.1 | CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/tow camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. For the Physiographic Setting for Segment 7 outside of Long Island Sound was classified as Continental Shelf.

The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features >0.4 mi^2 (1 km^2) in size and Level 2 represents features <0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 7 had a flat overall seafloor topography consisting of unconsolidated substrate (ranging in size from silt to boulders) and stations were classified as Level 1 Flat Geoform, a general term for a level or nearly level surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012) at a regional scale of greater than 0.4 mi^2 (1 km^2) in size.

The Geoform Level 2 classification consisted of three (3) categories. Two categories are of geologic origin, and these included 1) Flat and 2) Boulder Field Geoforms. The Flat Geoform, as described above, was seen at 7 of the 22 Segment 7 stations. The Boulder Fields Geoform is applied to areas dominated by large, boulder-sized (0.8 to 13.4 ft [256 to 4,096 mm]) stones or pieces of rock. The Boulder Field Geoform Level 2 classification was observed Segment 7 station ECR-C-1431.

The remaining 14 Segment 7 stations were classified as the Burrow/Bioturbation Geoform Level 2 (of biogenic origin), consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna. Geoform classifications for the stations in Segment 7 are summarized and illustrated in Table 81 and Figure 108.

Table 81 Geoform components based on drop/towed camera video for Segment 7.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geoform Level 2	Geoform	Stations
Passive Continental Margin	Continental Shelf	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-B-454, ECR-B-502, ECR-B-504, ECR-B-506, ECR-B-508, ECR-B-510, ECR-B-512, ECR-B-513, ECR-C-1425, ECR-C-1426, ECR-C-1518, ECR-C-1519, ECR-C-1520, ECR-C-1521
				Geologic	Boulder Field	ECR-C-1431
					Flat	ECR-B-448, ECR-B-450, ECR-B-452, ECR-C-1423, ECR-C-1424, ECR-C-1429, ECR-C-1430

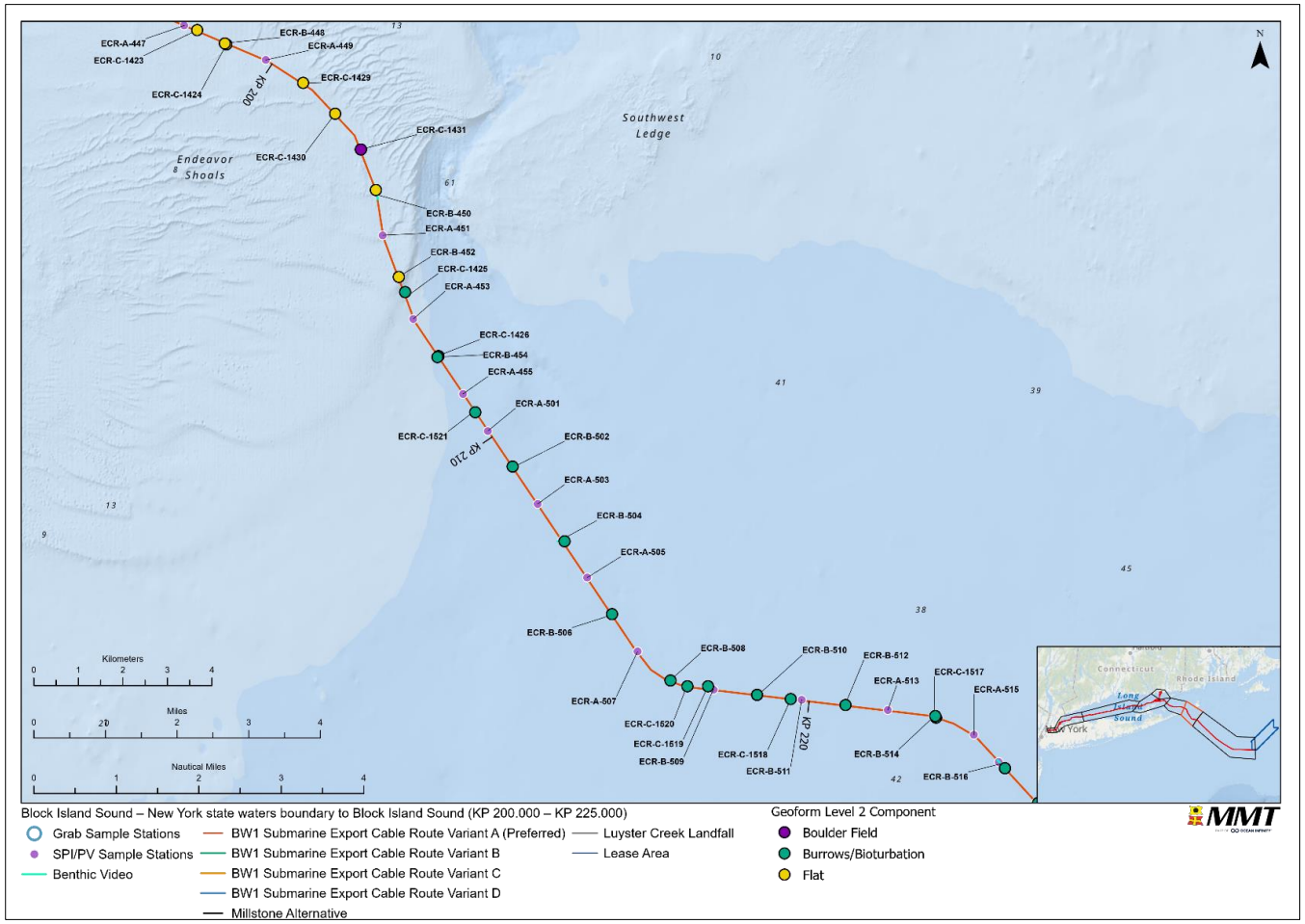


Figure 108 Overview of classified CMECS Geoform Level 2 Component based on drop/towed camera video towed video in Segment 7.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/tow camera benthic video data (Table 82 and Figure 109 and Figure 110).

The entirety of Segment 7 had Biotic Setting and Biotic Class classifications of Benthic/Attached Biota and Faunal Bed, respectively.

Biotic Subclass consisted of two classifications: Soft Sediment Fauna and Attached Fauna. Twenty-one (21) of the 22 stations in Segment 7 were associated with Soft Sediment Fauna, the same stations were classified as Burrows/Bioturbation and Flat Level 2 Geoforms). Several of these stations appeared to have dominant macrofauna with four stations (ECR-B-448, ECR-C-1423, ECR-C-1424, and ECR-C1429 dominated by the gastropod *Crepidula* spp. (likely *Crepidula fornicata*). These stations are classified as the CMECS biotic group of Mobile Mollusks on Soft Sediments, and the Biotic Community to *Crepidula* Reef for those four stations. Two stations – ECR-B-512 and ECR-B-514 – had a dominant Biotic Group classification of a Sand Dollar Bed due to the dominance of the sand dollar *Echinarachnius parma*.

Segment 7 station ECR-C-1431 had a Biotic Subclass classification of Attached Fauna, the same station with Boulder Field Level 2 Geoform. Attached Fauna was further categorized into the Biotic Group, Diverse Colonizers and Biotic Community, Large Macrofauna, due to the various kinds of epifauna typically observed on the boulders including sponges, hydroids, bryozoans, tunicates, and northern star corals (*Astrangia poculata.* Additional specifics are provided in Attachment B. Figure 110 shows the Segment 7 station Biotic Component classifications for 1) Diverse Colonizers being associated with single station with Boulder Field presence, 2) the Mobile Mollusks on Soft Sediment (the *Crepidula* spp. Beds, and 3) the Sand Dollar Beds.

Table 82 CMECS Biotic components based on drop/towed camera video in Segment 7.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Biotic Community	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	--	ECR-B-454, ECR-B-502, ECR-B-504, ECR-B-506, ECR-B-508, ECR-B-510, ECR-C-1425, ECR-C-1426, ECR-C-1518, ECR-C-1519, ECR-C-1520, ECR-C-1521,
			Mobile Mollusks on Soft Sediments	*Crepidula* Reef	ECR-B-448, ECR-C-1423, ECR-C-1424, ECR-C1429
			Sand Dollar Bed	--	ECR-B-512, ECR-B-514
		Attached Fauna	Diverse Colonizers	Large Macrofauna	ECR-C-1431

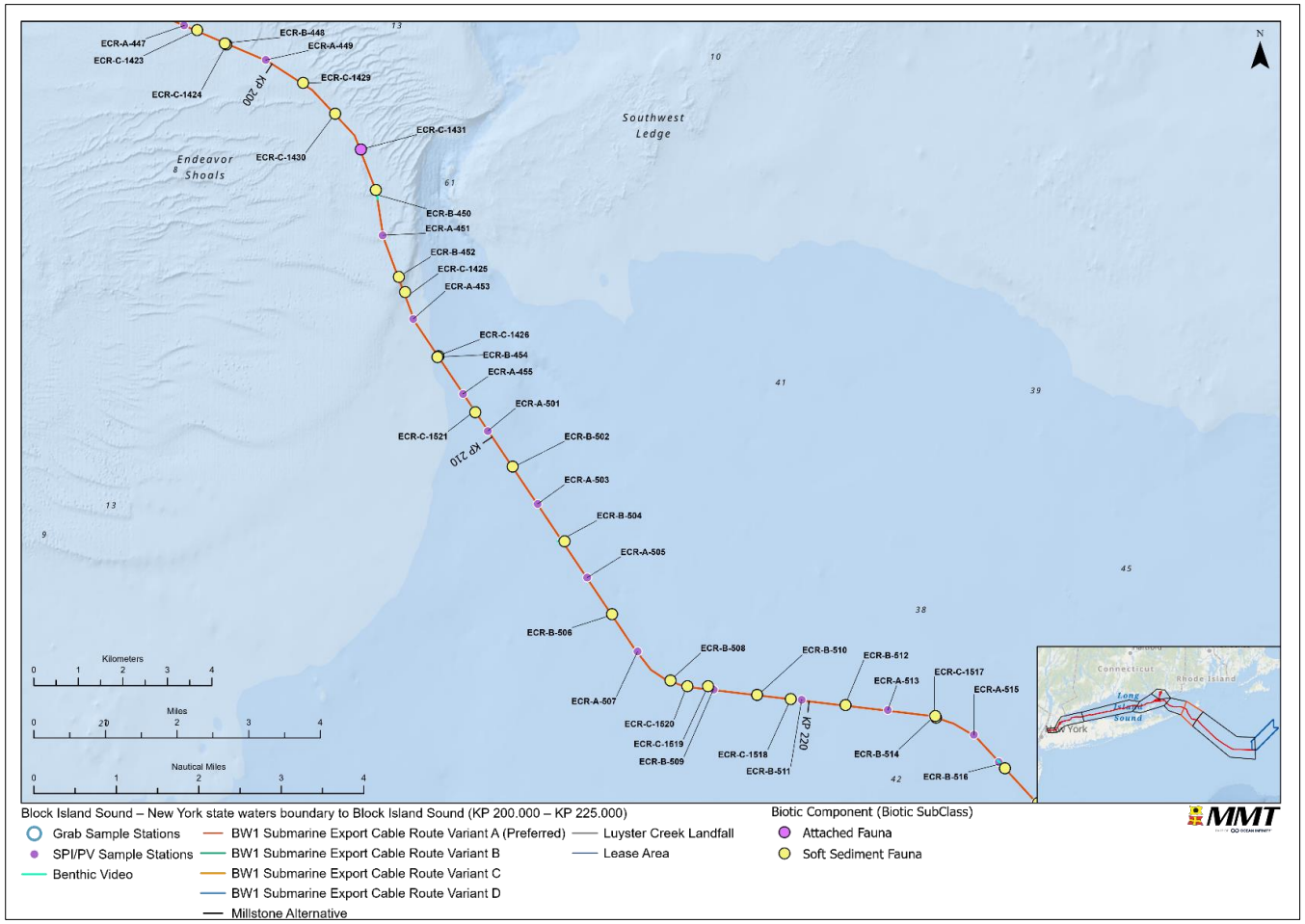


Figure 109 Overview of classified CMECS Biotic Component based on drop/towed camera video in Segment 7.

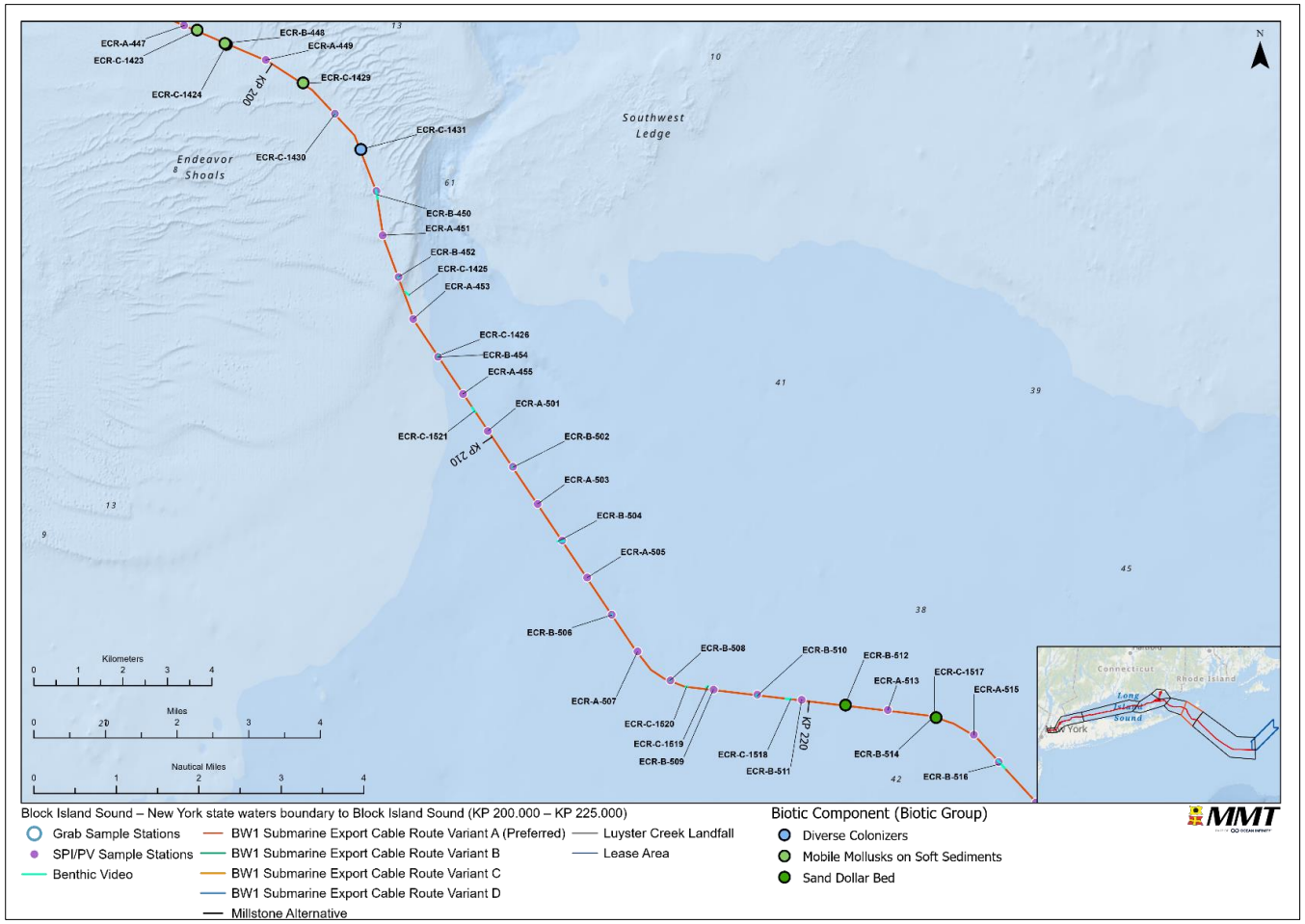


Figure 110 Overview of classified CMECS Biotic Component (Biotic Group) based on drop/towed camera video in Segment 7.

5.7.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Fourteen (14) benthic grab stations were sampled along Segment 7. Grab sampling was unsuccessful at station ECR-C-1431 and NMFS-modified CMECS substrate classifications were not available from SPI and/or PV imagery. Therefore, CMECS and NMFS-modified CMECS substrate classifications (to the substrate group level) for ECR-C-1431 was derived from grab-mounted video imagery (Image 95).

CMECS and NMFS-modified substrate classifications were derived from PSD results for the other 13 Segment 7 stations. After a review of benthic grab content imagery, no stations were determined to consist of substantial (>50 percent) biogenic (shell) material.

CMECS substrate component classifications for Segment 7 benthic grab stations are presented in Table 83 and shown in Figure 111. NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 7 are presented in Table 84 and shown in Figure 112. Fifty (50) percent of the Segment 7 stations yielded benthic grab samples containing coarse unconsolidated substrates and the other 50 percent contained fine unconsolidated substrate types, indicative of soft-bottomed habitats (NOAA Fisheries 2021). Substrate types included Gravel Mixes, Muddy Sandy Gravel, Sandy Gravel, Gravelly Muddy Sand, Gravelly Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sand (CMECS)/Fine/Very Fine, Medium Sand (NMFS-modified CMECS) and Silty Sand (CMECS)/Muddy Sand (NMFS-modified CMECS) substrates.

Seven of the Segment 7 stations contained coarse unconsolidated substrates, which are considered indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. Coarse unconsolidated Gravel Mixes and Gravelly substrates contained primarily pebble/granule as the gravel component except for station ECR-C-1431.

Six of the seven Segment 7 sampling stations which yielded samples containing coarse unconsolidated substrate types were located nearer to shore.

a. Gravel Mixes (ECR-C-1431)	b. Muddy Sandy Gravel (ECR-B-450)	c. Sandy Gravel (ECR-C-1430)
d. Gravelly Muddy Sand (ECR-B-452)	e. Gravelly Sand (ECR-B-448)	f. Silty Sand (CMECS)/Muddy Sand (NMFS-modified CMECS; ECR-B-504)

Image 95 Grab content images and screenshot from benthic grab-mounted video (station ECR-B-1431) showing representative substrate types encountered at benthic grab sampling stations along Segment 7. Representative images for substrate types Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sand (CMECS)/Fine/Very Fine and Medium Sand (NMFS-modified CMECS) are excluded from this image since previous sections provided representative grab content images).

Table 83 CMECS substrate component classifications for benthic grab stations sampled along Segment 7. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station ID	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-450	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel
ECR-C-1430	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel
ECR-C-1431[1]	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	N/A[1]
ECR-B-452	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-C-1429	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-514	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-448	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand
ECR-B-454	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-508	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-510	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-510-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-512	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-502	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-506	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-504	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	Silty Sand

[1] CMECS substrate classification for station ECR-C-1431 was derived from video analysis. Thus a substrate subgroup was not able to be determined. N/A: Not Applicable; QC: Quality Control.

Table 84 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 7. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station ID	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-450	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	Granule/Pebble
ECR-C-1430	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	Granule/Pebble
ECR-C-1431[1]	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	N/A[1]	Cobble
ECR-B-452	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-C-1429	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-514	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule/Pebble
ECR-B-448	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	Granule/Pebble
ECR-B-454	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-508	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-510	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-510-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-512	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-502	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	N/A
ECR-B-506	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-504	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A

[1] NMFS-modified CMECS substrate classification for station ECR-C-1431 was derived from video analysis. N/A: Not Applicable; QC: Quality Control.

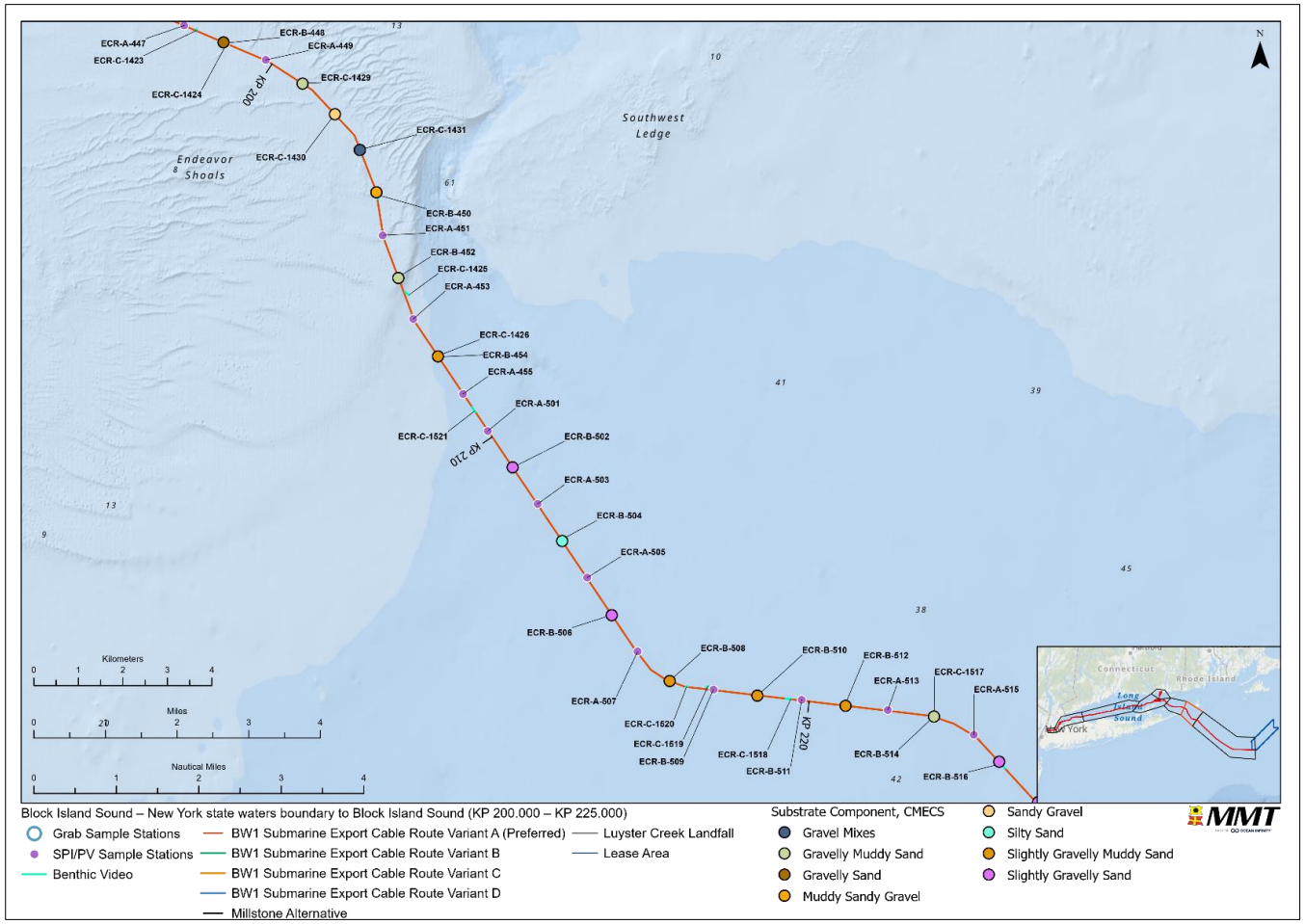


Figure 111 CMECS substrate component classifications for benthic grab stations sampled along Segment 7.

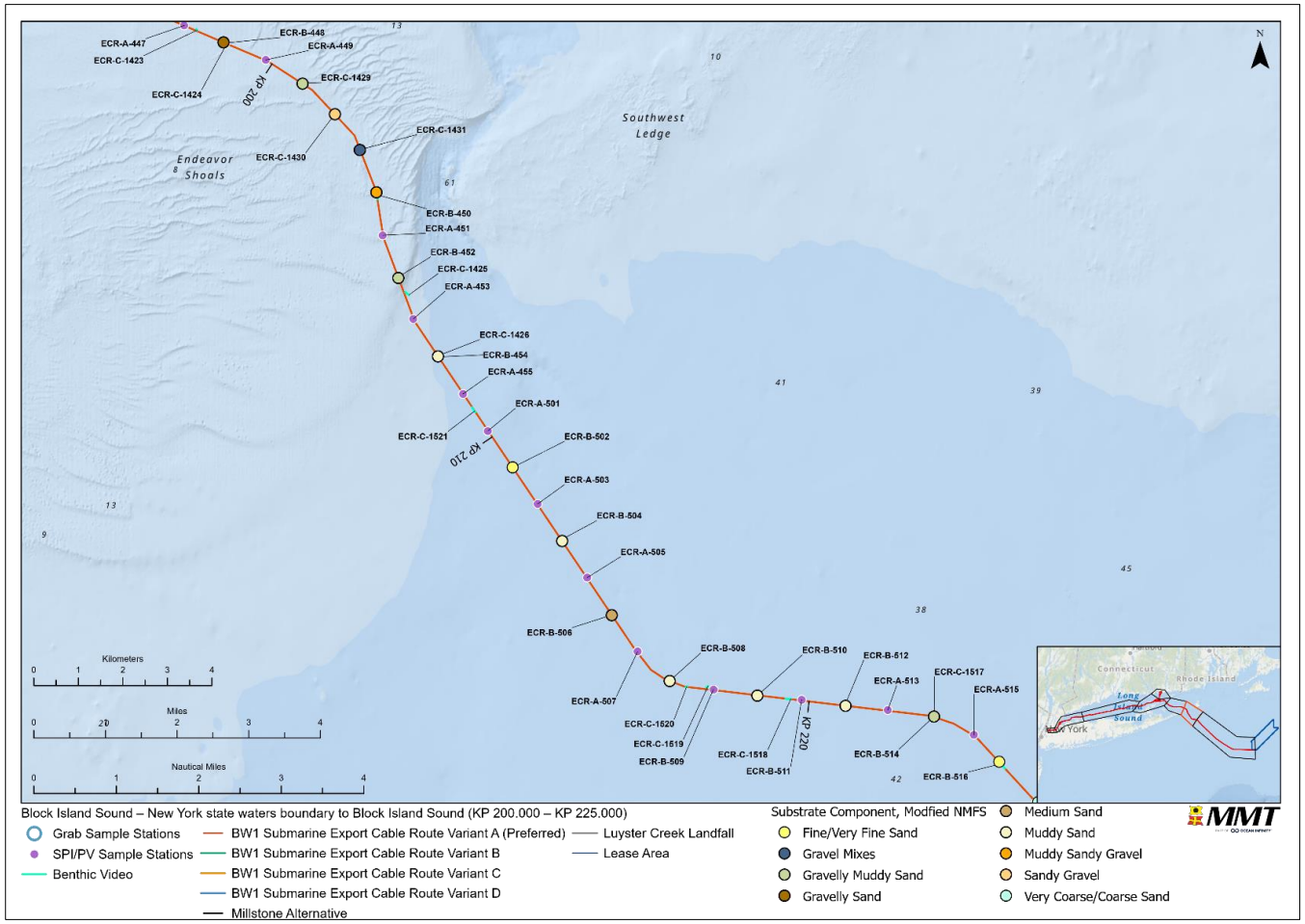


Figure 112 NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 7.

5.7.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). CMECS Unconsolidated Mineral Substrate class type was observed at 24 out of 25 stations while the CMECS Shell Substrate class type was observed at only one of the 25 Segment 7 stations (Table 85).

CMECS Fine Unconsolidated Substrate subclass type, with muddy sand and sandy mud observed at 15 of the 25 Segment 7 stations (Table 85), extended throughout Segment 7 (Figure 107, CMECS Substrate Subclass panel).

CMECS Coarse Unconsolidated Substrate, present at nine of the 25 Segment 7 stations (Figure 107, CMECS Substrate Subclass panel), was composed of gravelly sand and sandy gravel (Table 85).

CMECS Shell Reef Substrate subclass type was present at Segment 7 station ECR-A-449, as *Crepidula* Reef Substrate group (Image 90) (Table 85).

Table 85 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 7.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	24	96%	Fine Unconsolidated Substrate	15	60%	Sand	12	48%	Fine/Very Fine Sand	3	12%
									Medium Sand	8	32%
									Very Coarse/Coarse Sand	1	4%
						Muddy Sand	2	8%	--	2	8%
						Sandy Mud	1	4%	--	1	4%
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	9	36%	Gravels	1	4%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	1	4%
						Gravel Mixes	5	20%	Gravel Pavement	0	0%
									Sandy Gravel	5	20%
									Muddy Sandy Gravel		0%
									Muddy Gravel		0%
						Gravelly	3	12%	Gravelly Sand	3	12%
									Gravelly Muddy Sand		0%
									Gravelly Mud		0%
Shell Substrate	1	4%	Shell Reef Substrate	1	4%	*Crepidula* Reef Substrate	1	4%	--	1	4%
			Shell Rubble	0	0%	--	--	--	--	--	--
			Shell Hash	0	0%	--	--	--	--	--	--

5.7.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Subclass Soft Sediment Fauna biotic component was observed and mapped as the dominant biota grouping at 16 of the 25 Segment 7 stations (Figure 107, CMECS Biotic Subclass panel) (Attachment G-1). The Soft Sediment Fauna component included *Crepidula* beds, *Echinarachnius* beds, and *Ampelisca* beds (Attachment G-1).

The CMECS Subclass Attached Fauna biotic component was observed at 3 of the 25 Segment 7 stations (Figure 107, CMECS Biotic Subclass panel) and included Astrangiidae northern star coral colonies, *Sertularia* hydroids, and stacks of *Crepidula fornicata* (Attachment G-1).

The CMECS Subclass Inferred Fauna biotic component was observed and mapped as the dominant biota grouping at six of the 25 Segment 7 stations (Figure 107, CMECS Biotic Subclass panel) and included Inferred fauna groups *Arenicola* castings, decapod tracks and gastropod trails (Attachment G-1).

No CMECS Class Aquatic Vegetation was observed in Segment 7.

5.8| OFFSHORE CORRIDOR - BLOCK ISLAND SOUND TO LEASE AREA

Segment 8 includes sample stations along the BW1 Variant A submarine export cable corridor from Block Island Sound to the Lease Area (Figure 113).

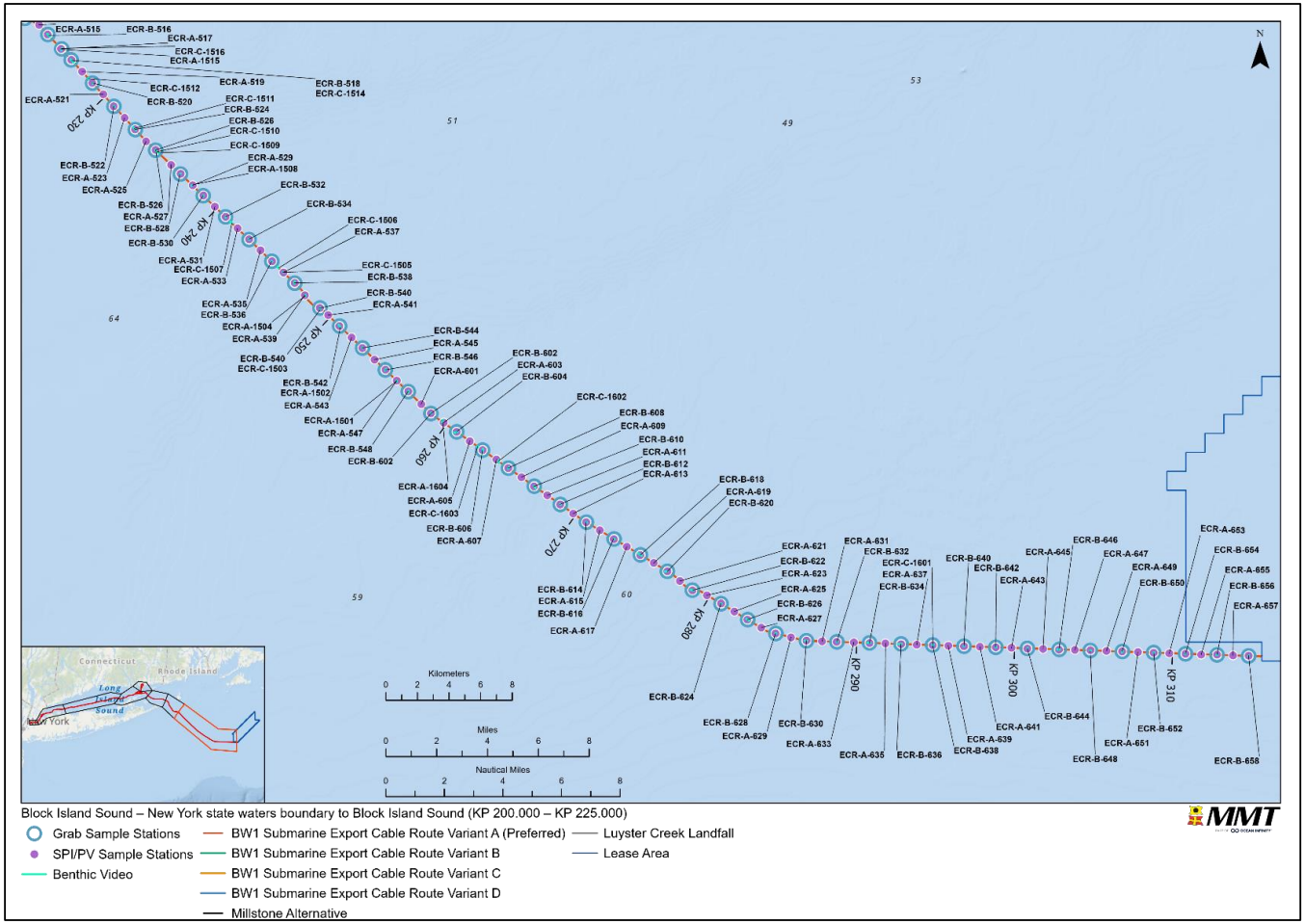


Figure 113 Overview of the Segment 8 sample stations.

5.8.1| BENTHIC VIDEO

The sampling video log is presented in Attachment B. Representative images of the seabed benthic habitat from Segment 8 are provided in Image 96, Image 97 and Image 98

The Segment 8 seabed was characterized by a range of substrates, from fine sandy silt to coarser sand substrate and occasional areas of gravel and shell material. There were also areas of fine sediments where bioturbation, in the form of tracks and burrows, is evident and included the presence of tube-building amphipods. Undulating sand wave features were also present within this Segment. Various macrobenthic taxa and fish (see Section 5 for a list of observed fish) were observed throughout these areas.

No consolidated hard substrates were observed within Segment 8. Underwater conditions were generally adequate for the collection of visual data and underwater near-bottom visibility delimited by suspended particles and an amount of artificial light penetration of approximately 3.3 ft (1 m) within the water column.

Macroinvertebrates observed included various mollusks – slipper snails (*Crepidula* spp.*),* sea scallops *(Placopecten magellanicus)* and other unidentified mollusks; crustaceans – hermit crabs (*Pagurus* spp.), spider crabs (*Libinia* sp.), Jonah crab (*Cancer irroratus*), barnacles; and echinoderms – sea stars and sand dollars (*Echinarachnius parma*). Attached taxa observed included bryozoans, hydroids (often attached to shell fragments), burrowing anemones and sea pens.

Image 96 Representative image from Segment 8 shows an Atlantic sea scallop (Placopecten magellanicus) and several sand dollars (Echinarachnius parma) on sand substrate.

Image 97 Representative image from Segment 8 displaying an Atlantic sea scallop (Placopecten magellanicus) on sand substrate.

Image 98 Representative image from Segment 8 displaying several sand dollars (Echinarachnius parma) and a sea star on an undulating sand bottom (trough is visible in the top left portion of the image).

5.8.2| SEDIMENT OBSERVATIONS

Visual sediment sample and *in situ* aRPD observations for Segment 8 are provided in Attachment B. All 47 Segment 8 benthic grab stations yielded sediment samples.

One of the of benthic samples, at station ECR-B-536 collected had a distinctive odor (ECR-B-536) and details are provided in Attachment B with the other noted visual observations. The distinctive odor detected in some samples is the result of some anoxic sediment with subtle pungency differences due to the composition of the sediment primarily the amount of organic material; note that description of odor and degree of pungency is rather subjective.

None of the benthic grabs had the presence of anthropogenic debris. Successful grab samples had penetration depths adequate to sample macroinfauna to a depth of ≥2.8 in (7 cm).

Surficial features in the grabs varied, ranging from shell material to gravel to fine sand with polychaete tubes (Image 99), while others lacked notable surficial features (Image 100).

Image 99 Representative surficial grab sample from Segment 8 station ECR-B-616 displaying polychaete tubes in medium to fine sand.

Image 100 Representative surficial grab sample from Segment 8 station ECR-B-646 displaying mostly very fine sand.

5.8.3| PARTICLE SIZE DISTRIBUTION

The PSD data based on the Wentworth scale (Table 21) is presented in Table 86 for Segment 8. All 47 samples collected from Segment 8 stations were analyzed for PSD (Figure 113); additional QC sediment samples were collected from four Segment 8 stations. Samples from 46 of the 47 stations had some type of gravel – combined Pebbles or Granules The single station that lacked any gravel component was ECR-B-518. Samples from 39 of the 47 stations had sediment compositions that consisted of greater than 50 percent of a combined sand particle fraction, of which 31 stations exceeded 75 percent. Seven of the 47 stations had combined Silt and Clay fractions that exceeded 50 percent of the sediment composition with a single station, ECR-B-648 exceeding 75 percent (78.3 percent).

The total gravel, total sand, and silt + clay was calculated and are presented in Figure 114. Most Segment 8 stations had samples with greater than 50 percent sand fraction composition, with an observable increase in the combination Silt and Clay fraction at stations on the eastern portion of the Segment. Figure 114 introduces TOC results, as more thoroughly presented in Section 5.8.4, relative to the percentage of total gravel, total sand, and silt + clay. A general trend of a positive correlation between TOC concentration and an increased fine (silt + clay) sediment component was evident.

Table 86 Percentages of particle size classes according to Wentworth (1922) from Segment 8. Grayed columns show sediment component totals.

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-516	--	--	0.1	--	0.1	0.2	2.4	7.6	67.2	13.6	91.0	7.8	1.1	8.9
ECR-C-1516	--	--	0.1	2.0	2.1	26.7	44.7	14.4	5.9	1.1	92.8	4.5	0.6	5.1
ECR-B-518	--	--	--	--	0.0	0.3	25.2	43.9	19.8	1.4	90.6	8.2	1.2	9.4
ECR-B-520	--	--	0.2	0.5	0.7	0.8	4.3	15.0	50.3	11.7	82.1	15.0	2.2	17.2
ECR-B-522	--	--	1.5	0.4	1.9	1.0	4.7	22.1	52.3	6.3	86.4	10.2	1.5	11.7
ECR-B-524	--	--	--	0.1	0.1	0.6	1.1	25.5	54.0	6.8	88.0	10.4	1.5	11.9
ECR-B-526	--	--	0.6	1.1	1.7	6.5	47.9	30.5	3.7	0.3	88.9	8.2	1.2	9.4
ECR-B-528	--	--	0.4	0.5	0.9	4.2	45.8	35.2	3.9	0.6	89.7	8.2	1.2	9.4
ECR-B-528-QC	--	--	0.1	0.4	0.5	3.7	45.8	36.9	4.3	0.7	91.4	7.4	0.7	8.1
ECR-B-530	--	--	2.5	1.2	3.7	4.2	11.2	24.1	26.5	14.2	80.2	13.6	2.5	16.1
ECR-B-532	--	--	1.8	0.1	1.9	0.7	5.5	28.7	27.4	14.9	77.2	17.7	3.2	20.9
ECR-B-534	--	--	0.1	0.3	0.4	1.4	5.3	23.1	38.4	17.0	85.2	12.5	1.9	14.4
ECR-B-536	--	--	--	0.1	0.1	0.2	1.9	24.3	38.5	13.9	78.8	18.4	2.7	21.1
ECR-B-538	--	--	0.6	--	0.6	0.4	29.7	46.8	10.5	0.5	87.9	10.0	1.5	11.5
ECR-B-540	--	--	--	0.5	0.5	3.9	40.5	30.1	12.0	1.0	87.5	10.4	1.6	12.0
ECR-B-542	--	--	0.9	1.9	2.8	12.6	50.3	14.5	2.2	0.9	80.5	14.5	2.2	16.7
ECR-B-544	--	--	1.9	2.1	4.0	2.4	4.2	12.2	37.5	14.5	70.8	22.0	3.2	25.2
ECR-B-546	--	--	0.2	0.1	0.3	1.0	21.7	32.4	20.6	5.1	80.8	16.4	2.5	18.9
ECR-B-548	--	--	0.2	1.2	1.4	11.9	66.9	8.0	1.5	0.5	88.8	8.5	1.3	9.8
ECR-B-548-QC	--	--	0.8	1.1	1.9	11.8	66.6	8.3	1.6	0.4	88.7	8.6	0.8	9.4
ECR-B-602	--	--	0.7	0.8	1.5	3.2	21.8	33.1	23.6	6.1	87.8	8.5	2.2	10.7
ECR-B-604	--	--	1.5	2.6	4.1	5.4	18.0	29.9	23.5	6.5	83.3	10.2	2.4	12.6
ECR-B-606	--	--	--	0.4	0.4	2.5	15.8	40.8	21.3	6.1	86.5	10.8	2.3	13.1
ECR-B-608	--	--	--	1.0	1.0	6.9	40.3	44.5	3.6	0.2	95.5	3.0	0.5	3.5
ECR-B-610	--	--	--	0.1	0.1	0.2	4.5	64.3	27.9	0.5	97.4	2.0	0.5	2.5

Station	Particle Size (percent)													
	Boulder	Cobbles	Pebble	Granule	Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Total Sand	Silt	Clay	Silt + Clay
ECR-B-612	--	--	--	0.2	0.2	2.1	6.3	21.7	42.5	9.0	81.6	14.8	3.4	18.2
ECR-B-614	--	--	1.0	0.1	1.1	0.1	4.4	25.5	46.0	8.5	84.5	11.6	2.8	14.4
ECR-B-616	--	--	--	0.3	0.3	1.4	11.5	39.8	31.2	5.9	89.8	7.3	2.6	9.9
ECR-B-618	--	--	--	0.1	0.1	1.3	13.7	50.1	16.8	4.5	86.4	11.2	2.3	13.5
ECR-B-620-QC	--	--	--	--	0.0	1.3	6.6	16.0	36.8	13.5	74.2	20.5	5.3	25.8
ECR-B-620	--	--	0.4	0.2	0.6	2.9	8.7	17.2	35.7	13.1	77.6	17.5	4.3	21.8
ECR-B-622	--	--	--	0.1	0.1	0.5	8.4	22.8	39.0	10.2	80.9	15.2	3.8	19.0
ECR-B-624	--	--	--	0.1	0.1	1.3	8.9	17.4	23.6	11.6	62.8	28.4	8.7	37.1
ECR-B-626	--	--	--	0.1	0.1	0.9	7.2	18.8	22.7	10.0	59.6	31.1	9.2	40.3
ECR-B-628	--	--	--	0.2	0.2	1.4	8.2	9.3	12.0	13.9	44.8	40.8	14.2	55.0
ECR-B-630	--	--	--	0.6	0.6	1.3	10.0	17.4	12.0	13.3	54.0	34.4	11.0	45.4
ECR-B-632	--	--	0.1	1.1	1.2	1.9	7.1	12.4	13.7	14.4	49.5	39.4	9.9	49.3
ECR-B-634	--	--	--	0.3	0.3	1.0	8.1	21.7	15.0	11.8	57.6	33.9	8.2	42.1
ECR-B-636	--	--	--	0.3	0.3	1.5	3.6	4.8	9.1	18.6	37.6	46.3	15.8	62.1
ECR-B-638	--	--	--	0.9	0.9	2.5	4.9	4.3	5.6	17.3	34.6	51.8	12.7	64.5
ECR-B-640	--	--	--	1.8	1.8	5.4	7.0	5.0	6.0	20.0	43.4	45.2	9.6	54.8
ECR-B-640-QC	--	--	0.2	0.9	1.1	3.2	4.0	3.0	4.2	17.8	32.2	54.0	12.7	66.7
ECR-B-642	--	--	--	5.0	5.0	2.8	13.2	7.6	7.6	21.6	52.8	33.3	8.9	42.2
ECR-B-644	--	--	--	0.4	0.4	1.4	2.4	2.6	4.3	19.1	29.8	56.2	13.6	69.8
ECR-B-646	--	--	--	1.5	1.5	2.9	10.2	20.7	11.7	43.8	89.3	7.7	1.5	9.2
ECR-B-648	--	--	--	0.5	0.5	--	2.4	2.9	3.0	12.9	21.2	63.4	14.9	78.3
ECR-B-650	--	--	--	0.4	0.4	0.4	6.3	15.1	11.2	15.8	48.8	42.5	8.3	50.8
ECR-B-652	--	--	--	0.5	0.5	1.4	3.9	8.7	16.8	32.6	63.4	29.8	6.3	36.1
ECR-B-654	--	--	--	1.1	1.1	3.0	7.0	13.7	15.6	42.6	81.9	14.6	2.4	17.0
ECR-B-656	--	--	--	1.5	1.5	2.9	6.7	13.5	11.8	34.1	69.0	24.0	5.5	29.5
ECR-B-658	--	--	0.5	1.3	1.8	1.9	6.9	19.9	16.2		76.2	17.8	4.2	22.0

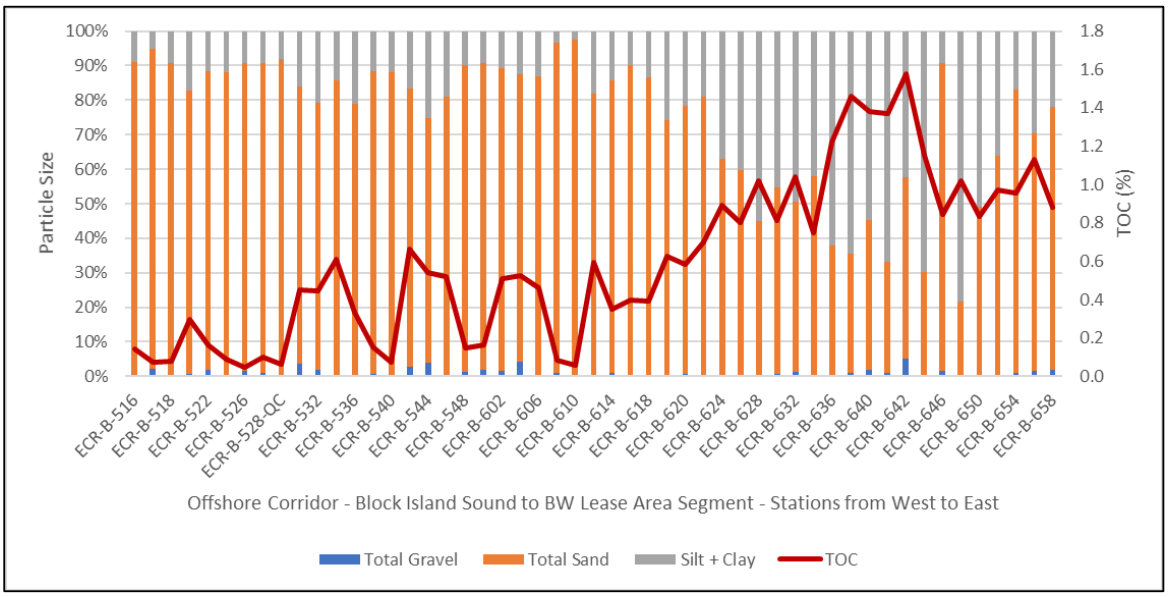


Figure 114 Percentages of total gravel, total sand and silt + clay fractions and total organic carbon (TOC) content in sediment samples from Segment 8 stations presented West to East.

5.8.4| TOTAL ORGANIC CARBON

Average TOC concentrations (exclusive of QC replicates) from Segment 8 benthic grab samples ranged from 0.05 to 1.58 percent (mean: 0.60 percent; SE: 0.06; Table 87) with a Segment mean of mean: 0.60 percent. Mean average TOC concentration in this Segment was similar to the mean average TOC concentration of the overall survey area (0.83 percent).

TOC concentrations from grab samples collected in Segment 8 generally increased approaching the Lease Area and were generally higher from samples that contained relatively higher proportions of silt + clay (Figure 114).

Table 87 Summary of total organic carbon (TOC) concentrations from benthic grab stations along Segment 8.

Station ID	TOC (percent)
ECR-B-516	0.14
ECR-B-518	0.08
ECR-B-520	0.30
ECR-B-522	0.17
ECR-B-524	0.09
ECR-B-526	0.05
ECR-B-528	0.10
ECR-B-528-QC	0.07
ECR-B-530	0.45
ECR-B-532	0.45
ECR-B-534	0.61
ECR-B-536	0.33

Station ID	TOC (percent)
ECR-B-538	0.15
ECR-B-540	0.08
ECR-B-542	0.66
ECR-B-544	0.54
ECR-B-546	0.52
ECR-B-548	0.15
ECR-B-548-QC	0.17
ECR-B-602	0.51
ECR-B-604	0.52
ECR-B-606	0.46
ECR-B-608	0.08
ECR-B-610	0.06
ECR-B-612	0.60
ECR-B-614	0.35
ECR-B-616	0.40
ECR-B-618	0.39
ECR-B-620-QC	0.62
ECR-B-620	0.58
ECR-B-622	0.70
ECR-B-624	0.89
ECR-B-626	0.80
ECR-B-628	1.02
ECR-B-630	0.81
ECR-B-632	1.04
ECR-B-634	0.75
ECR-B-636	1.22
ECR-B-638	1.46
ECR-B-640	1.38
ECR-B-640-QC	1.37
ECR-B-642	1.58
ECR-B-644	1.15
ECR-B-646	0.85
ECR-B-648	1.02
ECR-B-650	0.83
ECR-B-652	0.97
ECR-B-654	0.96
ECR-B-656	1.13
ECR-B-658	0.88
ECR-C-1516	0.08

5.8.5| INFAUNA FROM GRAB SAMPLES

Twenty-five (25) of the 47 successful benthic grab samples were selected for infaunal analyses. These 25 Segment 8 stations yielded 11,970 individuals and 183 total infauna taxa from eight phyla: Annelida, Anthozoa, Arthropoda, Echinodermata, Mollusca, Nemertea, Platyhelminthes, and Sipuncula. A total of 113 taxa were identified to species level another 70 to LPIL.

5.8.5.1 | BIOMASS

Biomass was measured for 14 taxonomic classes of infauna present in the samples. Total infauna biomass for the 25 Segment 8 sampling stations was 238.5 g. The mean biomass per station was (9.5 g ±14.9 SD).

Six of the 14 classes including Bivalvia, Holothuroidea, Echinoidea, Polychaeta, Asteroidea, and Ophiuroidea collectively accounted for 96 percent of the total infauna biomass in the samples (Table 88). Spatial distribution of biomass for these classes as well as total biomass are plotted in Figure 115. Polychaeta and Malacostraca (amphipods and crustaceans) biomass was distributed uniformly across Segment 8 stations with no aggregation observed. Bivalve biomass was highest near the start (western portion) of the Segment. Echinoid biomass was clumped along the center of the Segment. Asteroidea biomass was clumped in the center and near the end (eastern portion) of Segment 8. These values were due to collection of a few large individuals. Holothuroidea and Ophiuroidea biomass were aggregated near the end of Segment 8. High Holohuroidea biomass was due to over 250 individuals collected from stations ECR-630 and ECR-634. Ophiuroidea biomass was due to counts of 7 to 26 individuals per station, where present.

Table 88 Summary Statistics for infauna biomass collected from Segment 8.

Class	Total	Percent	Mean	SD
Bivalvia	72.80	30.52	2.91	10.26
Holothuroidea	56.11	23.53	2.24	9.28
Echinoidea	29.50	12.37	1.18	5.90
Polychaeta	26.97	11.31	1.08	0.86
Asteroidea	25.46	10.67	1.02	3.54
Ophiuroidea	17.74	7.44	0.71	1.01
Malacostraca	8.51	3.57	0.34	0.28
Nemertea *incertae sedis*	0.70	0.29	0.03	0.05
Anthozoa	0.36	0.15	0.01	0.03
Oligochaeta	0.14	0.06	0.01	0.01
Gastropoda	0.10	0.04	<0.01	0.01
Aplacophora	0.07	0.03	<0.01	0.01
Sipunculidea	0.02	0.01	<0.01	<0.01
Enteropneusta	0.01	0.01	<0.01	<0.01

SD = Standard deviation

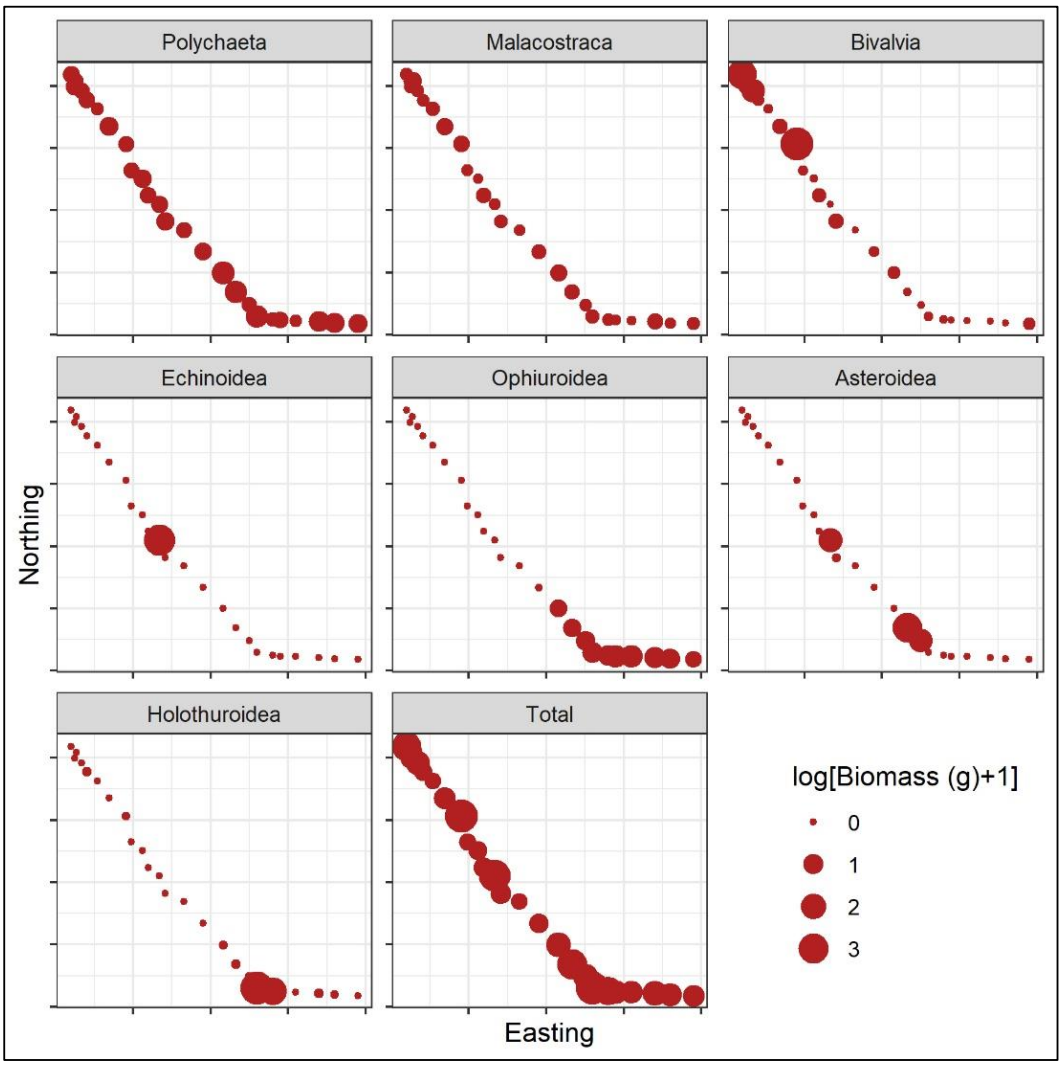


Figure 115 Biomass (g) of infauna organisms for the Classes Polychaeta, Malacostraca, Bivalvia, Echinoidea, Ophiuroidea, Asteroidea, and Holothuroidea plotted on the station positions along Segment 8.

5.8.5.2| UNIVARIATE STATISTICAL ANALYSES

Diversity indices plotted over the station positions are shown in Figure 116. The number of species per sample averaged 24.8 and ranged from 13 to 41. The Margalef's species richness (d) values ranged from 2.6 to 6.7; diversity (H') ranged from 1.87 to 2.88; Fisher's alpha ranged from 3.7 to 12.4. Evenness measured with Pielou's J was moderate across all stations averaging 0.70 ranging from 0.60 to 0.89.

The ten most abundant species sampled are shown in Table 89. These species collectively account for 62 percent of the infauna abundance recorded along Segment 8. Numerically dominant species include six polychaete annelids, three arthropods, and one mollusk.

The most abundant species, as listed in high to low order of abundance, *Ampelisca aggasszi* (amphipod crustacean), *Cossura soyeri* (polychaete worm), *Nucula proxima* (bivalve mollusk), and *Levinsenia gracilis* (polychaete worm) accounted for 39.4 percent of the 6,264 individuals. Spatial patterns of abundance for these ten taxa are shown in Figure 116.

Table 89 Numerically dominant species collected in grab samples from Segment 8.

Phylum	Taxa	Number of Individuals	Percent of Total Individuals
Arthropoda	*Ampelisca agassizi*	976	15.6
Annelida	*Cossura soyeri*	561	9.0
Mollusca	*Nucula proxima*	467	7.5
Annelida	*Levinsenia gracilis*	455	7.3
Annelida	*Goniadella gracilis*	306	4.9
Annelida	*Terebellides stroemi*	298	4.8
Arthropoda	*Byblis serrata*	257	4.1
Annelida	*Owenia fusiformis*	218	3.5
Arthropoda	*Eudorella pusilla*	210	3.4
Annelida	*Ninoe nigripes*	199	3.2

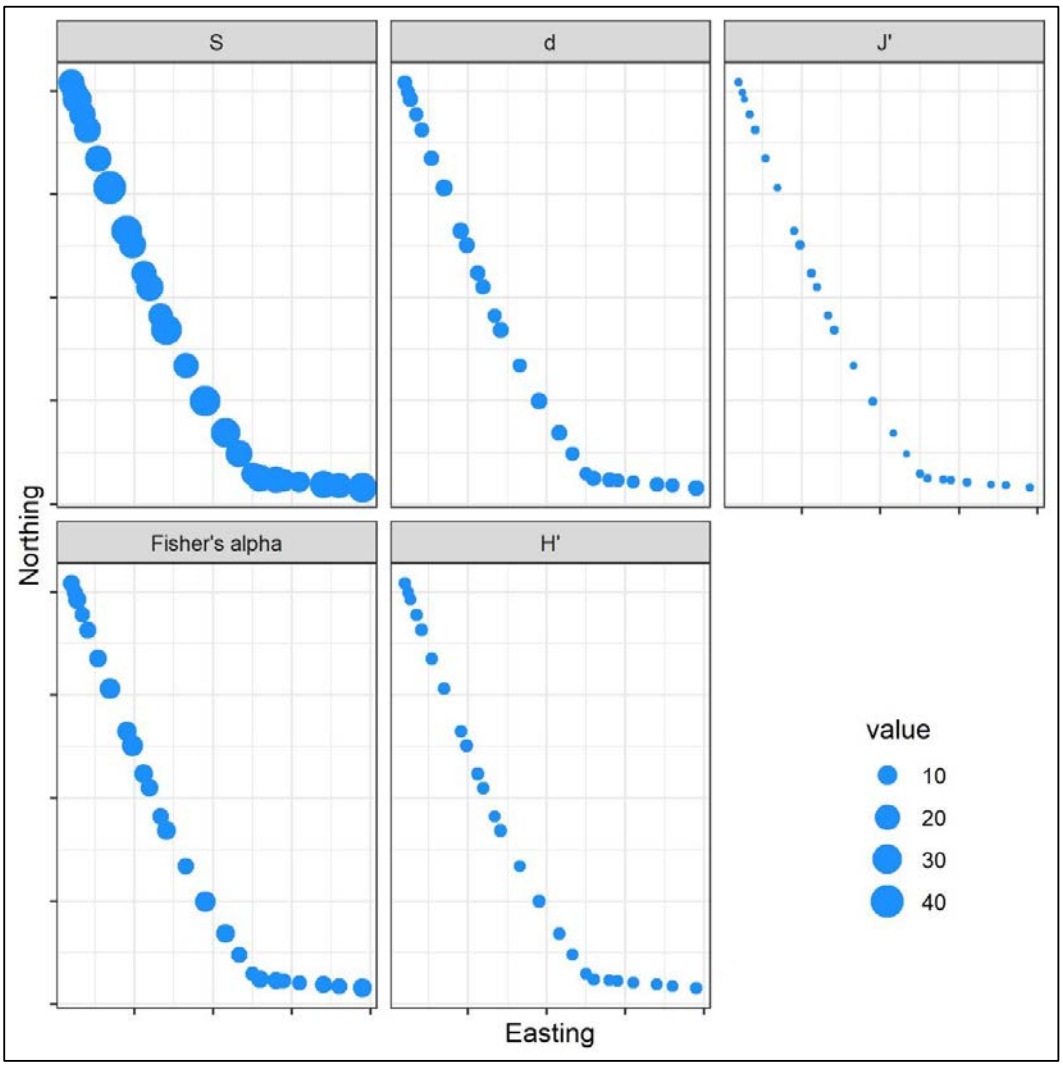


Figure 116 Number of taxa (S), Margalef's species richness (d), Fisher's alphaα, evenness (J'), and species diversity (H') plotted on the station positions along Segment 8.

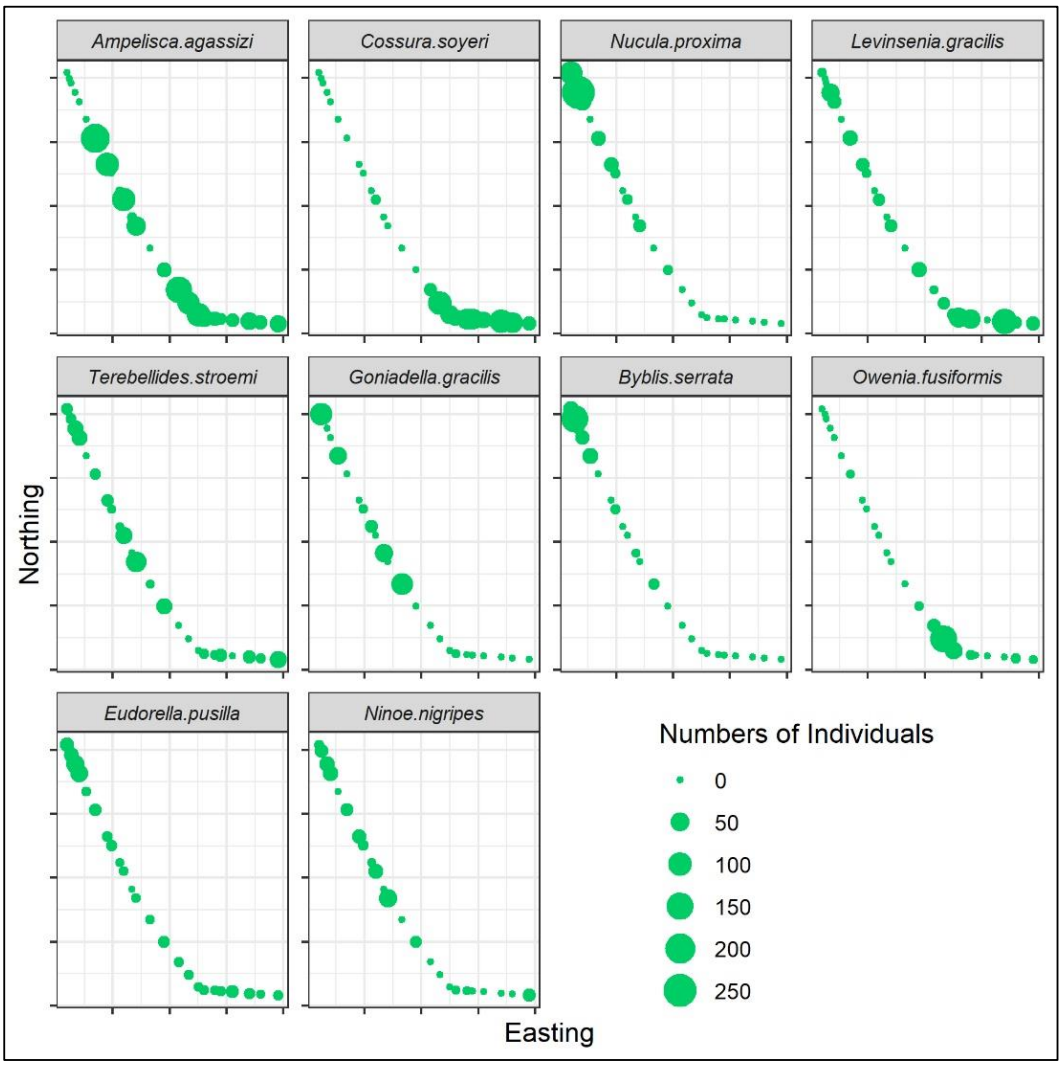


Figure 117 Number of individuals of the ten most abundant species in the samples plotted on the station positions along Segment 8.

5.8.5.3| MULTIVARIATE STATISTICAL ANALYSES

Cluster analysis coupled with the SIMPROF routine identified seven groups of stations with significantly similar species compositions (Figure 118). Groups b and c comprised six stations each; Group g had four stations, Groups a and e had three stations each. One of the groups (Group d) was a single station. The shade plot showed a stair step configuration of species with samples indicating a gradient of species composition across samples and groups.

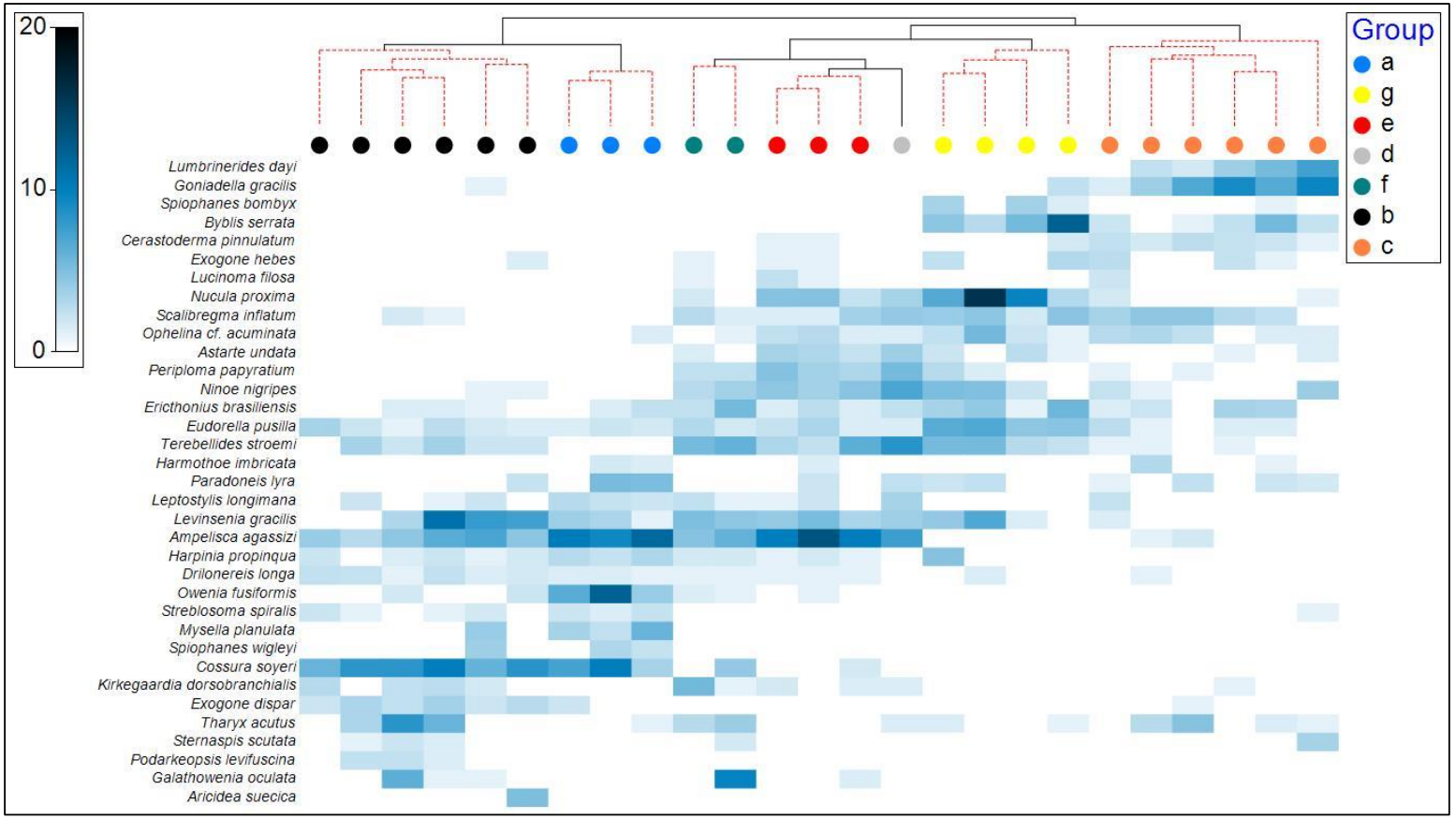


Figure 118 Results of normal cluster analysis of Segment 8 stations from Bray-Curtis similarity matrix. Statistically similar groups were determined using similarity profiles (SIMPROF) analyses. Samples (stations) are in columns and species ordered by normal and inverse cluster analyses respectively. The blue scale rectangles are abundance proportion to square root number of individuals. White rectangles indicate absence of the species in a sample. Species shown represent the 35 most abundant in the Segment 8 samples.

5.8.5.4 | ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

NMDS ordination displayed SIMPROF groups discretely (Figure 119). Vectors for percent sand and TOC extend left and right over the ordination. As indicated by the vector to the left, percent sand was statistically significant (R^2=0.77, p<0.05) and associated with Groups c, d, e, and g. Significant TOC concentrations (R^2=0.85, p<0.05) were associated with Group a and b samples. The vector for percent gravel was not statistically significant (R^2=0.0.6, p>0.05) and not associated with any of the groupings.

Cluster groups plotted on station positions illustrated patchiness in assemblage distribution (Figure 120).

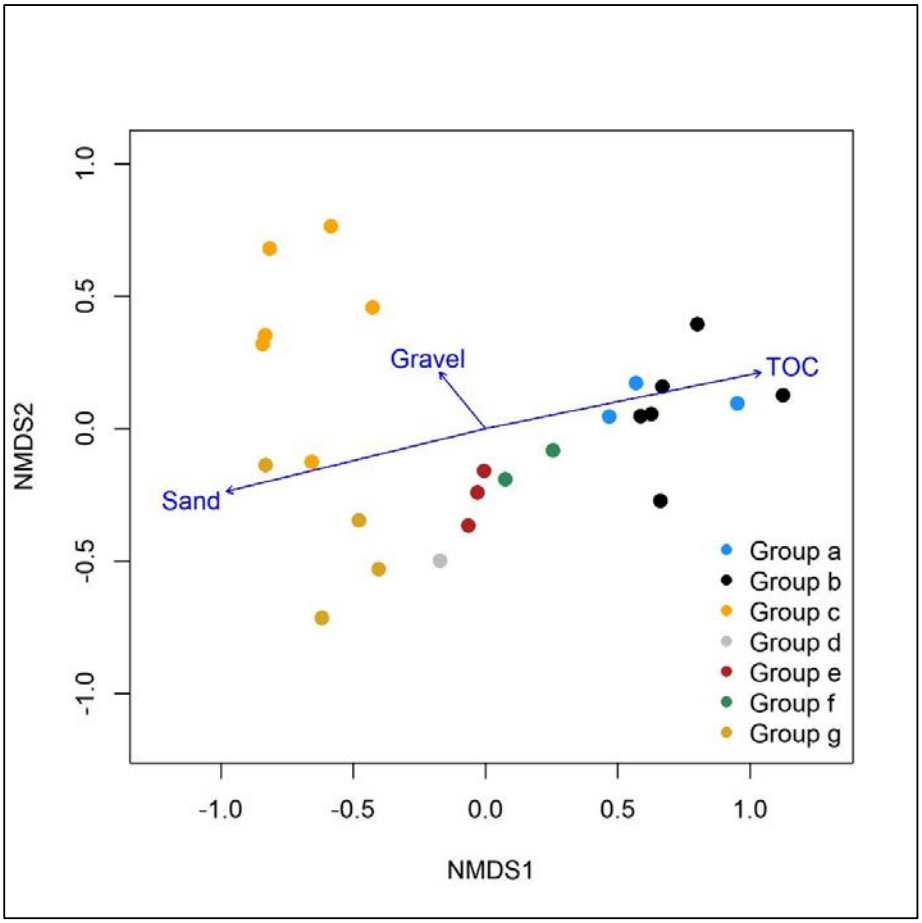


Figure 119 Non-Metric Multidimensional Scaling (NMDS) ordination plot of stations color-coded by SIMPROF groups and vectors (arrows) representing percent composition of sand and gravel; and TOC (total organic carbon) in the samples.

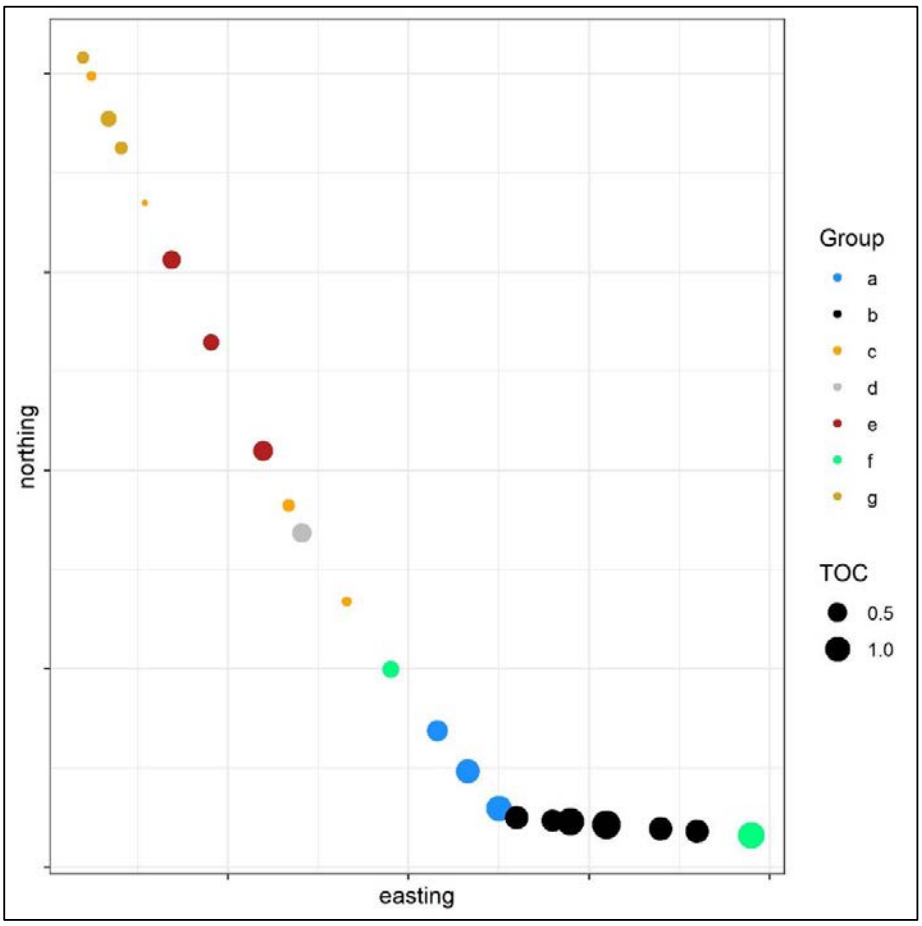


Figure 120 Cluster groups from similarity profiles analysis (SIMPROF) analyses plotted on station positions along Segment 8. The size of the symbols is proportional to total organic carbon (TOC) concentration (percent weight).

5.8.6| SPI RESULTS

SPI images were collected at a total of 93 stations for Segment 8 (stations ECR-1516, ECR-1517, ECR-515 through ECR-548, and ECR-601 through ECR-658). The results of the SPI image analysis are found in Attachment H. Selected parameters for Segment 8 are plotted in Figure 121 (grain size, penetration, and surface boundary roughness) and Figure 122 (apparent redox potential discontinuity, infauna succession, and organism sediment index).

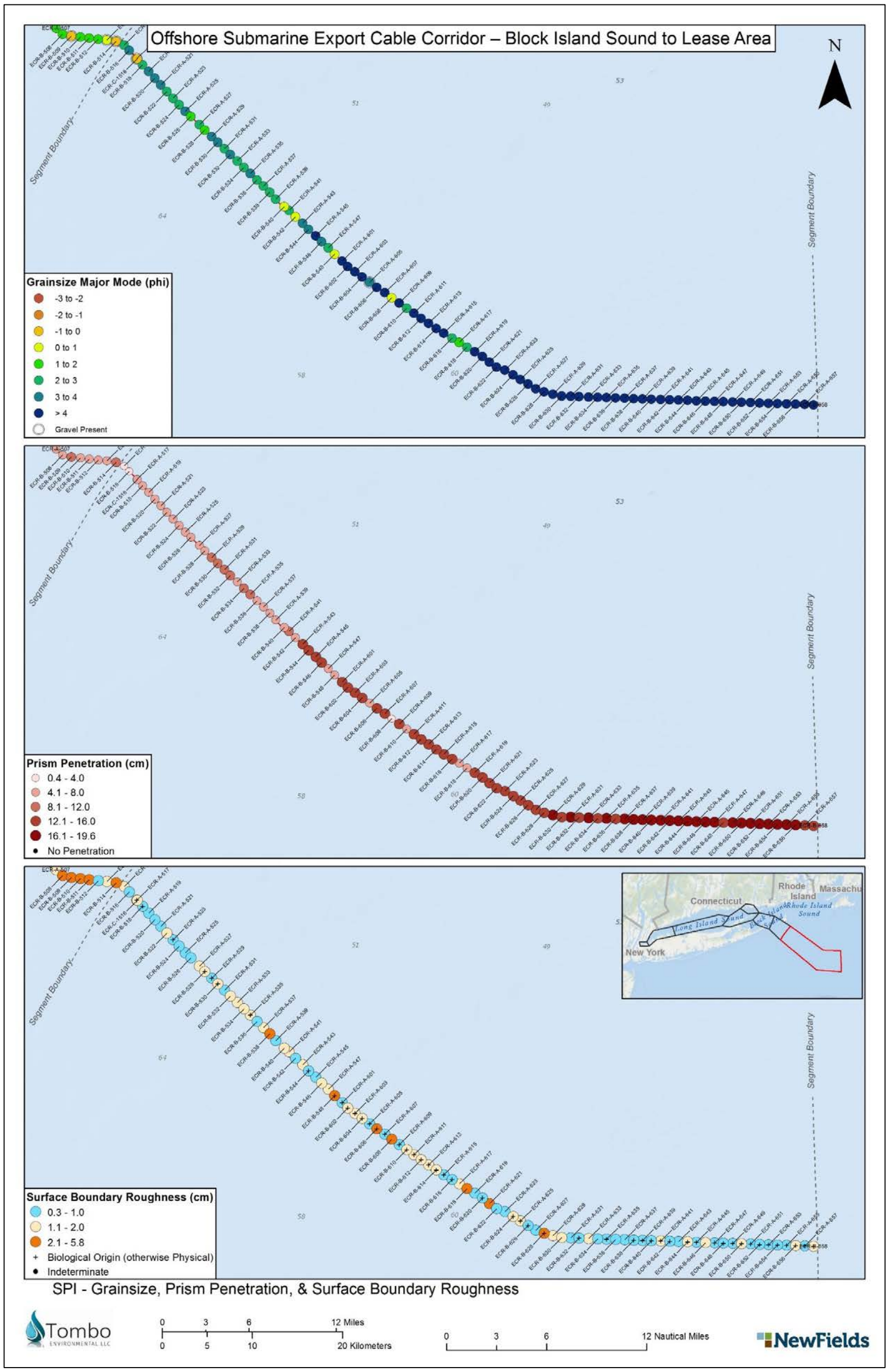


Figure 121 Sediment Profile Imaging (SPI) results for for grain size, penetration, and surface boundary roughness along Segment 8. Segment 8 stations (stations ECR-1516, ECR-1517, ECR-515 through ECR-548, and ECR-601 through ECR-658) are along the west-east corridor between Segment Boundaries.

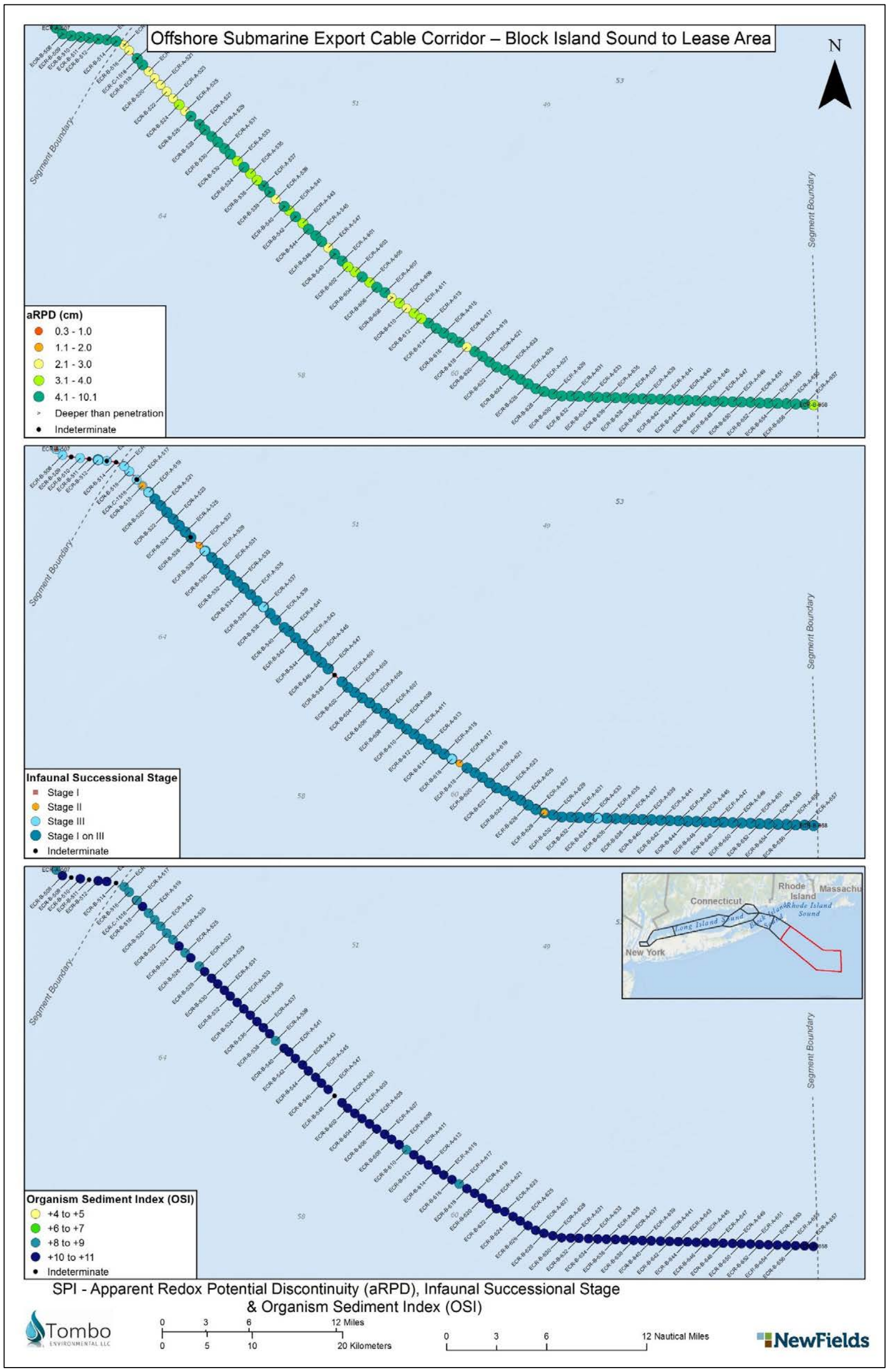
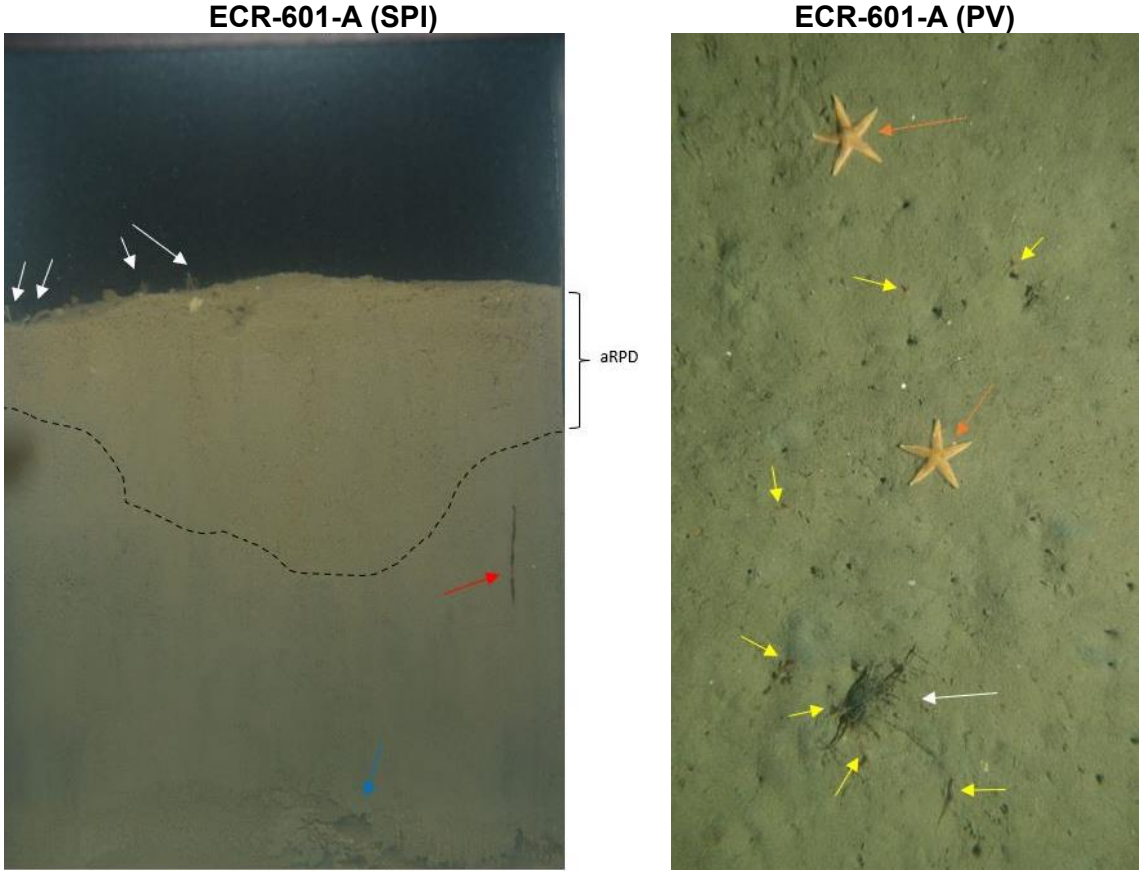


Figure 122 Sediment Profile Imaging (SPI) results for apparent redox potential discontinuity, infauna succession, and organism sediment index along Segment 8. Segment 8 stations (stations ECR-1516, ECR-1517, ECR-515 through ECR-548, and ECR-601 through ECR-658) are along the west-east corridor between Segment Boundaries.

5.8.6.1| PARTICLE SIZE MAJOR MODE AND SEDIMENT TYPE

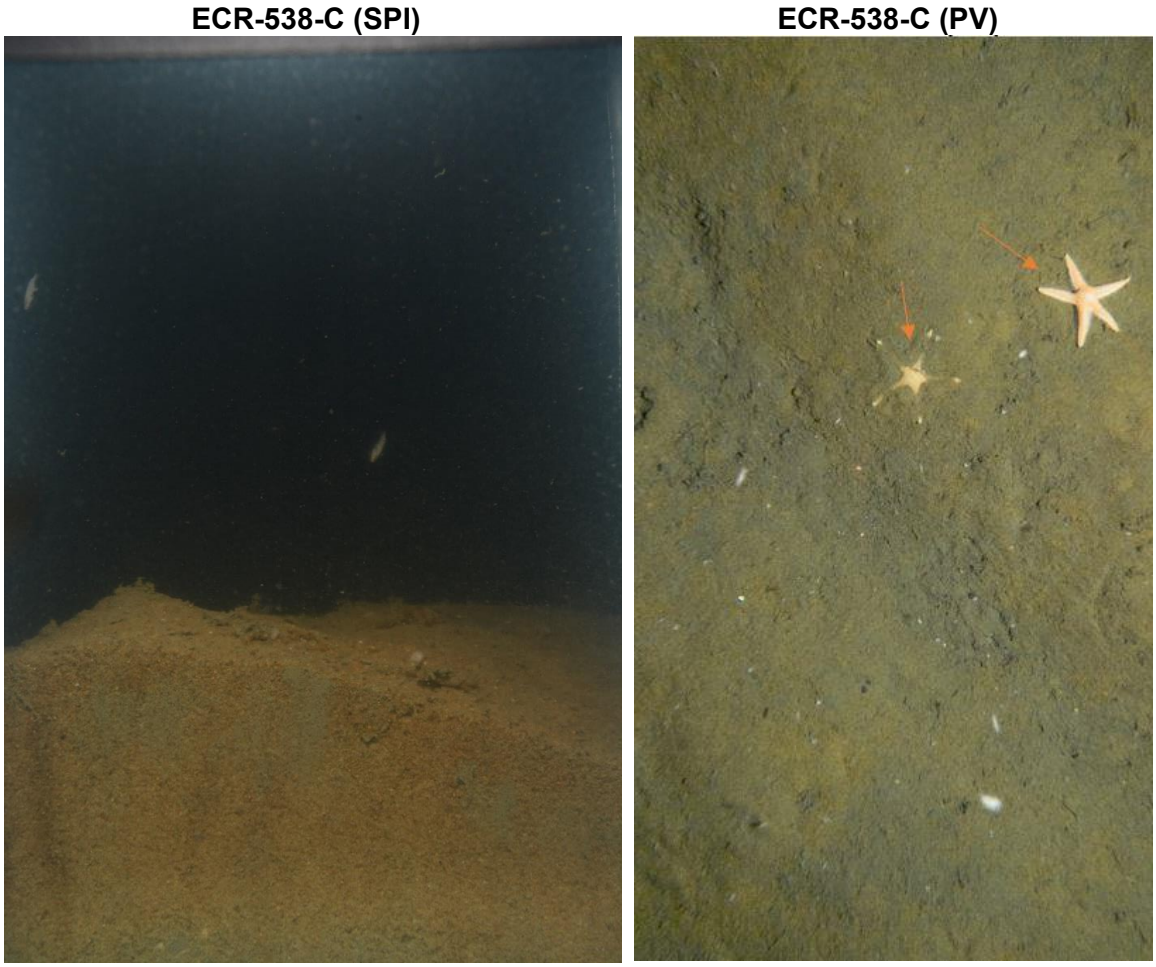
The grain size major mode (i.e., the dominant grain size) of surface sediments determined using SPI ranged from all categories of sand in the western portion of Segment 8, grading to silt and clay to the east. The predominant grain size mode in the Segment 8 was silt and clay (≥4 phi) (61 percent of SPI images) (Figure 121). Example SPI/PV images showing typical silt/clay sediments in Segment 8 are provided in Image 101.

Very fine and fine sand was present at 32 percent of the SPI replicates, primarily at locations within the northwestern portion of Segment 8. Example SPI/PV images showing fine sandy sediments in Segment 8 are provided in Image 102. Stations ECR-517, ECR-540, ECR-542, and ECR-608 had a grain size mode of coarse sand (1 to 0 phi). Station ECR-1516 showed a grain size mode of very coarse sand (0 to -1 phi).



The SPI image from station ECR-601 showed surface sediments consisting of silt/clay (≥4 phi) with Stage I surface tubes (white arrows), a polychaete (red arrow), and a large feeding void (blue arrow) at depth (Stage I on III succession). The aRPD was relatively deep (4.4 cm). The plan view (PV) image showed a muddy bottom with several small surface burrows, two sea stars (*Astropecten*; orange arrows) hydroids (white arrow) and small shrimp (yellow arrows). SPI image width = 15cm. PV image area = 0.44 m^2.

Image 101 SPI and PV Images typical silt/clay sediments from Segment 8 station ECR-601.



The SPI image from station ECR-538 showed surface sediments consisting of medium to fine sands with a rippled surface. Fecal aggregates were present on the sediment surface The PV image showed a sandy, slightly rippled surface with scattered shell particles on the surface. Two sea stars (*Astropecten*; orange arrows) were present. SPI image width = 15cm. PV image area = 0.47 m^2.

Image 102 SPI and PV Images showing fine sandy sediments from Segment 8 station ECR-538.

5.8.6.2| PRISM PENETRATION DEPTH

The distribution of Segment 8 SPI camera prism penetration (in centimeters) in surface sediments is presented in Figure 121. Mean penetration depth is the distance that the SPI camera prism penetrates the sediment providing a relative measure of sediment water content and shear strength of surface sediments. The Segment 8 camera prism penetration depths presented in Figure 121 ranged from 2.4 cm at station ECR-515 to 19 cm at station ECR-639 with a Segment average of 11.9 cm. In general, prism penetration depths followed a pattern similar to the grain size major mode with deeper prism penetration observed in silt and clay (≥4 phi) sediments and lower prism penetration observed where surface sediments consisted of sand.

5.8.6.3 | SURFACE BOUNDARY ROUGHNESS

Segment 8 mean small-scale boundary roughness values (surface relief), presented in Figure 121, ranged from 0.3 to 4.2 cm with a Segment average of 1.1 cm. The highest mean boundary roughness values (3.7 to 4.2 cm) were measured at stations ECR-538, ECR-548, and ECR-628 (Figure 121). The larger boundary roughness was due to a sloped surface, which may be related to surface ripples (physical roughness). In comparison to the other Segments, Segment 8 had a higher number of SPI images classified with biological roughness, likely due to deeper water depths and the presence of fine-grained sediments in the eastern portion of the Segment. Physical roughness was classified in 55 Segment 8 stations, and biogenic roughness classified in the other 38 Segment 8 stations.

5.8.6.4 | APPARENT REDOX POTENTIAL DISCONTINUITY DEPTH

The aRPD depth is an estimate of the depth of oxygenation in the upper sediment column and reflects the degree of biogenic or physical sediment mixing. The Segment 8 mean aRPD depths presented in Figure 122 ranged from 1.6 to 10.1 cm with a Segment average of 5.0 cm. The aRPD depths along Segment 8 were relatively deep and showed an increasing trend to the east, associated with the finer-grained silt and clay (≥4 phi) sediments.

5.8.6.5 | INFAUNAL SUCCESSIONAL STAGE

The infaunal successional stage in Segment 8 sediments was predominantly Stage III, present in 94 percent of SPI images. Stage I on III, the advanced successional stage where Stage I communities coexisting with larger head-down deposit feeding organisms (and feeding voids) was present in 83 percent of the SPI images (Figure 122).

Stage I succession only, the initial pioneering stage, was not observed in Segment 8. Stage II succession only, the transitional stage between I and III (typically showing the presence of amphipod surface tubes), was observed at five Segment 8 stations (ECR-1516, ECR-518, ECR-527, ECR-617, and ECR-628). The infaunal successional stage at station ECR-548 was indeterminate due to the presence of coarse sand and low SPI prism penetration.

5.8.6.6 | SEDIMENT OXYGEN DEMAND PROXIES

Proxies for high SOD in sediments included the presence of methane bubbles (methanogensis) and the presence of sulfate-reducing bacterial colonies. High SOD was not present in Segment 7 since potential indicators for high SOD were lacking.

5.8.6.7 | ORGANISM-SEDIMENT INDEX CALCULATION

The Segment 8 mean OSI values presented in Figure 122 were relatively high and ranged from +8 to +11. OSI values of +6 to +11 represent relatively undisturbed ambient conditions or conditions where physical disturbances have occurred but deep aRPD depths and/or Stage III communities are present. With the exception of five SPI images where OSI values were indeterminate, all OSI values in Segment 8 were +6 or higher. OSI values of +10 or +11 was measured in 78 percent of the SPI images.

5.8.7| PV RESULTS

The PV images were collected at 93 stations along Segment 8 (Figure 113). At Segment 8 stations, the PV camera was triggered at 1.6 ft (0.5 m) from the bottom due to high turbidity in the water column. Therefore, observations and descriptions of bedforms are based on a small field of view of the sea bottom with an average surface area of 0.4 m^2 (± 0.06 m^2).

5.8.7.1| BEDFORMS

Physical bedforms were observed at all 93 Segment 8 sampling stations (Attachment G-2). No bedform ripples were observed. No Biological bedforms were observed.

5.8.7.2| FLORA AND FAUNA PRESENCE

The CMECS - Biotic Component classification for observed biota and biotic indicators at Segment 8 stations are provided in Attachment G-1. PV image assessment for distribution of PVS and CMECS biotic and substrate subclasses for Segment 8 stations is shown in Figure 123. The biological assemblage observed in PV images from Segment 8 stations was not considered diverse with generally low faunal coverage. No marine macrophytes or seagrasses were observed in Segment 8. Dominant fauna observed along Segment 8 are as follows:

- Ceriantharian burrowing anemones were observed at 10 of the 93 Segment 8 sampling stations with a total of 17 individuals;
- The Sabellidae feather duster worms were observed at 16 of the 93 Segment 8 sampling stations with the highest estimated faunal cover of 40 percent at station ECR-B-614 (Image 103). There were approximately 266 individuals counted from Segment 8;
- *Sertularia* hydroids attached to shells or gravel in soft sediments, were observed at seven of the 93 Segment 8 sampling stations with a total of nine individual hydroid stalks;
- Sand dollars (*Echinarachnius parma*) were observed at three of the 93 Segment 8 sampling stations with the highest estimated faunal cover of 20 percent at station ECR-B-548 (Image 105);
- *Ampelisca* amphipod beds were observed at 56 of the 93 Segment 8 sampling stations;
- *Amphiura* bed of soft sediment brittle stars were observed at 21 of the 93 Segment 8 sampling stations;
- *Astropecten* sea star beds were observed at 71 of the 93 Segment 8 sampling stations with a total count of 230 individuals; and
- Pennatulid sea pen beds were observed at six of the 93 Segment 8 sampling stations with a total count of 9 sea pens.

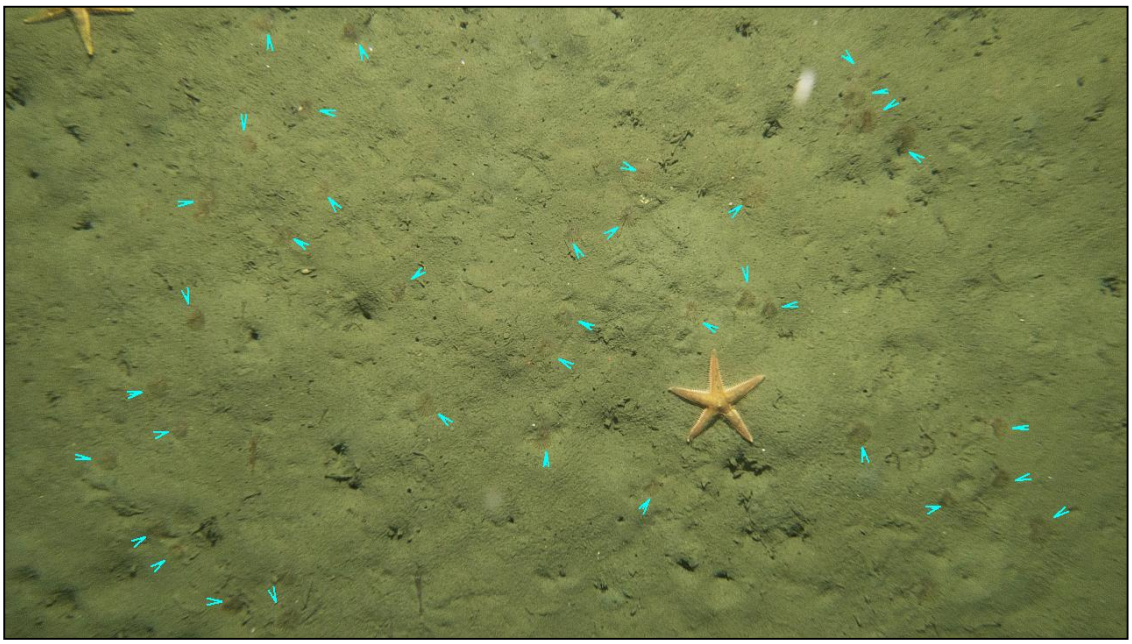


Image 103 Sabellidae feather duster worms (blue arrows) in muddy sand bottom at Segment 8 station ECR-A-603.

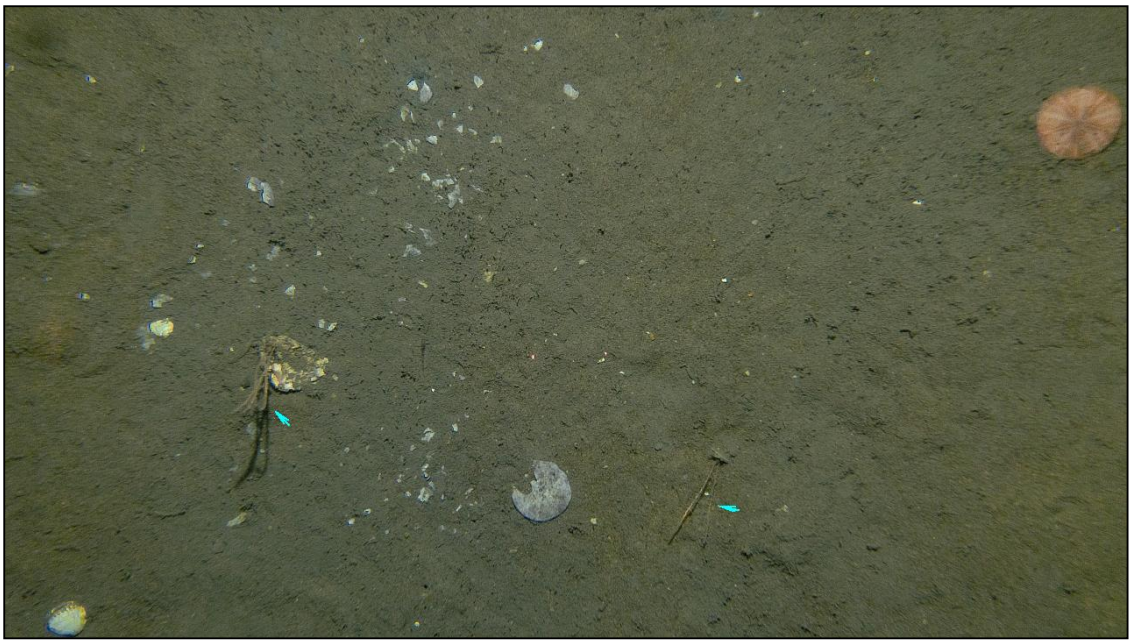


Image 104 Sertualria hydroid attached to shell fragment and a sand dollar in soft muddy sand sediment at Segment 8 station ECR-B-540.

Image 105 Bed of Echinarachnius parma with partially buried sea stars in soft muddy sand sediment at Segment 8 station ECR-B-548.

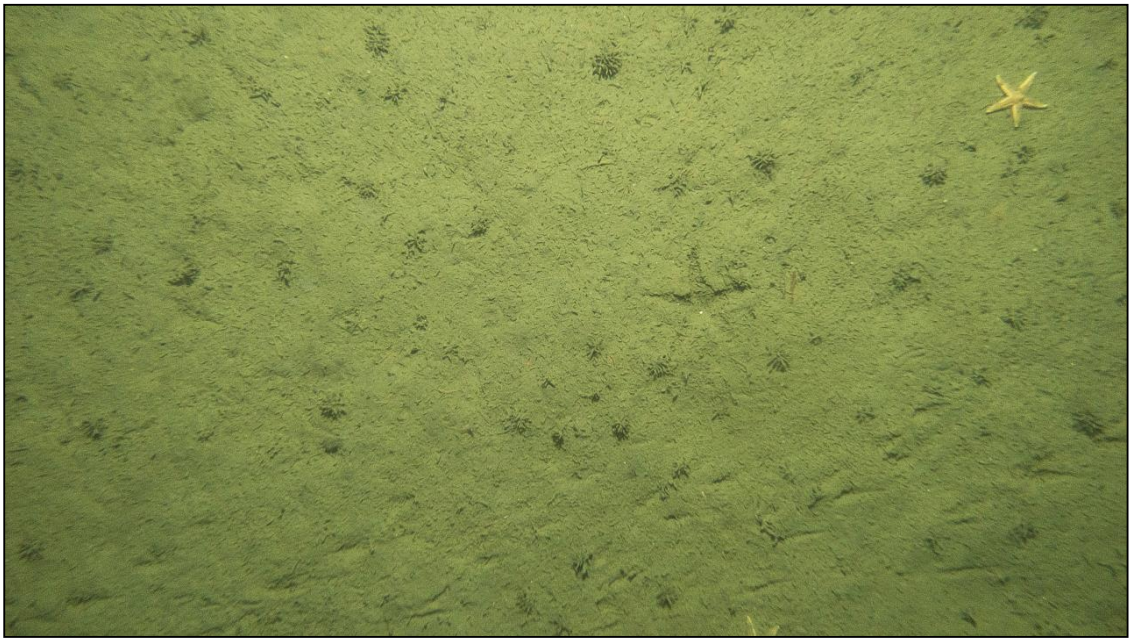


Image 106 Bed of Ampelisca amphipods with sea stars in soft muddy sand sediment at Segment 8 station ECR-A-655.

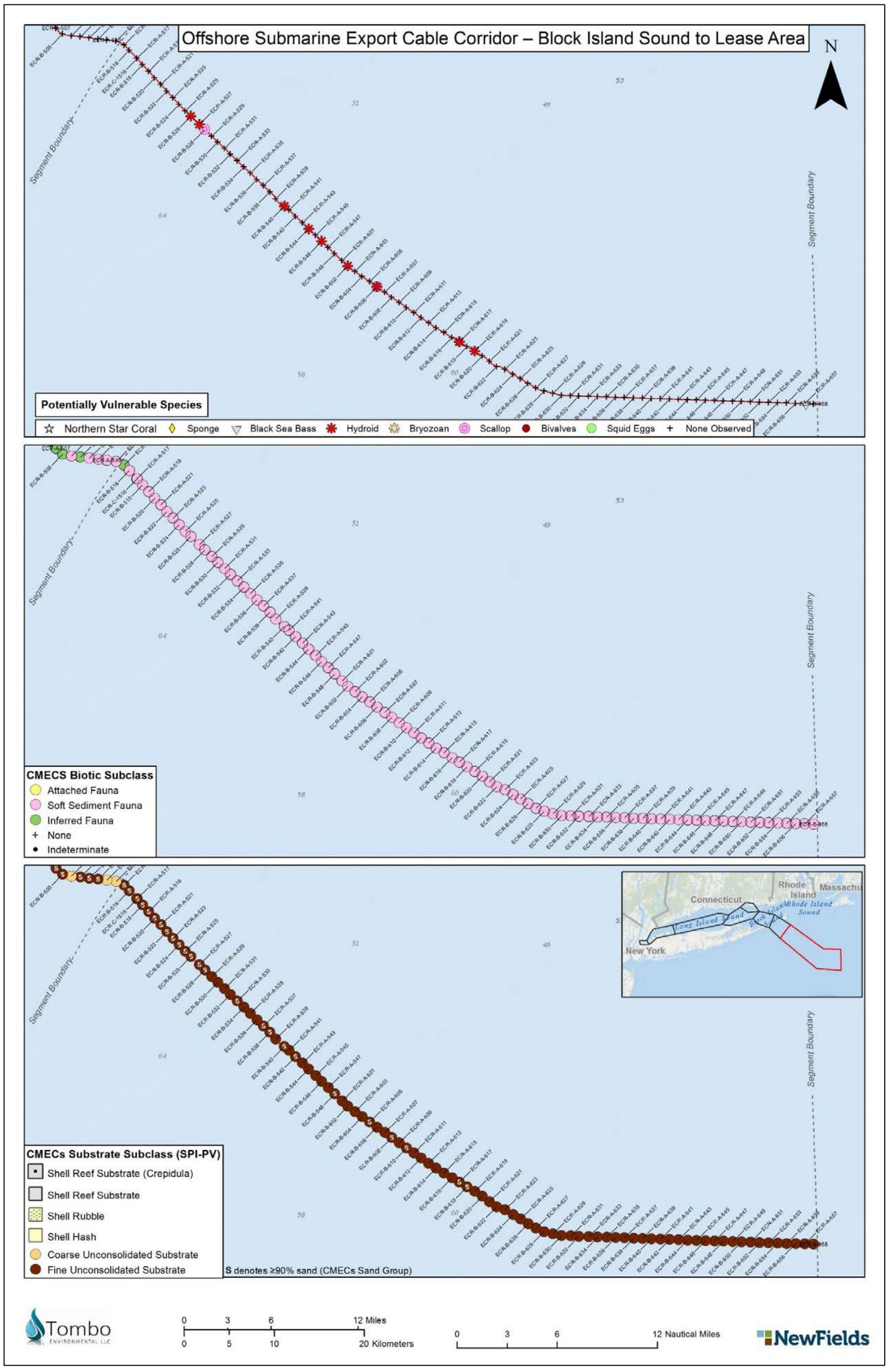


Figure 123 Plan View (PV) imaging results along Segment 8. Segment 8 stations (stations ECR-1516, ECR-1517, ECR-515 through ECR-548, and ECR-601 through ECR-658) are along the west-east corridor between Segment Boundaries.

5.8.7.3| TAXA POTENTIALLY VULNERABLE TO PROJECT IMPACTS

The PVS to project impacts observed along the entire Segment 8 included two *Placopecten magellanicus* sea scallops at station ECR-B-528 (Figure 107, Potentially Vulnerable Species panel). Additionally, one black seabass which may be considered a PVS, were observed in Segment 8. The scallop was considered as potential PVS due to their commercial importance.

Although burrowing anemones were commonly observed in Segment 8, they are not considered PVS, based on not meeting NOAA (2021) criteria of being a long-lived and habitat-forming species.

5.8.7.4| NON-NATIVE TAXA

No non-native species were observed in Segment 8.

5.8.8| CMECS CLASSIFICATIONS

5.8.8.1| CMECS GEOFORM AND BIOTIC COMPONENT FROM VIDEO

The CMECS Geoform component was derived solely from the benthic drop/tow camera system. The Tectonic Setting Subcomponent for the entirety of the submarine export cable corridor is classified as a Passive Continental Margin. For the Physiographic Setting for Segment 8 outside of Long Island Sound was classified as Continental Shelf.

The Geoform Component is used to describe aspects of the physical environment that influence and drive benthic community composition and distribution (FGDC, 2012 via Mittermayr, 2020). The Geoform Component is comprised of 2 levels defined by scale: Level 1 represents features greater than 0.4 mi^2 (1 km^2) in size and Level 2 represents features smaller than 0.4 mi^2 (1 km^2) (Mittermayr, 2020).

Segment 8 generally had a smooth seafloor topography with soft bottom substrate of geologic origin and stations were most often classified as Level 1 Flat Geoform, a general term for a level (or nearly level) surface or area marked by little to no relief and often composed of unconsolidated sediments (FGDC, 2012). The second type of Level 1 Geoform observed at several of the stations in Segment 8 were Megaripples, which consist of large, sand waves or ripple-like features having wavelengths greater than a meter or ripple heigh greater than 10 centimeters – this Geoform can be superimposed with smaller bedforms. It should be noted that the Megaripples classification, being a Level 1 Geoform classification is meant for features greater than 0.4 mi^2 (1 km^2) in size and as such the classification was based on an extrapolated observational field of view.

At the smaller scale (less than 0.4 mi^2 [1 km^2] in size), the Geoform Level 2 classification of Burrow/Bioturbation Geoform (of biogenic origin), consisting of such features as tubes, burrows, mounds, tracks and trails formed by the digging, feeding, and movement of benthic fauna was applied to every Segment 8 station. Geoform classifications for the stations within Segment 8 are summarized and illustrated in Table 90 and Figure 124.

Table 90 Geoform components based on drop/towed camera video for Segment 8.

Tectonic Setting	Physiographic Setting	Geoform Level 1	Geoform	Geofrom Level 2	Geoform	Stations
Passive Continental Margin	Continental Shelf	Geologic	Flat	Biogenic	Burrows/ Bioturbation	ECR-A-1504, ECR-A-1508, ECR-B-516, ECR-B-518 & ECR-C-1514, ECR-B-520, ECR-B-522, ECR-B-524, ECR-B-526, ECR-B-528, ECR-B-530, ECR-B-534, ECR-B-544, ECR-B-546, ECR-B-602, ECR-B-604, ECR-B-612, ECR-B-614, ECR-B-616, ECR-B-620, ECR-B-622, ECR-B-624, ECR-B-626, ECR-B-628, ECR-B-630, ECR-B-632, ECR-B-634, ECR-B-636, ECR-B-638, ECR-B-640, ECR-B-642, ECR-B-644, ECR-B-646, ECR-B-648, ECR-B-650, ECR-B-652, ECR-B-654, ECR-B-656, ECR-B-658, ECR-C-1505, ECR-C-1511, ECR-C-1512, ECR-C-1517, ECR-C-1601, ECR-C-1603
Passive Continental Margin	Continental Shelf	Geologic	Megaripples*	Biogenic	Burrows/ Bioturbation	ECR-A-1501, ECR-A-1513, ECR-A-1515, ECR-A-1604, ECR-B-532, ECR-B-536, ECR-B-538, ECR-B-540 & ERC-C-1503, ECR-B-542 & ERC-C-1502, ECR-B-548, ECR-B-606, ECR-B-608, ECR-B-610, ECR-B-618, ECR-C-1506, ECR-C-1507, ECR-C-1509, ECR-C-1510, ECR-C-1516, ECR-C-1602

*Megaripples are less than 1 km in size.

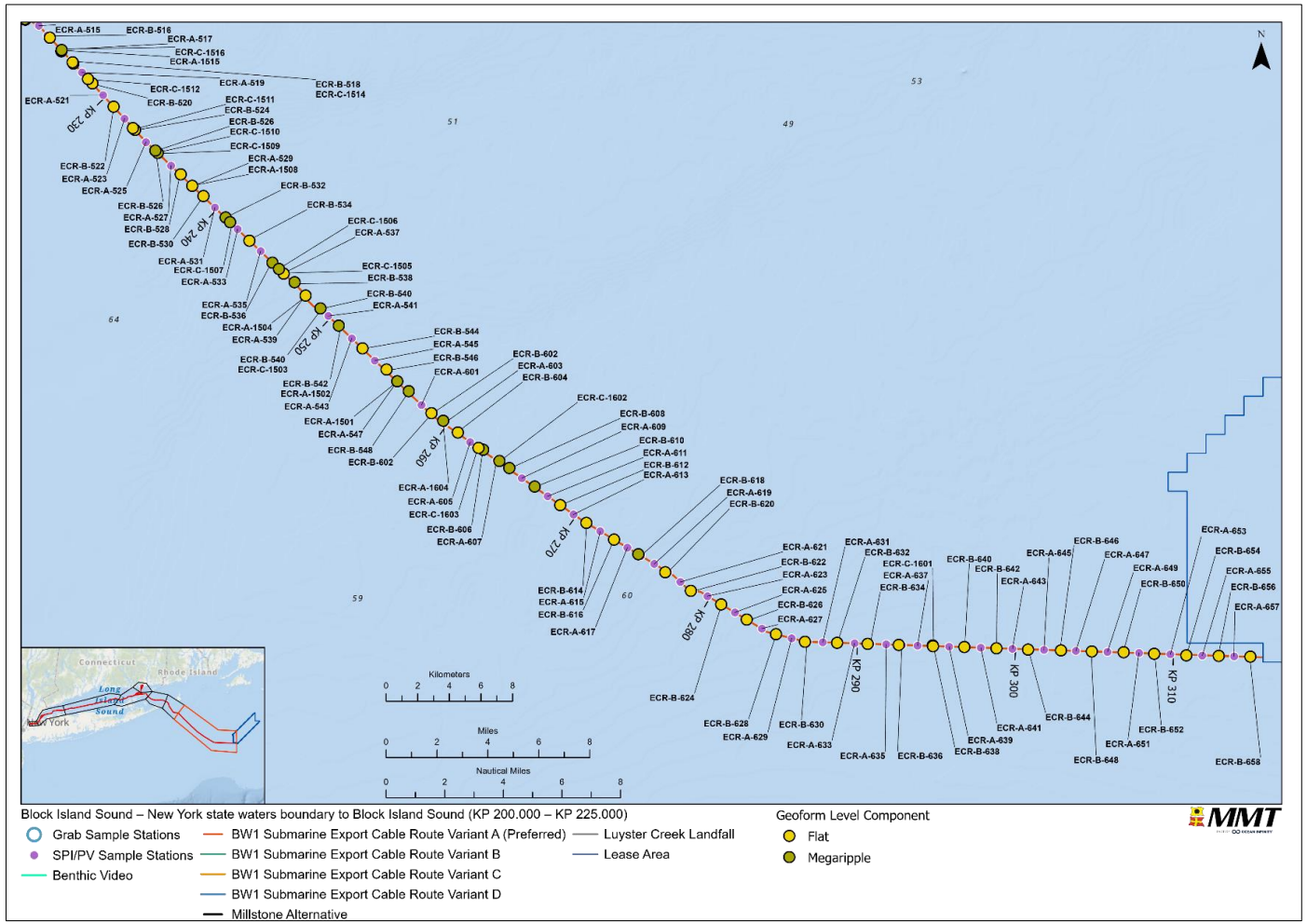


Figure 124 Overview of classified CMECS Geoform Component based on drop/towed camera video in Segment 8.

The CMECS Biotic Component was classified to the lowest practical taxonomical unit based solely on the drop/tow camera benthic video data (Table 91 and Figure 125).

The entire Offshore ECR to Lease Area Segment 8 had Biotic Setting, Biotic Class, and Biotic Subclass classifications of Benthic/Attached Biota, Faunal Bed, and Soft Sediment Fauna, respectively.

Twenty-six (26) of the 64 Segment 8 stations were further classified into the Biotic Group of Starfish Bed (based on the dominant presence of *Asterias* sp. and/or *Astropecten* spp.) and three stations into the Biotic Group Sand Dollar Bed. There did not appear to be a clear spatial distribution of these two biotic groups other than two of the three Sand Dollar Beds which were associated with Megaripple Geoforms.

Table 91 CMECS Biotic components based on towed video for Segment 8.

Biotic Setting	Biotic Class	Biotic Subclass	Biotic Group	Stations
Benthic/ Attached Biota	Faunal Bed	Soft Sediment Fauna	--	ECR-A-1501, ECR-A-1504, ECR-A-1508, ECR-A-1515, ECR-A-1604, ECR-B-516, ECR-B-526, ECR-B-528, ECR-B-530, ECR-B-532, ECR-B-534, ECR-B-536, ECR-B-542 & ECR-A-1502, ECR-B-544, ECR-B-546, ECR-B-612, ECR-B-614, ECR-B-622, ECR-B-624, ECR-B-628, ECR-B-630, ECR-B-632, ECR-B-634, ECR-B-644, ECR-B-646, ECR-B-648, ECR-B-650, ECR-B-652, ECR-C-1506, ECR-C-1509, ECR-C-1510, ECR-C-1516, ECR-C-1517, ECR-C-1602, ECR-C-1603
			Starfish Bed	ECR-A-1513, ECR-B-518 & ECR-C-1514, ECR-B-520, ECR-B-522, ECR-B-524, ECR-B-538, ECR-B-602, ECR-B-604, ECR-B-606, ECR-B-608, ECR-B-610, ECR-B-616, ECR-B-618, ECR-B-620, ECR-B-626, ECR-B-636, ECR-B-638, ECR-B-640, ECR-B-642, ECR-B-654, ECR-B-656, ECR-B-658, ECR-C-1505, ECR-C-1511, ECR-C-1512, ECR-C-1601
			Sand Dollar Bed	ECR-B-540 & ECR-A-1503, ECR-B-548, ECR-C-1507

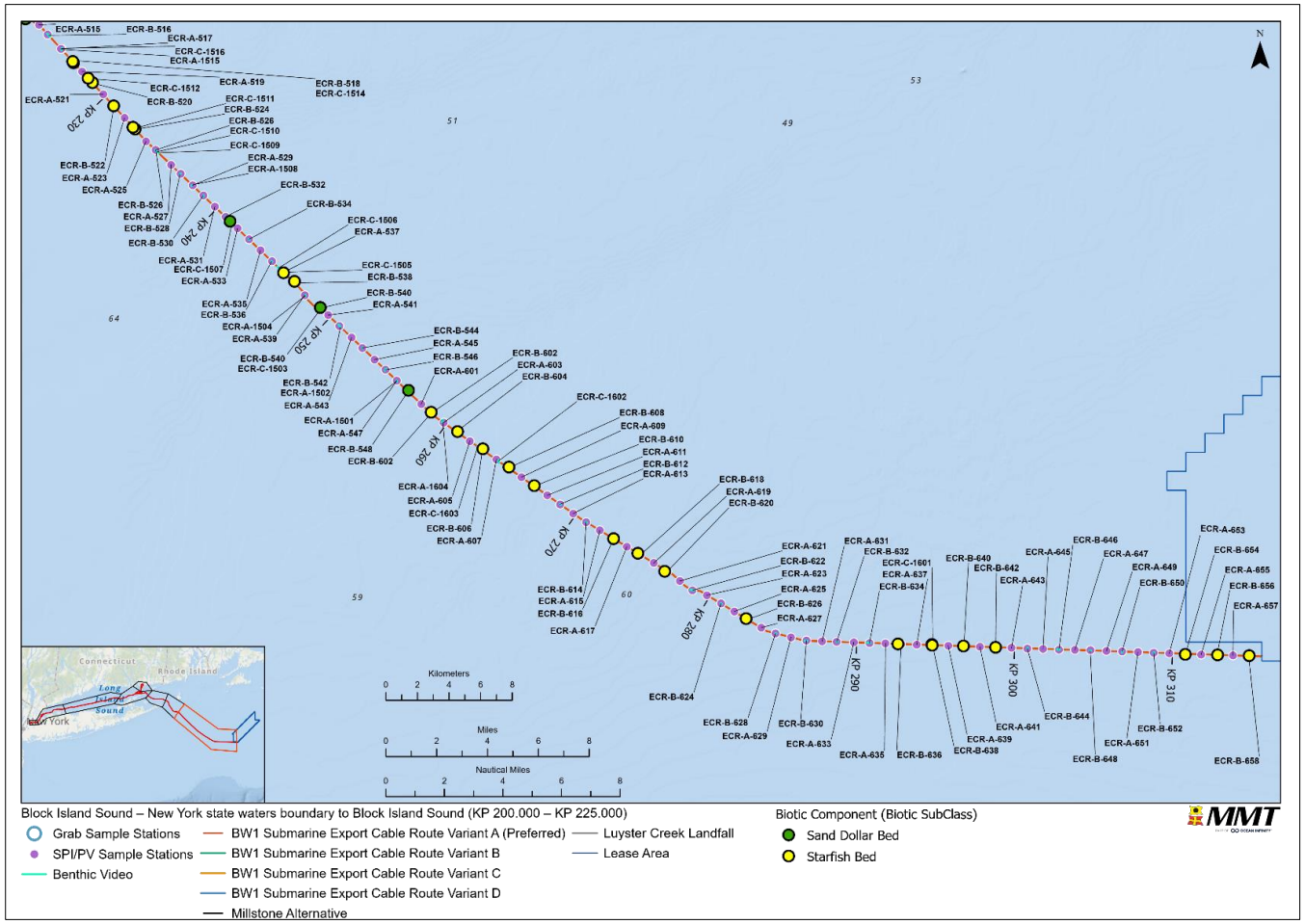


Figure 125 Overview of classified CMECS Biotic Component based on towed video Segment 8.

5.8.8.2 | CMECS AND NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM GRAB SAMPLES

Forty-seven benthic grab stations were successfully sampled along Segment 8. CMECS and NMFS-modified substrate classifications were derived from PSD results for all 47 Segment 8 stations. After a review of benthic grab content imagery, no stations were determined to consist of substantial (>50 percent) biogenic (shell) material (Image 51).

CMECS substrate component classifications for benthic grab stations sampled along Segment 8 are presented in Table 92 and shown in Figure 126. NMFS-modified CMECS substrate component classifications for benthic grab stations sampled along Segment 8 are presented in Table 93 and shown in Figure 127. Segment 8 yielded benthic grab samples which contained coarse unconsolidated and fine unconsolidated substrate types. Substrate types included Gravelly Muddy Sand, Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS), Slightly Gravelly Sand (CMECS)/Fine/Very Fine, Medium, and Coarse Sand (NMFS-modified CMECS), Slightly Gravelly Sandy Mud (CMECS)/Sandy Mud (NMFS-modified CMECS), Silty Sand (CMECS), Muddy Sand (NMFS modified CMECS) and Medium Sand (CMECS) substrates.

Ninety-eight (98) percent (46 of 47 Segment 8 stations) contained fine unconsolidated substrate (n=46), which are typically indicative of soft-bottomed habitats (NOAA Fisheries 2021). The other Segment 8 station contained coarse unconsolidated substrates, which are considered indicative of complex habitat under definitions found in NMFS' (2021) *Updated Recommendations for Mapping Fish Habitat*. The one station which yielded a sample containing coarse unconsolidated substrate (station ECR-642) was located due west of the western edge of the Lease Area. This sample had primarily pebble/granule as the gravel component.

The primary benthic grab sample and QC replicate from station ECR-B-528 were both classified as Fine Unconsolidated Substrates. However, a slight difference (1.4 percent) between the total sand component in the primary sample (ECR-B-528) and QC replicate (ECR-B-528-QC) resulted in different substrate classification at the NMFS-modified substrate group level.

The primary benthic grab sample and QC replicate from station ECR-B-620 were both classified as Muddy Sand using NMFS-modified CMECS substrate classifications. However, a slight gravel component (0.6 percent) detected in the primary sample (ECR-B-620) which was not present in the QC replicate (ECR-B-620-QC) resulted in different CMECS classifications at the substrate group level.

a. Gravelly Muddy Sand (ECR-B-642)	b. Slightly Gravelly Sand (CMECS)/Fine/Very Fine Sand (NMFS-modified CMECS; ECR-B-516)	c. Slightly Gravelly Sand (CMECS)/ Medium Sand (NMFS-modified CMECS; ECR-B-608)
d. Slightly Gravelly Sand (CMECS)/Very Course/Coarse Sand (NMFS-modified CMECS; ECR-C-1516)	e. Slightly Gravelly Muddy Sand (CMECS)/Muddy Sand (NMFS-modified CMECS; ECR-B-620) QC replicate: Silty Sand (CMECS), Muddy Sand (NMFS modified CMECS)	f. Medium Sand (CMECS; ECR-B-518)

Image 107 Grab content images showing representative substrate types encountered at benthic grab sampling stations along Segment 8. Representative images for substrate types Slightly Gravelly Sand (CMECS)/Muddy Sand (NMFS-modified CMECS) and Slightly Gravelly Sandy Mud (CMECS)/Sandy Mud (NMFS-modified CMECS) are excluded from this image since previous sections provided representative grab content images).

Table 92 CMECS substrate component classifications for benthic grab stations sampled at benthic grab sampling stations along Segment 8. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-642	Geologic	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
ECR-B-520	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-522	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-524	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-530	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-532	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-534	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-536	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-538	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-540	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-542	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-544	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-546	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-602	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-604	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-606	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-612	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-614	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-618	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-620	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-620-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	Silty Sand

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-622	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-624	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-626	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-630	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-632	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-634	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-652	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-654	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-656	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-658	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Muddy Sand
ECR-B-516	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-526	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-528	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-528-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-548	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-548-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-608	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-610	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-616	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-646	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-C-1516	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sand
ECR-B-628	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-636	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-638	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud

Station	Coastal and Marine Ecological Classification Standard				
	Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
ECR-B-640	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-640-QC	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-644	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-648	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-650	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Slightly Gravelly	Slightly Gravelly Sandy Mud
ECR-B-518	Geologic	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand

N/A: Not Applicable; QC: Quality Control.

Table 93 NMFS-modified CMECS substrate component classifications for benthic grab stations at benthic grab sampling stations along Segment 8. Substrate classifications are grouped by substrate origin/class or subclass separated by grey bars.

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-642	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	Granule
ECR-B-520	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-522	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-524	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-530	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-532	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-534	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-536	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-538	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-540	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-542	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-544	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-546	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-602	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-604	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-606	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-612	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-614	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-618	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-620	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-620-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-622	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-624	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-626	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-630	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-632	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-634	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-652	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-654	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-656	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-658	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-516	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	N/A

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-526	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-528	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-528-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	N/A
ECR-B-548	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-548-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-608	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-610	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A
ECR-B-616	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-B-646	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	N/A	N/A
ECR-C-1516	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	N/A
ECR-B-628	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-636	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-638	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-640	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-640-QC	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-644	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-648	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A

Station	NMFS-modified Coastal and Marine Ecological Classification Standard				
	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup	Gravel Component
ECR-B-650	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	N/A	N/A
ECR-B-518	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	N/A

N/A: Not Applicable; QC: Quality Control.

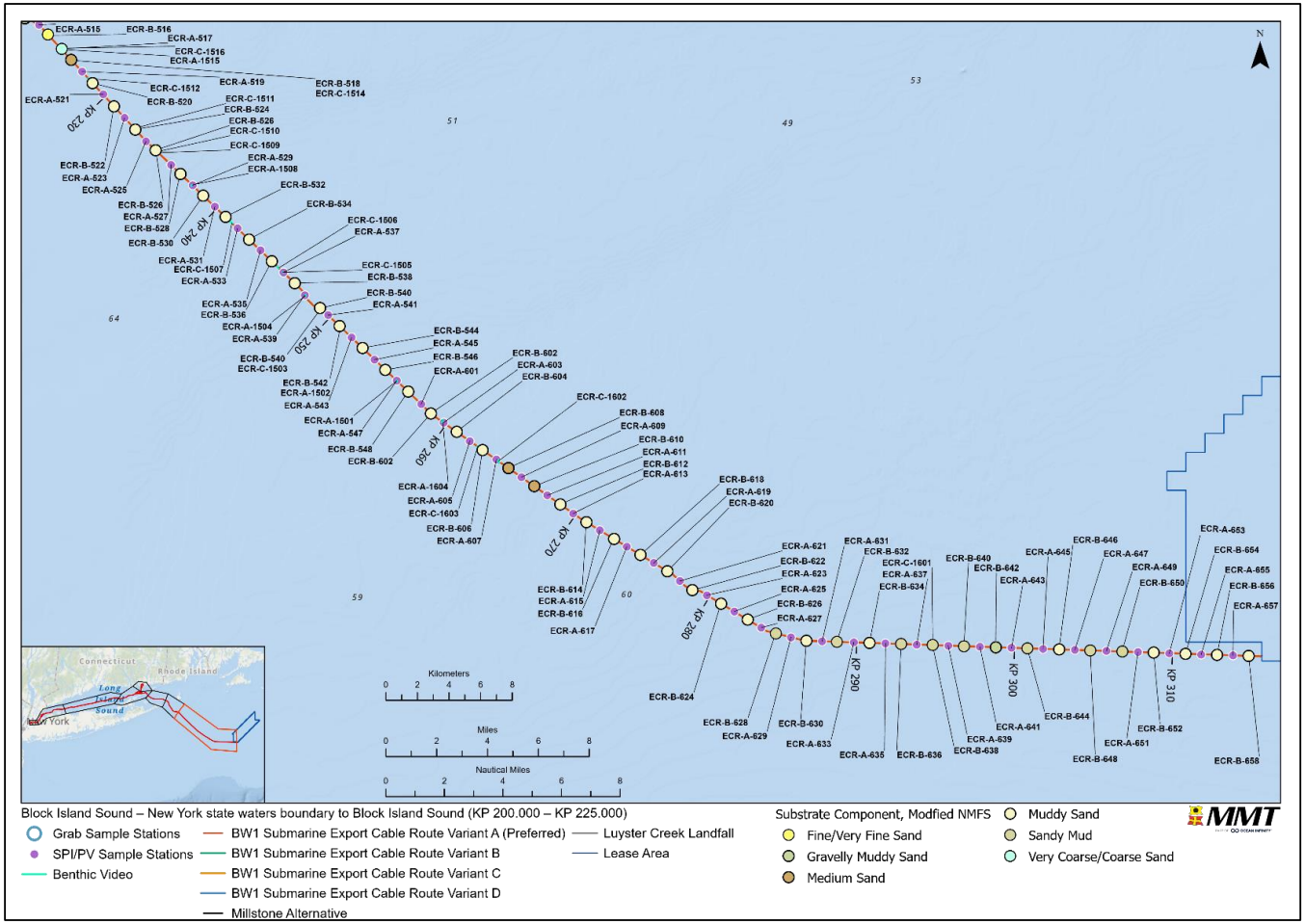


Figure 126 CMECS substrate component classifications for benthic grab stations at benthic grab sampling stations along Segment 8.

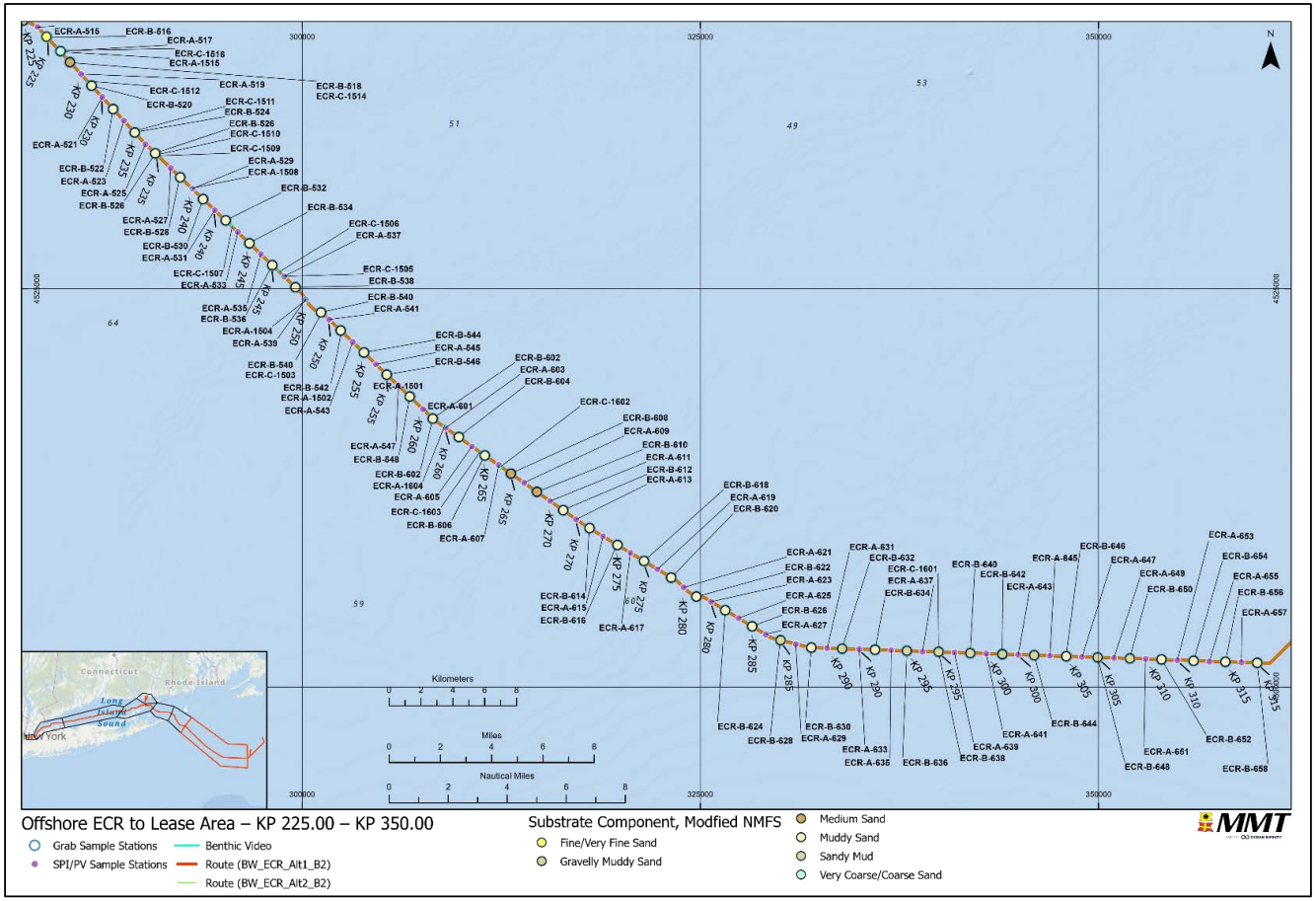


Figure 127 NMFS-modified CMECS substrate component classifications for benthic grab stations along Segment 8.

5.8.8.3| NMFS-MODIFIED CMECS SUBSTRATE COMPONENTS FROM SPI/PV

NMFS-Modified CMECS Substrate Components from SPI/PV were classified by reviewing all SPI and PV images for the best imagery to select the classifications (Attachment K). Segment 8 was composed of 100 percent CMECS Unconsolidated Mineral Substrate (Table 94).

CMECS Fine Unconsolidated Substrate subclass type, mostly sandy mud (57 percent), with sand and muddy sand, was observed at all 93 Segment 8 stations (Figure 123, CMECS Substrate Subclass panel and Table 94).

Table 94 NMFS-Modified CMECS Substrate Component from Sediment Profile Imaging (SPI) and Plan View (PV) imaging along Segment 8.

Class			Subclass			Group			Subgroup		
Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations	Type	# Stations	Percent of Stations
Unconsolidated Mineral Substrate	93	100%	Fine Unconsolidated Substrate	93	100%	Sand	26	28%	Fine/Very Fine Sand	17	18%
									Medium Sand	3	3%
									Very Coarse/Coarse Sand	6	6%
						Muddy Sand	14	15%	--	14	15%
						Sandy Mud	53	57%	--	53	57%
						Mud	0	0%	--	--	--
			Coarse Unconsolidated Substrate	0	0%	Gravels	0	0%	Boulder	0	0%
									Cobble	0	0%
									Pebble/Granule	0	0%
									Gravel Pavement	0	0%
						Gravel Mixes	0	0%	Sandy Gravel	0	0%
									Muddy Sandy Gravel	0	0%
									Muddy Gravel	0	0%
						Gravelly	0	0%	Gravelly Sand	0	0%
									Gravelly Muddy Sand	0	0%
									Gravelly Mud	0	0%
Shell Substrate	0	0%	Shell Reef Substrate	0	0%	Crepidula Reef Substrate	0	0%	--	--	--
									--	--	--
			Shell Rubble	0	0%	--	0	0%	--	--	--
			Shell Hash	0	0%	--	0	0%	--	--	--

5.8.8.4| CMECS BIOTIC COMPONENT FROM PV IMAGES

The CMECS Subclass Soft Sediment Fauna biotic component was observed and mapped as the dominant biota grouping at 92 of the 93 Segment 8 stations (Figure 107, CMECS Biotic Subclass panel) (Attachment G-1). The Soft Sediment Fauna component included Ceriantharian burrowing anemone beds, Sabellidae beds, *Sertularia* beds, *Crepidula* beds, *Echinarachnius* sand dollar beds, Pennatulid beds, *Ampelisca* beds, *Amphiura* beds, and *Astropecten* sea star beds (Attachment G-1).

No CMECS Subclass Attached Fauna biotic component was observed in Segment 8.

The CMECS Subclass Inferred Fauna biotic component was observed and mapped as the dominant biota grouping at one of the 93 Segment 8 stations (Figure 107, CMECS Biotic Subclass panel) (Attachment G-1) included the Inferred Fauna groups decapod tracks and gastropod trails.

No CMECS Class Aquatic Vegetation was observed in Segment 8.

6| DISCUSSION

6.1| POTENTIAL ECOSYSTEM SERVICES

Ecosystem services are the results of ecosystem processes and functions that benefit humans. Soft bottom environments produce a variety of ecosystem services through the collective actions of individual organisms interacting with their soft-bottom environment. For infauna, these actions include feeding, moving, tube construction, burrowing, filtering, excretions, shell formation, and growth. Despite their unstructured appearance, marine sedimentary ecosystems support a high diversity of invertebrates many of which live within the sediments (infauna) or on sediment surface (epifauna). Samples collected along the submarine export cable corridor revealed over 300 infaunal taxa from 11 invertebrate phyla (Section **5**). Video surveys documented the presence of larger, motile epifauna such as sea stars, sand dollars, sea scallops, clams, crabs, lobsters, and demersal fishes (Section 5).

Potential ecosystem services produced by soft bottom species of the submarine export cable corridor include 1) food (for human consumption) production; 2) carbon and nutrient cycling; and 3) sediment stability (Snelgrove, 1999; Snelgrove et al 2014).

Food Production

Primary production in subtidal benthic environments is often low to non-existent, but secondary production is generally high which leads to a complex of consumers and decomposers. Some benthic organisms provide food for human consumption as they are harvested directly. In the submarine export cable corridor, several harvested species including winter and summer flounders, black seabass, scup, sea scallops, hard clams, crabs, and lobsters were observed. Many of these fishery species feed on infauna and epifauna which form complex food web linkages (Byron and Link, 2010; Garrison and Link, 2002). Through these linkages, infaunal organisms nourish harvested species populations and indirectly support fisheries as requisite forage prey. Soft bottom habitats support various life history stages for harvested species.

Carbon and Nutrient Cycling

The food web processes discussed above also provide regulating services processing organic wastes input from inland areas or the overlying water column. Deposit feeders consume and process organic carbon and detritus burying (sequestering) much of it below the sediment surface.

Sediment Stability and Transport

Deposit feeding infauna continuously rework sediments and can increase water content, regulate pH, and oxygenate surficial sediments (Waldbusser et al., 2004). Biofilms and mucous excretion can bind sediments and reduce erosion in a low current area such as the western and central Long Island Sound. These sediment binding processes are less likely to be important in eastern Long Island Sound and on the inner continental shelf where current flows are relatively high.

6.2| ENVIRONMENTAL INFLUENCE ON INFAUNAL COMMUNITIES

Sediment grain size and organic content are physicochemical factors that influence assemblage composition for some, but not all of the submarine export cable corridor samples. Most Segments had sedimentary factors statistically correlated (see Sections 5.1.5.4, 5.2.5.4, 5.3.5.4, 5.4.5.4, and 5.8.5,4) with assemblage composition. Certainly, factors other than grain size composition or TOC content may affect assemblage structure (e.g., Snelgrove and Butman, 1994). Dynamics of individual species as well as entire

assemblages across habitat patches can be complex and will depend on the life histories and demographics of species involved, as well as the season of sampling (e.g., Zajac and Whitlatch 1991). Such factors, although not always clearly defined are important in understanding the role disturbance (natural or man-induced) plays in assemblage dynamics. Ultimately, the submarine export cable corridor route is within a highly urbanized seascape with a range of factors (shipping, fishing, aquaculture) affecting biotic communities and their species populations (Todd et al., 2019).

Infauna samples collected in along the export cable corridor Segments were primarily composed of polychaete worms, crustaceans, bivalves, and gastropods, as expected. A total of 128 grab samples taken along the ECR yielded 352 taxa, 224 (64%) of which were identified to species. These species were represented by eleven phyla. A total of 27,786 (32,821) individuals weighing 1,308 g were collected. The data set included the following phyla arranged in descending order by total abundance: Annelida, Mollusca, Arthropoda, Echinodermata, Nemertea, Cnidaria, Sipuncula, Chordata, Platyhelminthes, Hemichordata, and Phoronida.

6.3| GENERAL SUMMARY

The intent of this benthic survey report was to document and characterize seafloor habitats along the submarine export cable corridor and provide information needed to understand the resources at risk from the Beacon Wind Project. The resultant findings of the benthic study indicate the area is dominated by soft-bottom habitat that was locally variable concerning physical features, sediment composition (i.e., particle size distribution), and biological community composition. All observed habitats are regionally ubiquitous, and none would be considered unique based on components of associated biological assemblages. Based on survey findings, the area did not support any consolidated hardbottom substrates, seagrass communities, or commercially viable biotal aggregations (e.g., dense scallop beds). The primary PVS to project impacts of consideration, as based on meeting NOAA (2021) criteria of being a long-lived and habitat-forming species, was limited to the northern star coral, *Astrangia poculata*, that has a regionally wide distribution, is not considered to be a reef-building coral and is listed by the International Union for Conservation of Nature as a coral of “least concern”. The benthic study has met with the objective for seafloor habitat characterization and analyses of data to provide outputs in support of identifying potential resources at risk from proposed project activities.

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ATTACHMENT A BENTHIC SAMPLE POSITION LIST

ATTACHMENT B BENTHIC FIELD SAMPLING LOG

ATTACHMENT C BENTHIC SEDIMENT SAMPLING ANALYSIS RESULTS - LABORATORY REPORTS

ATTACHMENT D BENTHIC INFAUNA ANALYSIS RESULTS - LABORATORY REPORTS

ATTACHMENT E SPI AND PV FIELD COLLECTION FORMS

ATTACHMENT F SPI IMAGE ANALYSES RESULTS

ATTACHMENT G PV IMAGE ANALYSES RESULTS

ATTACHMENT H SPI AND PV IMAGES CATALOG

ATTACHMENT I CMECS GEOFORM AND BIOTIC FROM VIDEO

ATTACHMENT J CMECS SUBSTRATE FROM BENTHIC GRAB

ATTACHMENT K CMECS SUBSTRATE FROM SPI AND PV

ATTACHMENT L GIS DATA DELIVERABLES

ATTACHMENT A BENTHIC SAMPLE POSITION LIST

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment A - Benthic Sample Position List - Benthic Video

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
1	ECR-A-101-A	2021-11-04	85871.39	4527267.35	10:13	85880.96	4527261.92	10:18	Nearshore Dolphin
1	ECR-B-102	2021-11-03	86471.33	4527824.65	12:00	86440.06	4527821.92	12:07	Nearshore Dolphin
1	ECR-B-104	2021-11-03	88409.11	4527741.50	11:22	88293.78	4527794.47	11:29	Nearshore Dolphin
1	ECR-B-106	2021-11-03	90304.73	4527630.70	10:26	90289.91	4527654.03	10:31	Nearshore Dolphin
1	ECR-B-108	2021-11-03	92174.13	4527769.22	9:43	92109.09	4527743.93	9:50	Nearshore Dolphin
1	ECR-B-110	2021-09-18	93971.02	4527872.85	10:04	93989.06	4527877.83	10:09	
1	ECR-C-1107	2021-11-03	92473.08	4527876.40	9:58	92525.46	4527862.95	10:04	Nearshore Dolphin
1	ECR-C-1108	2021-11-03	87929.72	4527942.07	11:36	87905.63	4527958.71	11:45	Nearshore Dolphin
1	ECR-C-1110	2021-11-03	88798.20	4527666.45	11:06	88759.98	4527664.30	11:13	Nearshore Dolphin
1	ECR-C-1113	2021-09-18	93041.99	4528218.73	12:36	93090.28	4528233.84	12:57	
1	ECR-B-1150	2021-11-03	86358.78	4527694.30	12:33	86374.87	4527674.81	12:43	Nearshore Dolphin
1	ECR-B-1151	2021-11-03	86377.24	4527503.47	12:48	86393.97	4527495.29	12:55	Nearshore Dolphin
1	ECR-B-1152	2021-11-03	86484.16	4527338.53	13:00	86495.62	4527329.05	13:06	Nearshore Dolphin
1	ECR-B-1153	2021-11-03	86598.74	4527180.26	13:10	86589.79	4527163.87	13:17	Nearshore Dolphin
1	ECR-B-1154	2021-11-03	86736.72	4526960.81	13:22	86748.68	4526962.15	13:30	Nearshore Dolphin
1	ECR-B-1155	2021-11-03	86857.66	4526662.69	13:46	86881.79	4526651.11	13:52	Nearshore Dolphin
1	ECR-B-1156	2021-11-03	86848.34	4526352.72	13:57	86871.88	4526359.74	14:05	Nearshore Dolphin
1	ECR-B-1157	2021-11-03	86670.52	4526824.97	13:34	86668.74	4526790.84	13:41	Nearshore Dolphin
1	ECR-B-1158	2021-11-04	85995.02	4527432.52	11:34	86011.72	4527428.07	11:42	Nearshore Dolphin
2	ECR-B-112	2021-09-18	96241.48	4527601.69	7:39	96227.53	4527593.64	7:44	
2	ECR-B-114	2021-09-18	96836.76	4529273.98	4:26	96835.66	4529257.12	4:31	
2	ECR-B-116	2021-09-18	97693.58	4531009.63	0:34	97670.86	4530985.14	0:40	
2	ECR-B-118	2021-09-17	98865.67	4532581.25	21:25	98865.67	4532581.25	21:36	
2	ECR-B-120	2021-09-17	99868.72	4534408.69	16:23	99905.88	4534403.31	16:37	
2	ECR-A-121	2021-09-17	100311.40	4535090.66	14:35	100275.63	4535159.10	15:20	
2	ECR-B-122	2021-09-17	101415.13	4535784.06	12:29	101538.32	4535718.88	12:59	
2	ECR-B-124	2021-09-17	102776.41	4537513.23	9:35	102793.02	4537536.17	9:40	
2	ECR-B-126	2021-09-17	104271.27	4538796.38	7:26	104303.77	4538812.95	7:32	
2	ECR-B-128	2021-09-17	106082.81	4539678.78	4:30	106103.94	4539738.50	4:42	
2	ECR-B-130	2021-09-17	107751.35	4540161.95	2:27	107751.35	4540161.95	2:32	
2	ECR-B-132	2021-09-16	109690.68	4540586.65	23:28	109702.43	4540530.88	23:43	
2	ECR-B-134	2021-09-16	111646.86	4540907.62	20:20	111685.91	4540904.83	20:47	
2	ECR-B-136	2021-09-16	113657.67	4541255.23	17:32	113657.67	4541255.23	17:43	
2	ECR-B-138	2021-09-16	115437.61	4542079.02	14:24	115425.54	4542050.52	14:32	
2	ECR-B-140	2021-09-16	116213.00	4543872.15	12:13	116197.05	4543834.29	12:24	
2	ECR-B-142	2021-09-16	117931.09	4544613.26	9:21	118001.97	4544534.35	9:39	
2	ECR-B-144	2021-09-16	119931.02	4544991.34	6:39	119957.32	4545007.48	6:45	
2	ECR-B-146	2021-09-16	121963.19	4545431.41	3:19	121909.94	4545426.47	3:28	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
2	ECR-B-148	2021-09-15	123936.25	4545381.38	23:35	123833.97	4545331.93	23:55	
2	ECR-B-150	2021-09-15	125992.49	4545296.90	20:53	125965.89	4545331.85	21:10	
2	ECR-B-152	2021-09-15	127880.72	4545287.79	17:53	127906.75	4545251.25	18:03	
2	ECR-B-154	2021-09-15	129881.39	4545438.71	13:44	129810.96	4545394.22	13:57	
2	ECR-C-1102	2021-09-15	129308.02	4545350.13	16:03	129353.97	4545357.96	16:12	
2	ECR-C-1103	2021-09-16	121991.48	4545300.54	2:50	121947.82	4545306.28	3:00	
2	ECR-C-1104	2021-09-16	119245.41	4544854.55	7:48	119350.93	4544879.31	8:06	
2	ECR-C-1105	2021-09-16	109931.48	4540613.24	22:52	109898.29	4540571.86	23:04	
2	ECR-C-1106	2021-09-17	99685.14	4534052.99	18:40	99706.31	4534085.11	18:56	
2	ECR-C-1109	2021-11-05	97109.57	4530335.27	15:06	97138.04	4530337.43	15:17	Nearshore Dolphin
2	ECR-C-1111	2021-09-17	98574.68	4531938.01	22:59	98573.98	4531927.50	23:05	
2	ECR-C-1112	2021-09-18	97072.49	4530668.62	1:49	97157.54	4530559.35	2:15	
2	ECR-B-1131	2021-11-06	100419.75	4536403.50	8:46	100412.60	4536391.51	8:54	Nearshore Dolphin
2	ECR-B-1133	2021-11-06	101189.86	4538202.98	9:11	101133.10	4538159.47	9:20	Nearshore Dolphin
2	ECR-B-1135	2021-11-06	102896.47	4538829.88	9:36	102878.78	4538778.47	9:45	Nearshore Dolphin
2	ECR-B-1137	2021-11-06	104824.99	4539435.27	10:05	104793.16	4539380.45	10:14	Nearshore Dolphin
3	ECR-B-201	2021-08-29	133717.50	4546457.35	16:06	133772.56	4546467.71	16:24	
3	ECR-B-203	2021-08-29	135619.36	4546960.21	12:40	135671.27	4546965.70	13:05	
3	ECR-B-205	2021-08-29	137650.83	4547494.87	9:27	137604.87	4547481.76	9:36	
3	ECR-B-207	2021-08-29	139562.79	4548016.04	10:19	139517.99	4547981.67	10:37	
3	ECR-B-209	2021-08-29	141468.58	4548388.97	20:49	141525.44	4548386.02	21:09	
3	ECR-B-211	2021-08-29	143373.95	4547963.75	0:19	143413.95	4547973.79	2:00	
3	ECR-A-212	2021-08-28	144353.82	4548168.59	2:42	144389.96	4548187.43	2:49	
3	ECR-B-213	2021-08-27	145355.32	4548409.61	23:37	145412.67	4548417.00	23:55	
3	ECR-B-215	2021-08-27	147341.06	4548864.98	20:30	147283.41	4548858.52	20:47	
3	ECR-B-217	2021-08-27	149328.22	4549332.07	17:25	149280.78	4549320.69	17:42	
3	ECR-B-219	2021-08-27	151112.45	4549749.99	13:48	151166.68	4549755.09	13:59	
3	ECR-B-221	2021-08-27	153205.31	4550233.72	10:01	152977.57	4550201.68	10:30	
3	ECR-B-223	2021-08-25	155133.26	4550630.24	15:56	155085.50	4550620.84	16:08	
3	ECR-B-225	2021-08-25	157053.79	4550928.29	12:31	157107.73	4550939.32	12:49	
3	ECR-B-227	2021-08-25	159001.34	4551305.45	9:42	159064.90	4551319.63	9:59	
3	ECR-B-229	2021-08-25	161010.19	4551804.43	7:28	160978.03	4551796.51	7:38	
3	ECR-B-231	2021-08-25	162953.37	4552294.74	4:28	162893.50	4552280.36	4:48	
3	ECR-B-233	2021-08-30	164843.76	4552723.27	0:33	164915.64	4553048.68	1:28	
3	ECR-B-235	2021-08-24	166470.95	4552973.11	20:03	166407.76	4552987.34	20:25	
3	ECR-A-236	2021-08-24	167739.42	4552950.98	17:37	167659.63	4552943.83	17:58	
3	ECR-B-237	2021-08-24	168714.86	4553206.57	15:16	168650.20	4553209.56	15:38	
3	ECR-B-239	2021-08-30	170664.67	4553732.67	3:10	170711.95	4553744.92	3:18	
3	ECR-B-241	2021-08-24	172669.56	4554244.90	4:13	172659.68	4554242.08	4:16	
3	ECR-B-243	2021-08-24	174547.71	4554744.58	2:38	174573.89	4554744.36	2:46	
3	ECR-B-245	2021-08-30	176537.73	4555261.50	7:29	176486.64	4555235.98	7:39	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
3	ECR-B-247	2021-08-30	178477.63	4555758.17	9:39	178418.76	4555745.34	9:50	
3	ECR-B-302	2021-08-30	180339.68	4556239.58	12:33	180380.16	4556254.87	12:48	
3	ECR-B-304	2021-08-30	182291.43	4556740.23	15:19	182326.54	4556741.53	15:27	
3	ECR-B-306	2021-08-30	184208.76	4556409.55	17:48	184242.63	4556418.92	18:00	
3	ECR-B-308	2021-08-30	186170.19	4556841.83	21:00	186140.83	4556823.64	21:11	
3	ECR-B-310	2021-08-30	188096.55	4557450.17	22:49	188064.57	4557426.54	23:03	
3	ECR-B-312	2021-08-31	189950.72	4558022.27	1:38	190007.91	4558043.62	1:49	
3	ECR-B-314	2021-08-31	191859.17	4558621.67	4:00	191918.43	4558643.76	4:11	
3	ECR-B-316	2021-08-31	193825.72	4559279.95	7:29	193786.75	4559183.92	7:46	
3	ECR-B-318	2021-08-31	195736.98	4559833.41	12:33	195704.86	4559829.28	12:48	
3	ECR-B-320	2021-08-31	197598.25	4560414.71	15:01	197625.82	4560436.29	15:13	
3	ECR-B-322	2021-08-31	199539.32	4560814.07	18:11	199573.35	4560857.09	18:30	
3	ECR-B-324	2021-08-31	201552.52	4560542.67	20:30	201515.45	4560558.77	20:46	
3	ECR-B-326	2021-08-31	203544.24	4560441.06	23:36	203491.28	4560497.42	0:03	
3	ECR-C-1101	2021-09-15	131972.03	4545986.17	9:56	131871.62	4545959.07	10:13	
3	ECR-C-1201	2021-08-29	133517.34	4546370.95	18:27	133465.41	4546348.42	18:46	
3	ECR-C-1202	2021-08-29	135081.04	4547055.56	14:28	135128.56	4547078.85	14:46	
3	ECR-C-1203	2021-08-29	138359.20	4547684.19	8:41	138222.37	4547646.75	9:00	
3	ECR-C-1204	2021-08-29	144493.40	4548168.66	21:24	144343.90	4548183.65	22:13	
3	ECR-C-1205	2021-08-27	146355.11	4548639.75	22:11	146313.51	4548628.40	22:30	
3	ECR-C-1206	2021-08-27	150191.16	4549535.60	15:53	150244.94	4549541.44	16:12	
3	ECR-C-1207	2021-08-27	154035.37	4550391.82	7:22	153982.37	4550380.36	7:35	
3	ECR-C-1208	2021-08-25	154230.05	4550437.59	17:49	154189.70	4550406.83	18:10	
3	ECR-C-1209	2021-08-25	156720.68	4550948.51	13:43	156736.95	4550955.89	14:07	
3	ECR-C-1210	2021-08-25	163622.00	4552462.72	2:22	163723.66	4552489.15	2:33	
3	ECR-C-1211	2021-08-30	164876.21	4552746.08	1:53	164889.21	4552804.44	2:04	
3	ECR-C-1212	2021-08-30	171664.40	4553946.22	3:56	171710.87	4554034.11	4:14	
3	ECR-C-1213	2021-08-24	171782.13	4553857.61	5:59	171782.13	4553857.61	6:13	
3	ECR-C-1214	2021-08-27	153671.32	4550339.80	3:12	154221.78	4550460.02	5:17	
3	ECR-C-1215	2021-09-15	132822.92	4546217.51	8:19	132795.23	4546209.60	8:25	
4	ECR-B-328	2021-09-01	205019.58	4559006.13	3:18	205070.26	4559039.34	3:29	
4	ECR-B-330	2021-09-01	206939.83	4559386.14	5:34	206999.14	4559405.46	5:44	
4	ECR-B-332	2021-09-01	208919.05	4559984.94	12:29	208878.48	4559909.04	12:57	
4	ECR-B-334	2021-09-01	210773.15	4560496.59	16:46	210831.11	4560522.66	17:08	
4	ECR-B-336	2021-09-02	212748.48	4561047.12	15:09	212731.90	4561088.16	15:24	
4	ECR-B-338	2021-09-02	214455.21	4561963.19	19:16	214471.53	4562004.63	19:31	
4	ECR-B-340	2021-09-02	216178.82	4563162.18	23:20	216131.73	4563173.85	23:32	
4	ECR-B-342	2021-09-03	218027.05	4563645.77	3:57	217950.02	4563719.04	4:14	
4	ECR-B-344	2021-09-03	220002.24	4563920.63	15:18	219973.37	4563911.60	15:27	
4	ECR-B-346	2021-09-03	221980.17	4564132.37	14:27	221950.71	4564117.76	14:34	
4	ECR-B-348	2021-09-03	223765.20	4564899.24	21:18	223810.74	4564920.07	21:26	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
4	ECR-B-350	2021-09-04	225604.90	4565682.74	9:25	225671.13	4565673.89	9:37	
4	ECR-B-402	2021-09-04	226356.28	4567044.25	11:30	226302.20	4567042.52	11:41	
4	ECR-B-404	2021-09-04	228082.28	4568035.19	14:46	228043.68	4568028.57	14:53	
4	ECR-B-406	2021-09-04	229805.81	4568936.51	17:50	229838.41	4568931.60	17:57	
4	ECR-B-408	2021-09-04	231767.46	4569184.19	22:48	231808.15	4569201.92	22:56	
4	ECR-B-410	2021-09-05	233708.00	4568579.80	2:50	233646.45	4568584.22	3:01	
4	ECR-B-412	2021-09-08	234958.85	4567081.73	12:32	235009.32	4567155.18	12:39	
4	ECR-B-414	2021-09-05	236853.72	4567087.49	10:32	236808.63	4567063.68	10:40	
4	ECR-B-416	2021-09-05	238495.58	4567449.72	18:36	238562.51	4567452.14	18:50	
4	ECR-B-418	2021-09-06	240730.83	4567103.70	4:58	240457.64	4567109.73	5:08	
4	ECR-B-420	2021-09-08	241719.01	4565347.87	9:25	241715.37	4565172.98	9:45	
4	ECR-B-456	2021-09-10	226531.21	4566022.90	11:39	226580.21	4566052.72	12:00	
4	ECR-B-458	2021-09-10	228518.18	4566724.90	5:19	228446.84	4566717.09	5:33	
4	ECR-B-460	2021-09-08	230352.97	4567272.57	18:27	230310.13	4567257.49	18:37	
4	ECR-B-462	2021-09-08	231847.83	4567647.75	19:08	231823.08	4567627.64	19:20	
4	ECR-B-464	2021-09-05	233370.40	4567187.59	6:22	233389.54	4567202.10	6:27	
4	ECR-B-466	2021-09-05	235694.81	4567184.79	9:19	235738.24	4567196.65	9:27	
4	ECR-B-468	2021-09-05	237587.85	4567371.44	14:42	237491.86	4567371.01	15:00	
4	ECR-C-1301	2021-09-01	204295.42	4559908.64	9:10	204182.56	4559872.56	9:30	
4	ECR-C-1302	2021-09-01	210622.41	4560481.31	16:09	210681.65	4560515.10	16:34	
4	ECR-C-1303	2021-09-02	216078.82	4563122.18	22:23	216027.19	4563143.97	22:50	First attempt
4	ECR-C-1303a	2021-09-03	216120.91	4563095.48	0:12	216028.11	4563102.80	0:35	Second attempt (designated ECR-C-1303a)
4	ECR-C-1304	2021-09-03	223650.56	4564717.40	19:52	223714.42	4564729.07	20:13	
4	ECR-C-1305	2021-09-03	223733.70	4564818.52	20:33	223777.92	4564833.76	20:49	
4	ECR-C-1401	2021-09-04	229745.52	4568899.04	17:23	229780.47	4568893.57	17:31	
4	ECR-C-1402	2021-09-04	230541.94	4569122.01	20:48	230597.54	4569109.20	20:59	
4	ECR-C-1403	2021-09-05	233678.49	4568666.47	4:47	233614.61	4568609.75	4:54	
4	ECR-C-1404	2021-09-08	234998.67	4567161.22	12:48	234997.69	4566945.62	13:01	
4	ECR-C-1405	2021-09-05	236772.93	4567089.50	10:51	236739.54	4567046.96	11:04	
4	ECR-C-1406	2021-09-05	238846.60	4567513.73	22:30	238836.81	4567479.26	22:43	
4	ECR-C-1407	2021-09-05	238692.74	4567499.94	19:13	238718.06	4567523.34	19:34	
4	ECR-C-1408	2021-09-05	238829.56	4567494.87	22:53	238776.00	4567469.88	23:35	
4	ECR-C-1409	2021-09-06	240613.79	4567068.27	11:33	240581.59	4567297.76	11:36	
4	ECR-C-1410	2021-09-06	240732.80	4566848.99	12:29	240694.90	4566854.58	12:48	
4	ECR-C-1411	2021-09-06	240866.44	4566695.09	13:27	240855.52	4566697.76	13:40	
4	ECR-C-1427	2021-09-08	231755.70	4567588.35	19:28	231718.61	4567554.66	19:53	
4	ECR-C-1428	2021-09-05	237569.69	4567386.99	15:23	237992.01	4567647.16	15:37	
5	ECR-B-470	2021-09-10	233232.14	4570820.42	16:00	233200.18	4570826.82	16:18	
5	ECR-B-472	2021-09-10	233176.45	4572813.70	19:51	233149.13	4572830.32	20:01	
5	ECR-B-474	2021-09-11	233309.13	4574814.58	6:37	233292.87	4574811.38	6:43	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
5	ECR-B-476	2021-11-01	233407.28	4576808.14	11:30	233462.31	4576836.42	11:40	Nearshore Dolphin
5	ECR-B-478	2021-11-01	234268.98	4578395.20	8:55	234324.03	4578446.62	9:09	Nearshore Dolphin
5	ECR-B-478_Cab	2021-11-01	234236.96	4578478.00	N/A	N/A	N/A	N/A	Nearshore Dolphin / cable landing
5.1	ECR-B-480-A	2021-11-01	234247.93	4578074.20	10:11	234255.28	4577971.80	10:25	Nearshore Dolphin
5.1	ECR-B-480-A_Cab	2021-11-01	234267.33	4578110.20	16:14	234201.62	4577974.08	16:24	Nearshore Dolphin / cable landing
5.1	ECR-B-482	2021-09-11	233811.24	4573615.45	0:26	233823.79	4573615.01	0:35	
5.1	ECR-B-484	2021-09-11	234658.77	4575357.36	9:05	234673.08	4575358.14	9:10	
5.1	ECR-B-486	2021-11-01	235608.21	4576938.62	13:19	235704.81	4576959.71	13:29	Nearshore Dolphin
5.1	ECR-B-488	2021-10-31	235950.43	4577953.90	9:07	236034.33	4578034.96	9:20	Nearshore Dolphin
5.1	ECR-B-488_Cab	2021-11-01	236001.84	4577996.24	15:27	236050.49	4577847.13	15:38	Nearshore Dolphin / cable landing; in Field Log and Report as ECR-B-488
5	ECR-C-1432	2021-09-10	233383.84	4572923.75	22:19	233402.77	4572963.56	22:35	
5	ECR-C-1433	2021-09-10	233169.30	4573148.19	23:12	233233.92	4573151.60	23:22	
5	ECR-C-1434	2021-09-11	233273.05	4574242.52	4:07	233240.49	4574241.77	4:21	
5	ECR-C-1435	2021-09-11	233332.42	4575393.39	8:13	233330.87	4575360.33	8:24	
5	ECR-C-1436	2021-11-01	233390.85	4576897.81	11:17	233438.30	4576884.89	11:27	Nearshore Dolphin
5	ECR-C-1437	2021-11-01	234002.42	4578236.62	10:39	233993.06	4578227.22	10:47	Nearshore Dolphin
5.1	ECR-C-1438	2021-11-01	235951.12	4577685.56	12:49	236075.13	4577636.87	12:59	Nearshore Dolphin
5.1	ECR-C-1439	2021-11-01	235288.29	4576791.54	13:35	235513.49	4576758.88	13:45	Nearshore Dolphin
6	ECR-B-422	2021-09-06	242510.79	4563810.44	8:02	242741.85	4563568.97	8:44	
6	ECR-B-424	2021-09-06	244258.07	4562301.22	14:41	244221.16	4562299.62	14:48	
6	ECR-B-426	2021-09-06	245893.92	4561163.55	16:54	245855.56	4561146.96	17:02	
6	ECR-B-428	2021-09-06	247577.79	4560163.86	19:48	247615.40	4560180.14	19:56	
6	ECR-B-430	2021-09-06	249451.63	4559471.53	22:17	249488.04	4559459.37	22:23	
6	ECR-B-432	2021-09-07	251438.71	4558979.98	1:59	251391.14	4558999.36	2:08	
6	ECR-B-434	2021-09-07	253471.60	4558771.98	5:23	253164.03	4558780.77	5:30	
6	ECR-B-436	2021-09-07	255363.78	4558821.83	9:08	255427.98	4558818.12	9:19	
6	ECR-B-438	2021-09-07	257411.04	4558856.84	13:09	257372.39	4558855.20	13:16	
6	ECR-B-440	2021-09-07	259285.81	4558904.75	22:46	259318.97	4558883.29	22:54	
6	ECR-B-442	2021-09-07	261305.02	4558941.72	18:15	261256.73	4558934.11	18:28	
6	ECR-B-444	2021-09-08	262889.02	4558510.57	2:14	262849.03	4558527.01	2:22	
6	ECR-B-446	2021-09-08	264743.65	4557723.23	4:30	264564.87	4557796.11	4:56	
6	ECR-C-1412	2021-09-06	249223.88	4559539.77	21:53	249264.03	4559536.97	22:00	
6	ECR-C-1413	2021-09-07	251596.57	4558916.48	1:28	251540.39	4558940.18	1:39	
6	ECR-C-1414	2021-09-07	252008.50	4558837.47	3:33	251950.99	4558853.47	3:43	
6	ECR-C-1415	2021-09-07	252533.64	4558742.40	4:48	252492.76	4558754.60	4:56	
6	ECR-C-1416_1417	2021-09-07	255179.70	4558848.08	8:32	255240.21	4558836.10	8:45	video collected at both stations on one deployment
6	ECR-C-1418	2021-09-07	255606.29	4558855.52	11:01	255643.18	4558863.33	11:07	
6	ECR-C-1419	2021-09-07	258303.32	4558898.24	14:55	258249.72	4558900.74	15:35	
6	ECR-C-1420	2021-09-07	260733.64	4558881.54	20:56	260800.28	4558844.71	21:42	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
6	ECR-C-1421	2021-09-07	261113.01	4558730.38	20:12	261163.72	4558698.79	20:23	
6	ECR-C-1422	2021-09-14	262057.63	4558843.03	21:34	261872.71	4558710.98	22:16	
7	ECR-B-448	2021-09-11	266552.22	4556950.89	17:21	266519.40	4556965.27	17:34	
7	ECR-B-450	2021-09-12	269948.76	4553665.48	4:34	269989.47	4553452.05	5:09	
7	ECR-B-452	2021-09-12	270465.15	4551709.73	8:14	270445.44	4551697.38	8:22	
7	ECR-B-454	2021-09-14	271330.85	4549911.40	12:25	271349.64	4549936.14	12:30	
7	ECR-B-502	2021-09-14	273018.23	4547455.49	7:23	273016.99	4547423.30	7:30	
7	ECR-B-504	2021-09-14	274185.99	4545778.45	5:26	274030.96	4545774.94	5:56	
7	ECR-B-506	2021-09-14	275252.26	4544138.06	3:30	275249.68	4544122.49	3:39	
7	ECR-B-508	2021-09-14	276564.98	4542652.74	1:10	276549.94	4542643.42	1:14	
7	ECR-B-510	2021-09-13	278513.91	4542329.33	21:05	278504.57	4542286.27	21:16	
7	ECR-B-512	2021-09-13	280504.00	4542098.43	17:03	280474.96	4542062.62	17:11	
7	ECR-B-514	2021-09-13	282534.58	4541816.27	10:02	282433.37	4541849.68	10:38	
7	ECR-C-1423	2021-09-11	265927.81	4557248.97	16:32	265911.79	4557277.90	16:40	
7	ECR-C-1424	2021-09-11	266588.76	4556930.16	17:04	266550.89	4556950.63	17:19	
7	ECR-C-1425	2021-09-14	270602.86	4551370.68	15:37	270696.92	4551303.70	16:31	
7	ECR-C-1426	2021-09-14	271355.57	4549932.06	12:36	271362.74	4549960.66	13:08	
7	ECR-C-1429	2021-09-11	268312.95	4556064.80	21:24	268278.83	4556036.45	21:35	
7	ECR-C-1430	2021-09-11	269032.88	4555377.06	23:06	269017.41	4555339.22	23:21	
7	ECR-C-1431	2021-09-12	269606.31	4554572.26	2:55	269583.60	4554535.28	3:06	
7	ECR-C-1518	2021-09-13	279271.90	4542232.55	19:52	279155.28	4542242.60	20:15	
7	ECR-C-1519	2021-09-13	277414.14	4542524.32	23:25	277372.82	4542493.13	23:42	
7	ECR-C-1520	2021-09-14	276946.63	4542521.20	0:27	276909.83	4542497.43	0:48	
7	ECR-C-1521	2021-09-14	272178.54	4548674.92	9:00	272104.65	4548783.54	9:22	
8	ECR-B-516	2021-09-13	284083.56	4540679.10	11:39	283918.63	4540861.58	12:20	
8	ECR-B-518_ECR-C-1514	2021-08-21	285520.43	4539122.36	0:32	285392.07	4539254.78	0:52	video collected at both stations on one deployment
8	ECR-B-520	2021-08-20	286782.56	4537786.41	20:49	286782.99	4537715.49	20:57	
8	ECR-B-522	2021-08-20	288121.43	4536309.69	17:24	288161.62	4536240.60	17:33	
8	ECR-B-524	2021-08-20	289469.27	4534835.08	15:01	289529.16	4534768.57	15:12	
8	ECR-B-526	2021-08-20	290757.13	4533528.11	11:30	290814.16	4533476.82	11:38	
8	ECR-B-528	2021-08-20	292367.29	4532034.29	8:33	292315.06	4531964.15	8:42	
8	ECR-B-530	2021-08-19	293800.69	4530653.97	11:22	293774.05	4530572.78	11:31	
8	ECR-B-532	2021-08-19	295194.92	4529315.08	9:05	295202.86	4529233.10	9:14	
8	ECR-B-534	2021-08-19	296705.76	4527836.89	3:27	296643.75	4527888.89	3:36	
8	ECR-B-536	2021-08-19	298149.74	4526452.63	1:15	298093.43	4526506.59	1:24	
8	ECR-B-538	2021-08-18	299569.57	4525209.37	21:22	299566.32	4525059.03	21:39	
8	ECR-B-540_ECR-C-1503	2021-08-18	301190.92	4523562.48	17:30	301186.64	4523410.81	17:47	video collected at both stations on one deployment
8	ECR-B-542_ECR-A-1502	2021-08-18	302352.35	4522473.46	15:04	302476.41	4522318.79	15:26	video collected at both stations on one deployment

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
8	ECR-B-544	2021-08-18	303855.14	4521036.02	12:29	303880.74	4520972.31	12:37	
8	ECR-B-546	2021-08-18	305370.66	4519690.42	10:11	305282.87	4519573.49	10:26	
8	ECR-B-548	2021-08-18	306782.33	4518316.66	6:57	306746.78	4518149.83	7:16	
8	ECR-B-602	2021-08-18	308216.50	4516929.49	4:13	308203.87	4516829.65	4:24	
8	ECR-B-604	2021-08-18	309887.79	4515708.45	0:27	309663.47	4515633.97	0:52	
8	ECR-B-606	2021-08-17	311484.26	4514628.46	20:30	311455.80	4514379.83	20:58	
8	ECR-B-608	2021-08-17	313143.42	4513474.38	16:13	313088.19	4513347.63	16:29	
8	ECR-B-610	2021-08-17	314733.99	4512286.17	13:25	314823.89	4512120.87	13:46	
8	ECR-B-612	2021-08-17	316359.75	4511126.97	10:22	316422.64	4511087.10	10:31	
8	ECR-B-614	2021-08-17	318007.53	4510000.89	8:05	318080.92	4509954.77	8:15	
8	ECR-B-616	2021-08-17	319768.71	4508944.42	5:29	319833.61	4508904.93	5:37	
8	ECR-B-618	2021-08-17	321298.13	4508018.81	2:49	321547.90	4507860.27	3:25	
8	ECR-B-620	2021-08-17	323004.49	4506869.75	0:17	323202.43	4506879.85	0:38	
8	ECR-B-622	2021-08-16	324627.12	4505705.82	20:43	324865.77	4505682.31	21:12	
8	ECR-B-624	2021-08-16	326540.41	4504847.72	18:28	326595.66	4504814.81	18:36	
8	ECR-B-626	2021-08-16	328158.70	4503879.04	14:54	328367.15	4503748.36	15:21	
8	ECR-B-628	2021-08-16	329998.64	4502961.92	12:30	330065.12	4502942.41	12:39	
8	ECR-B-630	2021-08-16	331844.59	4502490.58	9:32	332032.26	4502486.78	9:53	
8	ECR-B-632	2021-08-16	333862.48	4502423.89	7:20	333933.12	4502422.16	7:28	
8	ECR-B-634	2021-08-16	335800.33	4502352.75	4:11	336027.89	4502348.25	4:36	
8	ECR-B-636	2021-08-16	337768.91	4502288.23	1:05	338007.48	4502282.62	1:32	
8	ECR-B-638	2021-08-15	339938.05	4502208.01	21:13	340005.82	4502214.81	21:22	
8	ECR-B-640	2021-08-15	341920.75	4502147.92	18:24	341979.19	4502142.38	18:31	
8	ECR-B-642	2021-08-15	343938.98	4502068.65	15:32	343995.42	4502087.33	15:39	
8	ECR-B-644	2021-08-15	345940.32	4501990.02	12:30	345986.60	4502027.88	12:39	
8	ECR-B-646	2021-08-15	348023.48	4501937.47	9:18	347843.35	4501941.29	9:37	
8	ECR-B-648	2021-08-15	349979.89	4501863.13	6:17	349896.39	4501865.36	6:26	
8	ECR-B-650	2021-08-15	351990.91	4501828.05	2:58	351936.04	4501757.78	3:08	
8	ECR-B-652	2021-08-14	353928.18	4501724.13	23:19	353996.68	4501746.02	23:28	
8	ECR-B-654	2021-08-14	355954.65	4501629.12	20:32	355963.48	4501688.51	20:40	
8	ECR-B-656	2021-08-14	357997.83	4501596.35	16:50	357933.95	4501588.34	16:58	
8	ECR-B-658	2021-08-14	359992.54	4501542.38	14:06	359939.20	4501512.34	14:15	
8	ECR-A-1501	2021-08-18	306045.03	4518958.33	8:47	306033.41	4518859.37	8:58	
8	ECR-A-1504	2021-08-18	300257.68	4524367.64	19:57	300254.10	4524258.82	20:09	
8	ECR-C-1505	2021-08-18	298868.72	4525763.35	23:12	298821.48	4525806.62	23:20	
8	ECR-C-1506	2021-08-19	298565.78	4526056.52	0:34	298477.11	4526140.50	0:48	
8	ECR-C-1507	2021-08-19	295478.86	4529008.13	6:34	295603.06	4528886.99	6:53	
8	ECR-A-1508	2021-08-20	293092.37	4531312.92	6:49	293037.66	4531250.96	6:58	
8	ECR-C-1509	2021-08-20	290910.35	4533379.37	12:05	290967.06	4533321.98	12:14	
8	ECR-C-1510	2021-08-20	290757.13	4533528.11	11:48	290888.83	4533381.01	11:57	
8	ECR-C-1511	2021-08-20	289342.67	4534948.48	14:37	289408.65	4534874.93	14:48	

Segment	Station	Date	Start X	Start Y	Time Start (local)	End X	End Y	Time Stop (local)	Notes_1
8	ECR-C-1512	2021-08-20	286501.95	4538059.91	22:11	286544.79	4538006.01	22:19	
8	ECR-A-1513	2021-08-21	285576.76	4539041.34	0:17	285533.60	4539096.71	0:25	
8	ECR-A-1515	2021-08-21	284804.42	4539815.26	2:19	284821.19	4539896.22	2:28	
8	ECR-C-1516	2021-08-21	284827.95	4539899.58	2:36	284840.48	4539964.96	2:44	
8	ECR-C-1517	2021-09-13	282521.07	4541853.38	10:53	282488.34	4541863.43	11:04	
8	ECR-C-1601	2021-08-15	339915.75	4502248.16	22:43	340024.37	4502255.82	22:57	
8	ECR-C-1602	2021-08-17	312510.03	4513908.24	18:45	312496.48	4513724.16	19:06	
8	ECR-C-1603	2021-08-17	311193.59	4514733.44	22:52	311133.35	4514774.70	23:01	
8	ECR-A-1604	2021-08-18	308962.88	4516455.09	3:20	308902.99	4516306.96	3:37	

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment A Benthic Sample Position List - Benthic Grabs

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
1	ECR-A-101-A	2021-11-04	85860.68	4527283.44	10:29:00	Nearshore Dolphin
1	ECR-B-102	N/A	N/A	N/A	N/A	Nearshore Dolphin; 2 attempts - no grab
1	ECR-B-104	N/A	N/A	N/A	N/A	Nearshore Dolphin; 2 attempts - no grab
1	ECR-B-106	2021-11-03	90302.35	4527642.14	8:54:00	Nearshore Dolphin
1	ECR-B-108	2021-11-03	92161.97	4527771.04	9:09:00	Nearshore Dolphin
1	ECR-B-110	2021-09-18	93991.64	4527876.67	10:20:00	
1	ECR-B-1150	2021-11-03	86364.06	4527656.18	13:52:00	Nearshore Dolphin
1	ECR-B-1151	2021-11-03	86388.35	4527477.59	14:56:00	Nearshore Dolphin
1	ECR-B-1152	2021-11-03	86510.09	4527319.53	9:33:00	Nearshore Dolphin; Geotech station
1	ECR-B-1153	2021-11-03	N/A	N/A	N/A	Nearshore Dolphin; 2 attempts - no grab
1	ECR-B-1154	2021-11-03	86733.89	4526955.48	11:23:00	Nearshore Dolphin; Geotech station
1	ECR-B-1155	2021-11-03	86868.34	4526647.60	15:57:00	Nearshore Dolphin
1	ECR-B-1156	2021-11-03	86836.51	4526334.69	15:01:00	Nearshore Dolphin
1	ECR-B-1157	2021-11-03	86676.46	4526790.29	13:19:00	Nearshore Dolphin; Geotech station
1	ECR-B-1158	2021-11-04	86014.12	4527431.12	11:53:00	Nearshore Dolphin
2	ECR-B-112	2021-09-18	96235.48	4527587.69	7:54:00	
2	ECR-B-114	2021-09-18	96829.59	4529266.59	4:45:00	
2	ECR-B-116	2021-09-18	97681.32	4530997.90	0:51:00	
2	ECR-B-118	2021-09-17	98879.06	4532569.59	21:47:53	
2	ECR-B-120	2021-09-17	99886.35	4534411.97	17:01:03	
2	ECR-A-121	2021-09-17	N/A	N/A	N/A	No grab collected due to boulders and corals in the area
2	ECR-B-122	2021-09-17	101516.55	4535744.76	13:28:21	2 attempts - second successful; coordinates from second grab
2	ECR-B-124	2021-09-17	102783.02	4537535.47	9:51:00	
2	ECR-B-126	2021-09-17	104283.57	4538812.22	7:44:19	
2	ECR-B-128	2021-09-17	106086.91	4539697.48	4:57:00	
2	ECR-B-130	2021-09-17	107743.22	4540155.48	2:47:00	
2	ECR-B-132	2021-09-17	109700.97	4540552.65	0:41:42	
2	ECR-B-134	2021-09-16	111666.33	4540903.23	20:57:00	
2	ECR-B-136	2021-09-16	113625.55	4541258.48	18:42:52	
2	ECR-B-138	2021-09-16	115418.74	4542062.79	14:53:30	
2	ECR-B-140	2021-09-16	116215.87	4543860.06	12:34:44	
2	ECR-B-142	2021-09-16	117934.10	4544628.01	9:50:59	
2	ECR-B-144	2021-09-16	119937.68	4545007.71	6:57:00	
2	ECR-B-146	2021-09-16	121942.03	4545428.77	4:00:00	
2	ECR-B-148	2021-09-15	123898.51	4545360.25	0:52:00	
2	ECR-B-150	2021-09-15	125985.64	4545306.16	21:29:55	2 attempts - second successful; coordinates from second grab

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
2	ECR-B-152	2021-09-15	127892.77	4545279.28	19:01:10	2 attempts - second successful; coordinates from second grab
2	ECR-B-154	2021-09-15	129891.74	4545436.41	N/A	2 attempts - no grab
2	ECR-B-1131	2021-11-06	100421.76	4536394.93	12:51:00	Nearshore Dolphin
2	ECR-B-1133	2021-11-06	101190.01	4538196.99	12:01:00	Nearshore Dolphin
2	ECR-B-1135	2021-11-06	102896.24	4538825.90	11:19:00	Nearshore Dolphin
2	ECR-B-1137	2021-11-06	104819.06	4539425.10	11:37:00	Nearshore Dolphin
3	ECR-B-201	2021-08-29	133747.81	4546461.87	16:37:13	
3	ECR-B-203	2021-08-29	135648.81	4546963.24	13:18:15	
3	ECR-B-205	2021-08-29	137615.20	4547491.19	9:51:55	2 attempts - second successful; coordinates from second grab
3	ECR-B-207	2021-08-29	139533.68	4548000.17	6:48:59	
3	ECR-B-209	2021-08-29	141501.41	4548389.13	3:46:19	3 attempts - third successful; coordinates from third grab
3	ECR-B-211	2021-08-29	143411.26	4547968.42	0:42:41	2 attempts - second successful; coordinates from second grab
3	ECR-B-213	2021-08-28	145387.61	4548414.10	0:38:11	2 attempts - second successful; coordinates from second grab
3	ECR-B-215	2021-08-27	147308.92	4548862.42	20:59:15	
3	ECR-B-217	2021-08-27	149306.71	4549327.69	18:38:18	
3	ECR-B-219	2021-08-27	151145.96	4549752.23	14:18:38	
3	ECR-B-221	2021-08-27	153151.45	4550222.15	11:44:00	
3	ECR-B-223	2021-08-25	155117.08	4550624.88	16:21:10	
3	ECR-B-225	2021-08-25	157079.03	4550929.81	11:13:49	
3	ECR-B-227	2021-08-25	159036.28	4551312.44	8:47:40	
3	ECR-B-229	2021-08-25	160979.94	4551801.36	6:28:27	
3	ECR-B-231	2021-08-25	162917.33	4552285.28	3:22:42	
3	ECR-B-233	2021-08-25	164853.21	4552770.68	23:28:47	
3	ECR-B-235	2021-08-24	166441.00	4552983.94	20:37:06	
3	ECR-B-237	2021-08-24	168675.48	4553213.79	13:50:05	
3	ECR-B-239	2021-08-24	170695.51	4553740.03	9:56:10	
3	ECR-B-241	2021-08-24	172636.46	4554242.29	4:28:26	
3	ECR-B-243	2021-08-24	174568.77	4554745.10	1:46:10	
3	ECR-B-245	2021-08-30	176505.45	4555248.18	7:49:50	
3	ECR-B-247	2021-08-30	178437.87	4555751.80	10:11:47	2 attempts - second successful; coordinates from second grab
3	ECR-B-302	2021-08-30	180379.86	4556255.63	13:15:16	3 attempts - third successful; coordinates from third grab
3	ECR-B-304	2021-08-30	182312.41	4556740.80	15:38:42	
3	ECR-B-306	2021-08-30	184228.09	4556412.02	18:49:17	
3	ECR-B-308	2021-08-30	186152.28	4556834.57	21:28:17	
3	ECR-B-310	2021-08-30	188079.38	4557437.83	23:15:01	

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
3	ECR-B-312	2021-08-31	189985.09	4558029.97	2:21:25	4 attempts - fourth successful; coordinates from fourth grab
3	ECR-B-314	2021-08-31	191893.98	4558632.83	4:26:20	
3	ECR-B-316	2021-08-31	193802.85	4559233.10	8:04:07	
3	ECR-B-318	2021-08-31	195713.54	4559831.28	13:00:34	
3	ECR-B-320	2021-08-31	197615.77	4560427.29	15:24:31	
3	ECR-B-322	2021-08-31	199558.77	4560839.55	18:48:01	
3	ECR-B-324	2021-08-31	201536.06	4560550.91	20:56:30	
3	ECR-B-326	2021-09-01	203528.17	4560455.72	0:45:40	Date corrected via info in Field Log
3	ECR-C-1101	2021-09-15	131929.53	4545966.99	10:25:07	
3	ECR-C-1207	2021-08-27	154008.14	4550402.99	8:27:44	
3	ECR-C-1208	2021-08-25	154211.91	4550418.50	19:08:50	
3	ECR-C-1215	2021-09-15	132802.34	4546210.67	8:38:03	
4	ECR-B-328	2021-09-01	205047.85	4559021.10	3:47:24	
4	ECR-B-330	2021-09-01	206981.07	4559395.63	6:28:01	
4	ECR-B-332	2021-09-01	208900.53	4559959.84	13:11:37	
4	ECR-B-334	2021-09-01	210812.35	4560513.07	17:20:09	
4	ECR-B-336	2021-09-02	212737.13	4561076.53	15:34:16	
4	ECR-B-338	2021-09-02	214472.49	4561987.29	19:43:27	
4	ECR-B-340	2021-09-02	216140.15	4563170.33	2:19:46	
4	ECR-B-342	2021-09-03	217994.24	4563678.92	4:44:44	
4	ECR-B-344	2021-09-03	219991.15	4563912.18	10:37:35	
4	ECR-B-346	2021-09-03	221964.54	4564128.90	16:47:50	
4	ECR-B-348	2021-09-03	223797.04	4564908.39	21:40:12	
4	ECR-B-350	2021-09-04	225645.33	4565682.26	9:52:52	
4	ECR-B-402	2021-09-04	226318.31	4567041.08	12:19:59	
4	ECR-B-404	2021-09-04	228057.66	4568033.12	15:04:50	
4	ECR-B-406	2021-09-04	229815.48	4568934.36	18:58:47	
4	ECR-B-408	2021-09-04	231791.34	4569192.69	23:18:15	
4	ECR-B-410	2021-09-05	233654.48	4568580.66	5:16:00	
4	ECR-B-412	2021-09-04	234996.71	4567144.06	5:10:18	
4	ECR-B-414	2021-09-05	236831.64	4567077.67	11:25:11	
4	ECR-B-416	2021-09-05	238538.54	4567459.29	20:08:49	
4	ECR-B-418	2021-09-06	240479.24	4567102.53	N/A	2 attempts - no grab; coordinates from second grab attempt
4	ECR-B-420	2021-09-08	241720.83	4565204.78	N/A	2 attempts - no grab; coordinates from second grab attempt
4	ECR-B-456	2021-09-10	226584.92	4566040.37	10:22:56	
4	ECR-B-458	2021-09-10	228471.84	4566714.04	5:44:00	
4	ECR-B-460	2021-09-08	230305.57	4567258.35	20:51:00	
4	ECR-B-462	2021-09-08	231843.14	4567633.41	15:57:36	

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
4	ECR-B-464	2021-09-05	233384.53	4567187.09	6:57:39	
4	ECR-B-466	2021-09-05	235719.79	4567190.31	9:44:49	
4	ECR-B-468	2021-09-05	237531.46	4567368.55	15:55:22	
4	ECR-C-1302	2021-09-01	210662.13	4560499.01	19:38:33	
5	ECR-B-470	2021-09-10	233226.36	4570828.74	16:25:00	
5	ECR-B-472	2021-09-10	233173.41	4572807.65	20:15:28	
5	ECR-B-474	2021-09-11	233305.19	4574804.85	6:52:52	
5	ECR-B-476	2021-11-01	233401.42	4576815.63	12:48:00	Nearshore Dolphin
5	ECR-B-478	2021-11-01	234234.95	4578477.90	N/A	Nearshore Dolphin; 3 attempts - no successful grabs. No imagery from video
5.1	ECR-B-480-A_Cab	2021-11-01	234280.97	4578055.01	14:11:00	Nearshore Dolphin / cable landing; Geotech station
5.1	ECR-B-482	2021-09-11	233860.54	4573617.93	0:44:42	
5.1	ECR-B-484	2021-09-11	234672.83	4575371.52	9:20:25	
5.1	ECR-B-486	2021-11-01	235638.22	4576935.46	11:50:00	Nearshore Dolphin; Geotech station
5.1	ECR-B-488_Cab	2021-11-01	235999.41	4577998.99	10:05:00	Nearshore Dolphin / cable landing; Geotech station; in Field Log and Report as ECR-B-488
5	ECR-C-1437	2021-11-01	233995.44	4578276.56	15:16:00	Nearshore Dolphin; Geotech station
6	ECR-B-422	2021-09-06	242718.37	4563597.29	9:08:13	
6	ECR-B-424	2021-09-06	244238.82	4562303.71	15:00:20	
6	ECR-B-426	2021-09-06	245876.88	4561158.43	17:13:39	
6	ECR-B-428	2021-09-06	247598.79	4560172.43	20:08:20	
6	ECR-B-430	2021-09-06	249466.78	4559469.90	22:36:33	
6	ECR-B-432	2021-09-07	251416.98	4558989.82	2:22:28	
6	ECR-B-434	2021-09-07	253175.64	4558779.32	6:30:25	2 attempts - second successful; coordinates from second grab
6	ECR-B-436	2021-09-07	255382.70	4558819.83	9:35:17	
6	ECR-B-438	2021-09-07	257387.75	4558843.12	13:47:49	3 attempts - third successful; coordinates from third grab
6	ECR-B-440	2021-09-07	259326.93	4558874.96	23:04:17	
6	ECR-B-442	2021-09-07	261266.99	4558936.77	18:37:58	
6	ECR-B-444	2021-09-08	262869.51	4558521.71	2:36:06	
6	ECR-B-446	2021-09-08	264703.99	4557733.08	N/A	2 attempts - no grab; coordinates from second grab attempt
7	ECR-B-448	2021-09-11	266521.18	4556974.99	18:30:08	
7	ECR-B-450	2021-09-12	269959.88	4553613.04	5:40:00	
7	ECR-B-452	2021-09-12	270448.20	4551689.32	8:30:00	
7	ECR-B-454	2021-09-14	271343.52	4549930.86	10:38:58	
7	ECR-B-502	2021-09-13	273019.76	4547438.86	2:55:00	
7	ECR-B-504	2021-09-13	274131.28	4545783.75	4:04:47	
7	ECR-B-506	2021-09-13	275248.50	4544116.43	5:05:39	
7	ECR-B-508	2021-09-13	276552.04	4542641.66	6:18:00	
7	ECR-B-510	2021-09-13	278518.57	4542311.72	7:10:00	

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
7	ECR-B-512	2021-09-13	280500.86	4542084.88	8:17:00	
7	ECR-B-514	2021-09-13	282490.88	4541842.11	9:19:00	
7	ECR-C-1429	2021-09-11	268300.15	4556048.48	21:50:00	
7	ECR-C-1430	2021-09-11	269028.38	4555363.35	0:35:00	2 attempts - second successful; coordinates from second grab
7	ECR-C-1431	2021-09-12	269582.98	4554558.96	3:25:00	2 attempts - no grab; coordinates from second grab attempt
8	ECR-B-516	2021-09-13	283954.71	4540827.34	7:31:00	
8	ECR-B-518	2021-08-21	285425.53	4539221.00	1:06:04	
8	ECR-B-520	2021-08-20	286780.40	4537754.16	21:10:20	
8	ECR-B-522	2021-08-20	288132.82	4536282.38	18:36:31	
8	ECR-B-524	2021-08-20	289487.32	4534808.82	15:26:39	
8	ECR-B-526	2021-08-20	290775.29	4533503.79	12:41:59	
8	ECR-B-528	2021-08-20	292346.61	4532002.91	9:16:30	2 attempts - second successful; coordinates from second grab
8	ECR-B-530	2021-08-19	293787.48	4530623.46	11:45:53	
8	ECR-B-532	2021-08-19	295198.90	4529283.81	9:26:40	
8	ECR-B-534	2021-08-19	296682.33	4527860.70	4:10:58	
8	ECR-B-536	2021-08-19	298126.06	4526476.36	1:37:30	
8	ECR-B-538	2021-08-18	299572.16	4525099.04	21:53:24	
8	ECR-B-540	2021-08-18	301188.15	4523523.84	18:42:43	
8	ECR-B-542	2021-08-18	302419.16	4522383.40	15:39:50	
8	ECR-B-544	2021-08-18	303866.03	4521001.08	12:54:20	
8	ECR-B-546	2021-08-18	305313.03	4519617.40	10:38:13	
8	ECR-B-548	2021-08-18	306757.72	4518236.37	7:32:00	
8	ECR-B-602	2021-08-18	308205.05	4516855.86	4:35:30	
8	ECR-B-604	2021-08-18	309834.00	4515695.16	1:09:32	
8	ECR-B-606	2021-08-17	311470.75	4514547.74	21:28:00	
8	ECR-B-608	2021-08-17	313111.94	4513403.38	16:45:39	
8	ECR-B-610	2021-08-17	314747.51	4512256.76	14:01:15	
8	ECR-B-612	2021-08-17	316386.85	4511107.44	10:44:45	
8	ECR-B-614	2021-08-17	318038.80	4509980.98	8:27:41	
8	ECR-B-616	2021-08-17	319794.91	4508923.38	6:15:26	
8	ECR-B-618	2021-08-17	321462.34	4507914.86	3:44:40	
8	ECR-B-620	2021-08-17	323172.38	4506879.98	0:51:51	
8	ECR-B-622	2021-08-16	324757.18	4505690.29	21:37:27	
8	ECR-B-624	2021-08-16	326567.03	4504832.23	18:51:11	
8	ECR-B-626	2021-08-16	328250.55	4503819.37	15:54:47	
8	ECR-B-628	2021-08-16	330030.32	4502951.50	12:54:38	
8	ECR-B-630	2021-08-16	331973.51	4502485.73	10:09:50	
8	ECR-B-632	2021-08-16	333895.09	4502420.08	7:42:08	

Segment	Station	Date	X	Y	Bottom Touchdown Time (local)	Notes_1
8	ECR-B-634	2021-08-16	335971.77	4502348.86	4:56:52	
8	ECR-B-636	2021-08-16	337970.34	4502281.55	1:43:45	
8	ECR-B-638	2021-08-15	339968.78	4502211.07	21:37:47	
8	ECR-B-640	2021-08-15	341950.38	4502143.35	18:44:00	
8	ECR-B-642	2021-08-15	343968.35	4502074.79	15:53:26	
8	ECR-B-644	2021-08-15	345967.40	4502004.85	12:53:54	
8	ECR-B-646	2021-08-15	347967.04	4501937.75	10:00:57	
8	ECR-B-648	2021-08-15	349944.01	4501870.30	6:53:29	2 attempts - second successful; coordinates from second grab
8	ECR-B-650	2021-08-15	351969.13	4501804.50	3:23:16	
8	ECR-B-652	2021-08-14	353961.52	4501731.66	23:41:46	
8	ECR-B-654	2021-08-14	355962.73	4501661.46	20:53:02	
8	ECR-B-656	2021-08-14	357965.57	4501595.38	17:14:13	
8	ECR-B-658	2021-08-14	359964.66	4501528.32	14:35:31	
8	ECR-C-1516	2021-08-21	284830.84	4539916.56	3:02:24	

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment A Benthic Sample Position List - SPI-PV

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
						NAD 83 2011 UTM 19		NAD83 2011		
1	ECR-B-101-A	A	11/12/2021	16:15	no data	85894.39	4527258.56	40 47.514232	073 54.455166	Nearshore Dolphin
1	ECR-B-101-A	B	11/12/2021	16:17	no data	85889.85	4527273.16	40 47.521958	073 54.458963	Nearshore Dolphin
1	ECR-B-101-A	C	11/12/2021	16:18	no data	85876.11	4527257.70	40 47.513217	073 54.468084	Nearshore Dolphin
1	ECR-B-102	A	11/12/2021	16:29	no data	86462.16	4527823.50	40 47.835612	073 54.075281	Nearshore Dolphin
1	ECR-B-102	B	11/12/2021	16:31	no data	86450.42	4527810.02	40 47.827998	073 54.083066	Nearshore Dolphin
1	ECR-B-102	C	11/12/2021	16:33	no data	86463.43	4527803.99	40 47.825143	073 54.073607	Nearshore Dolphin
1	ECR-A-103	A	11/12/2021	16:55	no data	87433.59	4528117.05	40 48.022978	073 53.398506	Nearshore Dolphin
1	ECR-A-103	B	11/12/2021	16:59	no data	87435.69	4528138.70	40 48.034701	073 53.397875	Nearshore Dolphin
1	ECR-A-103	C	11/12/2021	17:02	no data	87439.37	4528125.35	40 48.027622	073 53.394738	Nearshore Dolphin
1	ECR-B-104	A	11/13/2021	18:11	no data	88376.30	4527754.55	40 47.856104	073 52.716083	Nearshore Dolphin
1	ECR-B-104	B	11/13/2021	18:13	no data	88364.12	4527746.99	40 47.851666	073 52.724416	Nearshore Dolphin
1	ECR-B-104	C	11/13/2021	18:15	no data	88379.45	4527734.96	40 47.845648	073 52.713076	Nearshore Dolphin
1	ECR-A-105	A	11/13/2021	17:54	no data	89022.41	4527453.54	40 47.713383	073 52.246323	Nearshore Dolphin
1	ECR-A-105	B	11/13/2021	17:56	no data	89003.95	4527442.63	40 47.706954	073 52.258974	Nearshore Dolphin
1	ECR-A-105	C	11/13/2021	17:58	no data	89020.67	4527437.84	40 47.704876	073 52.246937	Nearshore Dolphin
1	ECR-B-106	A	11/13/2021	17:26	no data	90293.04	4527648.87	40 47.856624	073 51.353557	Nearshore Dolphin
1	ECR-B-106	B	11/13/2021	17:28	no data	90297.96	4527638.73	40 47.851310	073 51.349671	Nearshore Dolphin
1	ECR-B-106	C	11/13/2021	17:30	no data	90311.86	4527646.55	40 47.855938	073 51.340128	Nearshore Dolphin
1	ECR-B-106	D	11/13/2021	17:31	no data	90307.81	4527645.54	40 47.855273	073 51.342959	Nearshore Dolphin
1	ECR-A-107	A	11/13/2021	16:58	no data	91312.94	4527757.87	40 47.945783	073 50.635028	Nearshore Dolphin
1	ECR-A-107	B	11/13/2021	17:00	no data	91294.69	4527733.78	40 47.932264	073 50.647017	Nearshore Dolphin
1	ECR-A-107	C	11/13/2021	17:01	no data	91314.85	4527741.54	40 47.937044	073 50.633034	Nearshore Dolphin
1	ECR-A-107	D	11/13/2021	17:03	no data	91301.35	4527756.14	40 47.944505	073 50.643175	Nearshore Dolphin
1	ECR-B-108	A	11/13/2021	16:35	no data	92165.42	4527773.50	40 47.979598	073 50.031462	Nearshore Dolphin
1	ECR-B-108	B	11/13/2021	16:38	no data	92156.04	4527783.47	40 47.984688	073 50.038501	Nearshore Dolphin
1	ECR-B-108	C	11/13/2021	16:39	no data	92170.53	4527784.97	40 47.985928	073 50.028290	Nearshore Dolphin
1	ECR-A-109	A	9/18/2021	11:49	-19.04	93287.35	4528065.97	40 48.17047	073 49.24773	
1	ECR-A-109	B	9/18/2021	11:54	-19.12	93295.99	4528068.95	40 48.17233	073 49.24171	
1	ECR-A-109	C	9/18/2021	11:58	-18.94	93306.30	4528072.26	40 48.17442	073 49.23454	
1	ECR-B-110	A	9/18/2021	10:34	-10.57	93982.30	4527859.58	40 48.07992	073 48.74710	
1	ECR-B-110	B	9/18/2021	10:42	-9.04	93997.88	4527856.27	40 48.07859	073 48.73592	
1	ECR-B-110	C	9/18/2021	10:48	-11.02	94003.43	4527870.40	40 48.08637	073 48.73254	
1	ECR-A-111	A	9/18/2021	09:07	-16.44	95200.43	4527577.54	40 47.96404	073 47.87274	
1	ECR-A-111	B	9/18/2021	09:13	-16.61	95217.01	4527576.64	40 47.96405	073 47.86095	
1	ECR-A-111	C	9/18/2021	09:18	-16.64	95229.40	4527576.08	40 47.96411	073 47.85215	
1	ECR-B-1150	A	11/12/2021	15:26	no data	86367.17	4527642.18	40 47.735098	073 54.135394	Nearshore Dolphin
1	ECR-B-1150	B	11/12/2021	15:30	no data	86379.51	4527665.07	40 47.747798	073 54.127559	Nearshore Dolphin

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
1	ECR-B-1150	C	11/12/2021	15:35	no data	86370.49	4527657.07	40 47.743217	073 54.133633	Nearshore Dolphin
1	ECR-B-1151	A	11/12/2021	15:06	no data	86402.91	4527481.10	40 47.649430	073 54.103672	Nearshore Dolphin
1	ECR-B-1151	B	11/12/2021	15:08	no data	86384.32	4527491.36	40 47.654395	073 54.117253	Nearshore Dolphin
1	ECR-B-1151	C	11/12/2021	15:11	no data	86381.66	4527472.06	40 47.643921	073 54.118371	Nearshore Dolphin
1	ECR-B-1152	A	11/12/2021	14:26	no data	86519.48	4527313.54	40 47.562711	073 54.014419	Nearshore Dolphin
1	ECR-B-1152	B	11/12/2021	14:33	no data	86507.03	4527332.13	40 47.572346	073 54.023979	Nearshore Dolphin
1	ECR-B-1152	C	11/12/2021	14:37	no data	86510.68	4527318.85	40 47.565305	073 54.020865	Nearshore Dolphin
1	ECR-B-1153	A	11/12/2021	13:46	no data	86623.55	4527154.13	40 47.480002	073 53.934350	Nearshore Dolphin
1	ECR-B-1153	B	11/12/2021	13:52	no data	86620.37	4527151.96	40 47.478737	073 53.936517	Nearshore Dolphin
1	ECR-B-1153	C	11/12/2021	13:55	no data	86618.67	4527171.18	40 47.489036	073 53.938484	Nearshore Dolphin
1	ECR-B-1153	D	11/12/2021	14:01	no data	86605.64	4527167.69	40 47.486764	073 53.947579	Nearshore Dolphin
1	ECR-B-1154	A	11/12/2021	13:21	no data	86750.22	4526941.30	40 47.369204	073 53.836152	Nearshore Dolphin
1	ECR-B-1154	B	11/12/2021	13:24	no data	86743.33	4526957.34	40 47.377635	073 53.841670	Nearshore Dolphin
1	ECR-B-1154	C	11/12/2021	13:27	no data	86736.33	4526944.42	40 47.370466	073 53.846118	Nearshore Dolphin
1	ECR-B-1155	A	11/12/2021	11:49	no data	86873.99	4526641.24	40 47.211341	073 53.736556	Nearshore Dolphin
1	ECR-B-1155	B	11/12/2021	11:53	no data	86852.24	4526639.57	40 47.209786	073 53.751901	Nearshore Dolphin
1	ECR-B-1155	C	11/12/2021	11:55	no data	86861.83	4526649.09	40 47.215202	073 53.745483	Nearshore Dolphin
1	ECR-B-1155	D	11/12/2021	12:18	no data	86874.92	4526643.69	40 47.212688	073 53.735995	Nearshore Dolphin
1	ECR-B-1155	E	11/12/2021	12:20	no data	86858.74	4526634.18	40 47.207079	073 53.747082	Nearshore Dolphin
1	ECR-B-1155	F	11/12/2021	12:22	no data	86858.35	4526648.18	40 47.214607	073 53.747913	Nearshore Dolphin
1	ECR-B-1156	A	11/12/2021	9:37	no data	86844.67	4526348.85	40 47.052994	073 53.745739	Nearshore Dolphin
1	ECR-B-1156	B	11/12/2021	9:39	no data	86823.12	4526344.48	40 47.049991	073 53.760834	Nearshore Dolphin
1	ECR-B-1156	C	11/12/2021	9:42	no data	86830.77	4526357.13	40 47.057034	073 53.755915	Nearshore Dolphin
1	ECR-B-1156	D	11/12/2021	10:08	no data	86841.17	4526347.24	40 47.052022	073 53.748155	Nearshore Dolphin
1	ECR-B-1156	E	11/12/2021	10:13	no data	86827.76	4526343.44	40 47.049571	073 53.757505	Nearshore Dolphin
1	ECR-B-1156	F	11/12/2021	10:16	no data	86833.71	4526357.12	40 47.057118	073 53.753832	Nearshore Dolphin
1	ECR-B-1156	G	11/12/2021	10:59	no data	86824.08	4526342.02	40 47.048696	073 53.760056	Nearshore Dolphin
1	ECR-B-1156	H	11/12/2021	11:03	no data	86837.48	4526346.35	40 47.051431	073 53.750734	Nearshore Dolphin
1	ECR-B-1156	I	11/12/2021	11:06	no data	86829.00	4526358.56	40 47.057751	073 53.757226	Nearshore Dolphin
1	ECR-B-1157	A	11/12/2021	12:56	no data	86687.51	4526800.28	40 47.291369	073 53.874992	Nearshore Dolphin
1	ECR-B-1157	B	11/12/2021	12:59	no data	86678.15	4526807.30	40 47.294868	073 53.881903	Nearshore Dolphin
1	ECR-B-1157	C	11/12/2021	13:01	no data	86668.55	4526810.50	40 47.296301	073 53.888832	Nearshore Dolphin
1	ECR-B-1158	A	11/12/2021	15:54	no data	85997.90	4527418.02	40 47.603233	073 54.388158	Nearshore Dolphin
1	ECR-B-1158	B	11/12/2021	15:56	no data	85990.73	4527428.95	40 47.608902	073 54.393673	Nearshore Dolphin
1	ECR-B-1158	C	11/12/2021	15:58	no data	86007.24	4527427.37	40 47.608550	073 54.381911	Nearshore Dolphin
2	ECR-B-112	A	9/18/2021	08:14	-32.97	96228.10	4527574.70	40 47.99283	073 47.14423	
2	ECR-B-112	B	9/18/2021	08:20	-33.04	96222.33	4527584.17	40 47.99776	073 47.14869	
2	ECR-B-112	C	9/18/2021	08:26	-33.07	96214.69	4527597.56	40 48.00475	073 47.15462	
2	ECR-A-113	A	9/18/2021	05:42	-15.51	96673.16	4528269.61	40 48.38024	073 46.85570	
2	ECR-A-113	B	9/18/2021	05:47	-15.87	96671.60	4528255.80	40 48.37275	073 46.85627	
2	ECR-A-113	C	9/18/2021	05:51	-16.02	96669.40	4528240.34	40 48.36436	073 46.85723	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
2	ECR-A-113	D	9/18/2021	06:49	-16.17	96658.64	4528269.38	40 48.37969	073 46.86598	
2	ECR-A-113	E	9/18/2021	06:54	-16.27	96657.11	4528257.10	40 48.37303	073 46.86658	
2	ECR-A-113	F	9/18/2021	06:58	-16.62	96655.65	4528247.59	40 48.36786	073 46.86726	
2	ECR-B-114	A	9/18/2021	04:56	-10.57	96826.31	4529280.74	40 48.92937	073 46.78630	
2	ECR-B-114	B	9/18/2021	05:00	-10.34	96826.41	4529265.79	40 48.92132	073 46.78565	
2	ECR-B-114	C	9/18/2021	05:04	-10.67	96825.12	4529251.27	40 48.91346	073 46.78601	
2	ECR-A-115	A	9/18/2021	03:05	-19.99	96973.91	4530198.22	40 49.42796	073 46.71575	
2	ECR-A-115	B	9/18/2021	03:09	-19.01	96975.96	4530182.12	40 49.41933	073 46.71410	
2	ECR-A-115	C	9/18/2021	03:13	-19.01	96977.40	4530182.12	40 49.41933	073 46.71410	
2	ECR-A-115	D	9/18/2021	03:36	-19.07	96977.68	4530181.70	40 49.41911	073 46.71389	
2	ECR-A-115	E	9/18/2021	03:41	-20.08	96982.63	4530196.52	40 49.42723	073 46.71096	
2	ECR-A-115	F	9/18/2021	03:46	-20.62	96987.22	4530210.67	40 49.43499	073 46.70825	
2	ECR-B-116	A	9/18/2021	01:03	-14.97	97689.94	4531013.62	40 49.88816	073 46.24104	
2	ECR-B-116	B	9/18/2021	01:08	-14.74	97680.93	4531002.51	40 49.88190	073 46.24700	
2	ECR-B-116	C	9/18/2021	01:12	-20.58	97670.53	4530991.36	40 49.87560	073 46.25390	
2	ECR-A-117	A	9/18/2021	23:20	-16.27	98544.88	4531810.44	40 50.34246	073 45.66554	
2	ECR-A-117	B	9/18/2021	23:25	-16.53	98542.63	4531824.44	40 50.34993	073 45.66768	
2	ECR-A-117	C	9/18/2021	23:31	-16.67	98553.00	4531835.68	40 50.35629	073 45.66076	
2	ECR-B-118	A	9/17/2021	22:03	-18.96	98886.07	4532552.38	40 50.75211	073 45.45220	
2	ECR-B-118	B	9/17/2021	22:10	-19.18	98871.40	4532562.41	40 50.75708	073 45.46299	
2	ECR-B-118	C	9/17/2021	22:16	-19.19	98872.08	4532577.62	40 50.76529	073 45.46309	
2	ECR-A-119	A	9/17/2021	19:43	-15.51	99484.65	4533590.93	40 51.32906	073 45.06766	
2	ECR-A-119	B	9/17/2021	19:56	-14.97	99497.29	4533582.18	40 51.32471	073 45.05836	
2	ECR-A-119	C	9/17/2021	20:02	-15.11	99505.81	4533594.14	40 51.33140	073 45.05277	
2	ECR-B-120	A	9/17/2021	17:14	-17.24	99896.18	4534403.21	40 51.77864	073 44.80702	
2	ECR-B-120	B	9/17/2021	17:20	-17.04	99880.82	4534405.53	40 51.77944	073 44.81800	
2	ECR-B-120	C	9/17/2021	17:25	-16.92	99878.44	4534394.91	40 51.77364	073 44.81928	
2	ECR-A-121	A	9/17/2021	15:32	-25.82	100289.30	4535149.32	40 52.19203	073 44.55683	
2	ECR-A-121	B	9/17/2021	15:37	-25.82	100281.70	4535142.54	40 52.18816	073 44.56197	
2	ECR-A-121	C	9/17/2021	15:42	-25.79	100279.51	4535132.29	40 52.18257	073 44.56312	
2	ECR-B-122	A	9/17/2021	13:43	-32.64	101502.63	4535744.88	40 52.54826	073 43.71874	
2	ECR-B-122	B	9/17/2021	13:49	-32.33	101496.73	4535734.95	40 52.54274	073 43.72254	
2	ECR-B-122	C	9/17/2021	13:55	-31.78	101509.78	4535726.97	40 52.53882	073 43.71297	
2	ECR-A-123	A	9/17/2021	10:57	-22.28	101942.76	4536414.86	40 52.92198	073 43.43211	
2	ECR-A-123	B	9/17/2021	11:07	-22.31	101949.22	4536426.14	40 52.92824	073 43.42796	
2	ECR-A-123	C	9/17/2021	11:10	-22.04	101954.76	4536435.20	40 52.93329	073 43.42437	
2	ECR-A-123	D	9/17/2021	11:35	-22.08	101937.88	4536427.11	40 52.92844	073 43.43605	
2	ECR-A-123	E	9/17/2021	11:42	-21.83	101957.03	4536416.57	40 52.92332	073 43.42205	
2	ECR-A-123	F	9/17/2021	11:46	-21.66	101961.61	4536425.30	40 52.92816	073 43.41913	
2	ECR-B-124	A	9/17/2021	10:03	-15.19	102793.78	4537515.65	40 53.53972	073 42.87029	
2	ECR-B-124	B	9/17/2021	10:08	-14.88	102800.35	4537526.74	40 53.54588	073 42.86605	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
2	ECR-B-124	C	9/17/2021	10:13	-14.89	102806.14	4537537.20	40 53.55168	073 42.86233	
2	ECR-A-125	A	9/17/2021	08:46	-12.83	103413.52	4538320.64	40 53.99136	073 42.46117	
2	ECR-A-125	B	9/17/2021	08:51	-12.39	103417.41	4538332.19	40 53.99769	073 42.45885	
2	ECR-A-125	C	9/17/2021	08:57	-12.49	103419.93	4538343.62	40 54.00392	073 42.45749	
2	ECR-B-126	A	9/17/2021	07:56	-12.16	104293.90	4538794.22	40 54.27200	073 41.85423	
2	ECR-B-126	B	9/17/2021	08:01	-12.33	104303.24	4538799.11	40 54.27491	073 41.84779	
2	ECR-B-126	C	9/17/2021	08:08	-12.34	104299.52	4538813.02	40 54.28230	073 41.85097	
2	ECR-A-127	A	9/17/2021	06:28	-11.84	105194.63	4539234.21	40 54.53510	073 41.23148	
2	ECR-A-127	B	9/17/2021	06:33	-12.14	105202.14	4539243.94	40 54.54056	073 41.22652	
2	ECR-A-127	C	9/17/2021	06:38	-11.90	105211.08	4539253.94	40 54.54621	073 41.22055	
2	ECR-B-128	A	9/17/2021	05:17	-12.51	106073.98	4539687.79	40 54.80485	073 40.62435	
2	ECR-B-128	B	9/17/2021	05:21	-12.31	106088.60	4539694.14	40 54.80870	073 40.61420	
2	ECR-B-128	C	9/17/2021	05:25	-12.54	106100.69	4539699.95	40 54.81217	073 40.60584	
2	ECR-A-129	A	9/17/2021	03:48	-12.83	106759.36	4539951.43	40 54.96664	073 40.14766	
2	ECR-A-129	B	9/17/2021	03:52	-12.78	106771.03	4539954.62	40 54.96870	073 40.13950	
2	ECR-A-129	C	9/17/2021	03:56	-12.74	106783.28	4539957.39	40 54.97054	073 40.13090	
2	ECR-B-130	A	9/17/2021	03:01	-14.59	107727.06	4540146.10	40 55.09937	073 39.46782	
2	ECR-B-130	B	9/17/2021	03:06	-14.53	107740.82	4540150.79	40 55.10229	073 39.45822	
2	ECR-B-130	C	9/17/2021	03:10	-14.49	107755.77	4540154.41	40 55.10467	073 39.44774	
2	ECR-A-131	A	9/17/2021	01:45	-15.26	108781.24	4540394.55	40 55.26348	073 38.72853	
2	ECR-A-131	B	9/17/2021	01:50	-15.16	108767.69	4540390.19	40 55.26074	073 38.73799	
2	ECR-A-131	C	9/17/2021	01:55	-15.33	108752.66	4540385.90	40 55.25800	073 38.74851	
2	ECR-B-132	A	9/17/2021	00:53	-15.18	109715.52	4540554.76	40 55.37655	073 38.07102	
2	ECR-B-132	B	9/17/2021	00:58	-15.13	109700.62	4540556.05	40 55.37681	073 38.08164	
2	ECR-B-132	C	9/17/2021	01:02	-15.09	109685.83	4540556.94	40 55.37687	073 38.09219	
2	ECR-A-133	A	9/16/2021	21:57	-15.38	110683.49	4540757.30	40 55.51332	073 37.39112	
2	ECR-A-133	B	9/16/2021	22:03	-15.33	110670.14	4540750.10	40 55.50906	073 37.40033	
2	ECR-A-133	C	9/16/2021	22:09	-15.23	110677.34	4540738.36	40 55.50294	073 37.39478	
2	ECR-B-134	A	9/16/2021	21:15	-14.67	111661.10	4540891.38	40 55.61342	073 36.70175	
2	ECR-B-134	B	9/16/2021	21:20	-14.68	111658.01	4540900.70	40 55.61835	073 36.70429	
2	ECR-B-134	C	9/16/2021	21:27	-14.66	111666.38	4540913.15	40 55.62530	073 36.69882	
2	ECR-A-135	A	9/16/2021	19:38	-13.87	112645.67	4541089.57	40 55.74819	073 36.00980	
2	ECR-A-135	B	9/16/2021	19:44	-13.87	112641.30	4541078.65	40 55.74218	073 36.01249	
2	ECR-A-135	C	9/16/2021	19:50	-13.89	112660.92	4541077.61	40 55.74218	073 35.99852	
2	ECR-B-136	A	9/16/2021	18:58	-13.32	113626.91	4541243.12	40 55.85875	073 35.31849	
2	ECR-B-136	B	9/16/2021	19:03	-13.53	113636.30	4541246.15	40 55.86065	073 35.31193	
2	ECR-B-136	C	9/16/2021	19:08	-13.60	113641.18	4541255.94	40 55.86606	073 35.30884	
2	ECR-A-137	A	9/16/2021	16:24	-11.89	114576.14	4541528.11	40 56.03915	073 34.65478	
2	ECR-A-137	B	9/16/2021	16:29	-11.82	114587.05	4541532.92	40 56.04205	073 34.64721	
2	ECR-A-137	C	9/16/2021	16:34	-11.70	114598.06	4541537.84	40 56.04501	073 34.63958	
2	ECR-A-137	D	9/16/2021	16:58	-11.80	114577.32	4541537.92	40 56.04447	073 34.65431	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
2	ECR-A-137	E	9/16/2021	17:04	-12.02	114587.80	4541521.10	40 56.03570	073 34.64624	
2	ECR-A-137	F	9/16/2021	17:10	-11.90	114602.48	4541527.72	40 56.03968	073 34.63606	
2	ECR-B-138	A	9/16/2021	15:06	-11.73	115434.53	4542050.68	40 56.34494	073 34.06438	
2	ECR-B-138	B	9/16/2021	15:12	-11.60	115442.50	4542063.68	40 56.35216	073 34.05920	
2	ECR-B-138	C	9/16/2021	15:19	-11.67	115430.20	4542072.06	40 56.35633	073 34.06826	
2	ECR-B-138	D	9/16/2021	15:45	-11.52	115426.70	4542052.18	40 56.34552	073 34.07000	
2	ECR-B-138	E	9/16/2021	15:50	-11.62	115434.31	4542061.53	40 56.35077	073 34.06494	
2	ECR-B-138	F	9/16/2021	15:56	-11.90	115439.59	4542072.08	40 56.35661	073 34.06158	
2	ECR-A-139	A	9/16/2021	13:39	-13.68	115875.50	4542859.76	40 56.79329	073 33.78114	
2	ECR-A-139	B	9/16/2021	13:41	-13.61	115873.08	4542848.28	40 56.78703	073 33.78243	
2	ECR-A-139	C	9/16/2021	13:46	-13.81	115871.51	4542835.86	40 56.78030	073 33.78308	
2	ECR-B-140	A	9/16/2021	12:50	-17.51	116202.69	4543868.53	40 57.34601	073 33.58611	
2	ECR-B-140	B	9/16/2021	12:56	-17.35	116194.98	4543855.24	40 57.33863	073 33.59109	
2	ECR-B-140	C	9/16/2021	13:02	-17.38	116206.69	4543847.08	40 57.33457	073 33.58247	
2	ECR-A-141	A	9/16/2021	11:20	-18.81	117010.08	4544456.74	40 57.68565	073 33.03411	
2	ECR-A-141	B	9/16/2021	11:25	-18.85	117004.23	4544446.51	40 57.67997	073 33.03789	
2	ECR-A-141	C	9/16/2021	11:31	-18.72	116998.21	4544436.34	40 57.67433	073 33.04180	
2	ECR-B-142	A	9/16/2021	10:02	-17.37	117936.69	4544615.57	40 57.79724	073 32.38139	
2	ECR-B-142	B	9/16/2021	10:07	-17.40	117925.53	4544613.25	40 57.79568	073 32.38924	
2	ECR-B-142	C	9/16/2021	10:13	-16.98	117922.00	4544625.31	40 57.80208	073 32.39219	
2	ECR-A-143	A	9/16/2021	08:31	-22.37	118992.80	4544799.58	40 57.92597	073 31.63750	
2	ECR-A-143	B	9/16/2021	08:37	-22.47	119005.08	4544801.05	40 57.92711	073 31.62883	
2	ECR-A-143	C	9/16/2021	08:42	-22.35	119016.56	4544802.81	40 57.92838	073 31.62073	
2	ECR-B-144	A	9/16/2021	07:08	-21.61	119944.48	4544992.75	40 58.05664	073 30.96813	
2	ECR-B-144	B	9/16/2021	07:14	-21.42	119957.07	4545000.77	40 58.06131	073 30.95948	
2	ECR-B-144	C	9/16/2021	07:19	-21.74	119949.87	4545009.97	40 58.06606	073 30.96493	
2	ECR-A-145	A	9/16/2021	05:00	-20.98	121114.09	4545133.27	40 58.16494	073 30.14185	
2	ECR-A-145	B	9/16/2021	05:04	-21.14	121116.48	4545143.98	40 58.17078	073 30.14055	
2	ECR-A-145	C	9/16/2021	05:09	1.24	121120.32	4545158.95	40 58.17895	073 30.13836	
2	ECR-B-146	A	9/16/2021	04:18	-19.31	121933.88	4545411.21	40 58.33749	073 29.56924	
2	ECR-B-146	B	9/16/2021	04:22	-19.51	121941.56	4545422.99	40 58.34404	073 29.56422	
2	ECR-B-146	C	9/16/2021	04:26	-19.61	121950.60	4545436.09	40 58.35136	073 29.55827	
2	ECR-A-147	A	9/16/2021	02:10	-19.31	122958.75	4545386.86	40 58.35278	073 28.83974	
2	ECR-A-147	B	9/16/2021	02:13	-19.55	122945.26	4545386.83	40 58.35239	073 28.84933	
2	ECR-A-147	C	9/16/2021	02:16	-19.50	122929.91	4545387.63	40 58.35239	073 28.86027	
2	ECR-B-148	A	9/16/2021	01:17	-18.89	123918.23	4545365.15	40 58.36761	073 28.15680	
2	ECR-B-148	B	9/16/2021	01:23	-18.87	123896.15	4545371.22	40 58.37027	073 28.17272	
2	ECR-B-148	C	9/16/2021	01:28	-19.06	123888.66	4545353.69	40 58.36062	073 28.17741	
2	ECR-A-149	A	9/15/2021	22:37	-18.17	124934.68	4545321.72	40 58.37224	073 27.43256	
2	ECR-A-149	B	9/15/2021	22:44	-18.12	124927.07	4545333.01	40 58.37812	073 27.43838	
2	ECR-A-149	C	9/15/2021	22:49	-17.99	124936.71	4545340.18	40 58.38225	073 27.43179	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
2	ECR-B-150	A	9/15/2021	21:44	-18.39	125974.08	4545297.82	40 58.38795	073 26.69271	
2	ECR-B-150	B	9/15/2021	21:50	-18.30	125974.57	4545309.57	40 58.39430	073 26.69279	
2	ECR-B-150	C	9/15/2021	21:56	-18.34	125983.20	4545320.26	40 58.40029	073 26.68704	
2	ECR-A-151	A	9/15/2021	20:00	-18.37	126905.57	4545308.18	40 58.41909	073 26.03080	
2	ECR-A-151	B	9/15/2021	20:05	-18.21	126904.57	4545299.55	40 58.41441	073 26.03120	
2	ECR-A-151	C	9/15/2021	20:09	-18.19	126902.74	4545289.71	40 58.40906	073 26.03215	
2	ECR-B-152	A	9/15/2021	19:17	-21.64	127889.35	4545289.75	40 58.43607	073 25.33066	
2	ECR-B-152	B	9/15/2021	19:21	-21.72	127903.28	4545286.92	40 58.43493	073 25.32066	
2	ECR-B-152	C	9/15/2021	19:27	-21.61	127902.13	4545271.79	40 58.42675	073 25.32093	
2	ECR-A-153	A	9/15/2021	16:52	-16.10	128893.86	4545295.77	40 58.46673	073 24.61665	
2	ECR-A-153	B	9/15/2021	16:58	-16.16	128896.95	4545283.09	40 58.45998	073 24.61399	
2	ECR-A-153	C	9/15/2021	17:03	-16.36	128898.50	4545271.24	40 58.45364	073 24.61247	
2	ECR-B-154	A	9/15/2021	14:36	-9.92	129898.29	4545443.74	40 58.57381	073 23.90776	
2	ECR-B-154	B	9/15/2021	14:41	-9.60	129884.61	4545441.96	40 58.57248	073 23.91743	
2	ECR-B-154	C	9/15/2021	14:46	-9.56	129872.12	4545440.89	40 58.57157	073 23.92627	
2	ECR-A-155	A	9/15/2021	11:36	-15.56	130878.37	4545697.68	40 58.73727	073 23.21994	
2	ECR-A-155	B	9/15/2021	11:43	-15.45	130863.57	4545693.72	40 58.73473	073 23.23033	
2	ECR-A-155	C	9/15/2021	11:48	-15.66	130852.32	4545691.24	40 58.73309	073 23.23824	
2	ECR-A-155	D	9/15/2021	12:47	-15.50	130868.02	4545704.74	40 58.74079	073 23.22755	
2	ECR-A-155	E	9/15/2021	12:52	-15.58	130856.84	4545700.55	40 58.73823	073 23.23536	
2	ECR-A-155	F	9/15/2021	12:59	-15.18	130866.13	4545686.75	40 58.73104	073 23.22825	
2	ECR-A-1130	A	11/13/2021	8:13	no data	100085.82	4535631.82	40 52.445975	073 44.719813	Nearshore Dolphin
2	ECR-A-1130	B	11/13/2021	8:16	no data	100101.33	4535631.27	40 52.446133	073 44.708785	Nearshore Dolphin
2	ECR-A-1130	C	11/13/2021	8:18	no data	100095.29	4535624.41	40 52.442261	073 44.712807	Nearshore Dolphin
2	ECR-A-1130	D	11/13/2021	8:38	no data	100096.22	4535643.67	40 52.452662	073 44.712890	Nearshore Dolphin
2	ECR-A-1130	E	11/13/2021	8:40	no data	100092.51	4535618.55	40 52.439023	073 44.714554	Nearshore Dolphin
2	ECR-A-1130	F	11/13/2021	8:42	no data	100108.03	4535626.65	40 52.443840	073 44.703853	Nearshore Dolphin
2	ECR-B-1131	A	11/13/2021	8:58	no data	100405.35	4536390.13	40 52.863786	073 44.522280	Nearshore Dolphin
2	ECR-B-1131	B	11/13/2021	9:02	no data	100424.20	4536383.51	40 52.860772	073 44.508647	Nearshore Dolphin
2	ECR-B-1131	C	11/13/2021	9:04	no data	100426.71	4536403.76	40 52.871753	073 44.507646	Nearshore Dolphin
2	ECR-B-1131	D	11/13/2021	9:50	no data	100416.18	4536405.97	40 52.872635	073 44.515204	Nearshore Dolphin
2	ECR-B-1131	E	11/13/2021	9:52	no data	100425.32	4536386.92	40 52.862641	073 44.507998	Nearshore Dolphin
2	ECR-B-1131	F	11/13/2021	9:54	no data	100408.66	4536395.94	40 52.867013	073 44.520155	Nearshore Dolphin
2	ECR-B-1131	G	11/13/2021	10:14	no data	100422.80	4536387.02	40 52.862621	073 44.509776	Nearshore Dolphin
2	ECR-B-1131	H	11/13/2021	10:15	no data	100407.56	4536391.73	40 52.864713	073 44.520773	Nearshore Dolphin
2	ECR-B-1131	I	11/13/2021	10:18	no data	100420.59	4536404.36	40 52.871897	073 44.512012	Nearshore Dolphin
2	ECR-A-1132	A	11/13/2021	10:40	no data	100693.94	4537604.05	40 53.526105	073 44.364221	Nearshore Dolphin
2	ECR-A-1132	B	11/13/2021	10:42	no data	100716.15	4537597.53	40 53.523242	073 44.348204	Nearshore Dolphin
2	ECR-A-1132	C	11/13/2021	10:44	no data	100707.11	4537615.84	40 53.532841	073 44.355326	Nearshore Dolphin
2	ECR-B-1133	A	11/13/2021	11:14	no data	101206.77	4538210.70	40 53.867864	073 44.023545	Nearshore Dolphin
2	ECR-B-1133	B	11/13/2021	11:18	no data	101187.04	4538207.71	40 53.865677	073 44.037436	Nearshore Dolphin

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
2	ECR-B-1133	C	11/13/2021	11:19	no data	101195.50	4538216.86	40 53.870853	073 44.031783	Nearshore Dolphin
2	ECR-A-1134	A	11/13/2021	11:42	no data	101955.85	4538537.46	40 54.065733	073 43.504330	Nearshore Dolphin
2	ECR-A-1134	B	11/13/2021	11:44	no data	101967.76	4538550.11	40 54.072895	073 43.496361	Nearshore Dolphin
2	ECR-A-1134	C	11/13/2021	11:49	no data	101972.08	4538527.98	40 54.061100	073 43.492444	Nearshore Dolphin
2	ECR-B-1135	A	11/13/2021	12:10	no data	102896.15	4538830.84	40 54.251148	073 42.848026	Nearshore Dolphin
2	ECR-B-1135	B	11/13/2021	12:12	no data	102909.09	4538820.70	40 54.246062	073 42.838450	Nearshore Dolphin
2	ECR-B-1135	C	11/13/2021	12:13	no data	102909.52	4538840.03	40 54.256487	073 42.838885	Nearshore Dolphin
2	ECR-A-1136	A	11/13/2021	12:34	no data	103883.84	4539129.32	40 54.440627	073 42.158195	Nearshore Dolphin
2	ECR-A-1136	B	11/13/2021	12:36	no data	103868.35	4539135.42	40 54.443463	073 42.169426	Nearshore Dolphin
2	ECR-A-1136	C	11/13/2021	12:43	no data	103868.61	4539121.31	40 54.435870	073 42.168702	Nearshore Dolphin
2	ECR-B-1137	A	11/14/2021	9:32	no data	104828.14	4539420.06	40 54.624614	073 41.498807	Nearshore Dolphin
2	ECR-B-1137	B	11/14/2021	9:34	no data	104841.07	4539420.89	40 54.625436	073 41.489657	Nearshore Dolphin
2	ECR-B-1137	C	11/14/2021	9:36	no data	104834.91	4539432.22	40 54.631361	073 41.494464	Nearshore Dolphin
2	ECR-B-1137	D	11/14/2021	9:38	no data	104824.27	4539428.34	40 54.628962	073 41.501871	Nearshore Dolphin
2	ECR-A-1138	A	11/14/2021	9:58	no data	105786.90	4539702.71	40 54.804601	073 40.828776	Nearshore Dolphin
2	ECR-A-1138	B	11/14/2021	10:01	no data	105789.55	4539683.65	40 54.794410	073 40.826169	Nearshore Dolphin
2	ECR-A-1138	C	11/14/2021	10:03	no data	105803.90	4539699.68	40 54.803460	073 40.816589	Nearshore Dolphin
2	ECR-A-1138	D	11/14/2021	10:05	no data	105804.22	4539686.30	40 54.796262	073 40.815852	Nearshore Dolphin
3	ECR-B-201	A	8/29/2021	17:11	-24.51	133736.96	4546453.61	40 59.22187	073 21.21397	
3	ECR-B-201	B	8/29/2021	17:18	-24.30	133751.67	4546450.23	40 59.22045	073 21.20339	
3	ECR-B-201	C	8/29/2021	17:23	-24.28	133765.26	4546457.93	40 59.22496	073 21.19400	
3	ECR-A-202	A	8/29/2021	15:22	-24.45	134701.29	4546720.14	40 59.39143	073 20.53755	
3	ECR-A-202	B	8/29/2021	15:28	-24.45	134717.85	4546720.28	40 59.39195	073 20.52578	
3	ECR-A-202	C	8/29/2021	15:33	-24.71	134732.47	4546720.31	40 59.39236	073 20.51538	
3	ECR-B-203	A	8/29/2021	13:30	-23.40	135637.33	4546957.96	40 59.54470	073 19.88018	
3	ECR-B-203	B	8/29/2021	13:36	-23.42	135649.51	4546949.90	40 59.54068	073 19.87123	
3	ECR-B-203	C	8/29/2021	13:41	-23.38	135663.29	4546956.30	40 59.54450	073 19.86165	
3	ECR-A-204	A	8/29/2021	10:57	-22.12	136663.36	4547236.15	40 59.72207	073 19.16016	
3	ECR-A-204	B	8/29/2021	11:02	-22.04	136650.43	4547232.45	40 59.71973	073 19.16923	
3	ECR-A-204	C	8/29/2021	11:08	-22.05	136643.47	4547219.19	40 59.71239	073 19.17371	
3	ECR-B-205	A	8/29/2021	10:09	-21.85	137629.51	4547493.00	40 59.88627	073 18.48192	
3	ECR-B-205	B	8/29/2021	10:16	-21.83	137622.49	4547479.58	40 59.87884	073 18.48644	
3	ECR-B-205	C	8/29/2021	10:21	-21.78	137607.83	4547482.60	40 59.88008	073 18.49697	
3	ECR-A-206	A	8/29/2021	07:52	-22.53	138589.76	4547745.39	41 00.04784	073 17.80766	
3	ECR-A-206	B	8/29/2021	07:57	-22.57	138583.66	4547731.64	41 00.04027	073 17.81151	
3	ECR-A-206	C	8/29/2021	08:03	-22.50	138573.79	4547742.27	41 00.04573	073 17.81891	
3	ECR-B-207	A	8/29/2021	07:01	-24.29	139545.86	4548001.48	41 00.21124	073 17.13641	
3	ECR-B-207	B	8/29/2021	07:06	-24.12	139540.51	4547987.83	41 00.20374	073 17.13974	
3	ECR-B-207	C	8/29/2021	07:11	-24.17	139526.08	4547991.08	41 00.20511	073 17.15013	
3	ECR-A-208	A	8/29/2021	04:48	-26.43	140515.49	4548256.88	41 00.37456	073 16.45546	
3	ECR-A-208	B	8/29/2021	04:54	-26.62	140511.36	4548272.16	41 00.38268	073 16.45894	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-A-208	C	8/29/2021	05:00	-26.53	140524.53	4548266.21	41 00.37982	073 16.44936	
3	ECR-B-209	A	8/29/2021	04:00	-28.75	141492.16	4548394.06	41 00.47428	073 15.76533	
3	ECR-B-209	B	8/29/2021	04:07	-28.63	141491.98	4548379.55	41 00.46645	073 15.76495	
3	ECR-B-209	C	8/29/2021	04:12	-28.59	141506.59	4548374.99	41 00.46438	073 15.75439	
3	ECR-A-210	A	8/29/2021	01:55	-27.09	142419.21	4548023.28	41 00.29883	073 15.09283	
3	ECR-A-210	B	8/29/2021	02:00	-27.24	142423.48	4548038.11	41 00.30694	073 15.09031	
3	ECR-A-210	C	8/29/2021	02:06	-27.24	142434.14	4548029.87	41 00.30278	073 15.08244	
3	ECR-B-211	A	8/29/2021	00:59	-28.13	143396.71	4547966.35	41 00.29381	073 14.39535	
3	ECR-B-211	B	8/29/2021	01:04	-28.17	143408.18	4547976.82	41 00.29975	073 14.38755	
3	ECR-B-211	C	8/29/2021	01:09	-28.18	143421.65	4547973.01	41 00.29805	073 14.37784	
3	ECR-A-212	A	8/28/2021	22:44	-30.55	144400.80	4548182.46	41 00.43659	073 13.68837	
3	ECR-A-212	B	8/28/2021	22:49	-30.59	144390.21	4548192.23	41 00.44157	073 13.69624	
3	ECR-A-212	C	8/28/2021	22:55	-30.59	144375.25	4548189.42	41 00.43967	073 13.70679	
3	ECR-A-212	D	8/28/2021	23:25	-30.65	144367.87	4548174.72	41 00.43155	073 13.71153	
3	ECR-A-212	E	8/28/2021	23:30	-30.44	144379.24	4548166.50	41 00.42742	073 13.70316	
3	ECR-A-212	F	8/28/2021	23:36	-30.59	144393.49	4548171.15	41 00.43030	073 13.69318	
3	ECR-B-213	A	8/28/2021	00:52	-33.99	145381.34	4548402.81	41 00.58097	073 12.99824	
3	ECR-B-213	B	8/28/2021	00:56	-34.13	145396.12	4548406.33	41 00.58325	073 12.98784	
3	ECR-B-213	C	8/28/2021	01:03	-34.25	145398.37	4548420.75	41 00.59108	073 12.98674	
3	ECR-B-213	D	8/28/2021	01:41	-34.29	145372.62	4548411.57	41 00.58546	073 13.00474	
3	ECR-B-213	E	8/28/2021	01:45	-34.45	145378.79	4548422.96	41 00.59176	073 13.00075	
3	ECR-B-213	F	8/28/2021	01:49	-34.46	145389.48	4548428.61	41 00.59508	073 12.99333	
3	ECR-A-214	A	8/27/2021	22:45	-34.36	146345.17	4548641.02	41 00.73447	073 12.32056	
3	ECR-A-214	B	8/27/2021	22:51	-34.39	146331.60	4548646.77	41 00.73721	073 12.33041	
3	ECR-A-214	C	8/27/2021	22:57	-34.32	146319.67	4548638.19	41 00.73228	073 12.33861	
3	ECR-B-215	A	8/27/2021	21:12	-34.56	147321.38	4548855.13	41 00.87524	073 11.63318	
3	ECR-B-215	B	8/27/2021	21:17	-34.48	147311.42	4548844.11	41 00.86904	073 11.63989	
3	ECR-B-215	C	8/27/2021	21:23	-34.56	147295.73	4548848.05	41 00.87076	073 11.65120	
3	ECR-A-216	A	8/27/2021	19:43	-35.15	148311.37	4549089.64	41 01.02730	073 10.93664	
3	ECR-A-216	B	8/27/2021	19:47	-35.09	148297.90	4549088.25	41 01.02620	073 10.94618	
3	ECR-A-216	C	8/27/2021	19:52	-35.19	148282.87	4549084.70	41 01.02389	073 10.95675	
3	ECR-B-217	A	8/27/2021	18:50	-36.27	149289.96	4549329.50	41 01.18187	073 10.24834	
3	ECR-B-217	B	8/27/2021	18:56	-36.44	149295.01	4549314.36	41 01.17384	073 10.24423	
3	ECR-B-217	C	8/27/2021	19:02	-36.38	149309.77	4549311.80	41 01.17284	073 10.23364	
3	ECR-A-218	A	8/27/2021	16:34	-35.61	150241.69	4549547.79	41 01.32407	073 09.57837	
3	ECR-A-218	B	8/27/2021	16:39	-35.53	150229.74	4549555.19	41 01.32775	073 09.58712	
3	ECR-A-218	C	8/27/2021	16:44	-35.54	150217.09	4549546.72	41 01.32286	073 09.59584	
3	ECR-B-219	A	8/27/2021	14:40	-36.75	151134.56	4549747.06	41 01.45443	073 08.94959	
3	ECR-B-219	B	8/27/2021	14:46	-36.76	151148.54	4549741.41	41 01.45175	073 08.93944	
3	ECR-B-219	C	8/27/2021	14:50	-36.78	151162.48	4549747.04	41 01.45514	073 08.92971	
3	ECR-A-220	A	8/27/2021	12:57	-32.72	152244.13	4550008.77	41 01.62395	073 08.16861	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-A-220	B	8/27/2021	13:02	-32.92	152228.89	4550005.10	41 01.62159	073 08.17934	
3	ECR-A-220	C	8/27/2021	13:07	-33.07	152214.13	4550001.11	41 01.61906	073 08.18971	
3	ECR-B-221	A	8/27/2021	10:56	-35.03	153161.04	4550227.68	41 01.76540	073 07.52328	
3	ECR-B-221	B	8/27/2021	11:00	-35.09	153148.30	4550233.84	41 01.76839	073 07.53256	
3	ECR-B-221	C	8/27/2021	11:05	-34.95	153139.76	4550221.31	41 01.76142	073 07.53822	
3	ECR-A-222	A	8/27/2021	06:35	-20.64	154123.99	4550412.97	41 01.88984	073 06.84399	
3	ECR-A-222	B	8/27/2021	06:42	-20.79	154128.35	4550398.40	41 01.88209	073 06.84040	
3	ECR-A-222	C	8/27/2021	06:47	-20.49	154114.57	4550403.87	41 01.88469	073 06.85039	
3	ECR-B-223	A	8/25/2021	16:37	-24.50	155124.91	4550611.31	41 02.02221	073 06.13806	
3	ECR-B-223	B	8/25/2021	16:42	-24.29	155110.40	4550608.43	41 02.02028	073 06.14829	
3	ECR-B-223	C	8/25/2021	16:48	-24.18	155098.76	4550617.25	41 02.02474	073 06.15688	
3	ECR-A-224	A	8/25/2021	15:03	-29.12	156093.07	4550854.62	41 02.17791	073 05.45690	
3	ECR-A-224	B	8/25/2021	15:07	-29.06	156084.27	4550841.00	41 02.17035	073 05.46271	
3	ECR-A-224	C	8/25/2021	15:12	-29.02	156074.17	4550829.58	41 02.16394	073 05.46952	
3	ECR-B-225	A	8/25/2021	11:29	-33.05	157065.80	4550927.86	41 02.24199	073 04.76675	
3	ECR-B-225	B	8/25/2021	11:34	-33.10	157075.41	4550939.61	41 02.24857	073 04.76031	
3	ECR-B-225	C	8/25/2021	11:37	-33.15	157089.70	4550939.14	41 02.24867	073 04.75011	
3	ECR-A-226	A	8/25/2021	10:29	-33.28	158055.00	4551072.53	41 02.34492	073 04.06723	
3	ECR-A-226	B	8/25/2021	10:35	-33.32	158066.68	4551063.82	41 02.34052	073 04.05863	
3	ECR-A-226	C	8/25/2021	10:39	-33.42	158078.20	4551072.70	41 02.34560	073 04.05072	
3	ECR-B-227	A	8/25/2021	09:02	-33.48	159050.97	4551317.19	41 02.50186	073 03.36616	
3	ECR-B-227	B	8/25/2021	09:06	-33.45	159037.81	4551322.78	41 02.50455	073 03.37572	
3	ECR-B-227	C	8/25/2021	09:11	-33.54	159025.09	4551314.43	41 02.49972	073 03.38450	
3	ECR-A-228	A	8/25/2021	08:05	-33.33	160004.10	4551560.98	41 02.65719	073 02.69551	
3	ECR-A-228	B	8/25/2021	08:11	-33.39	160013.21	4551547.71	41 02.65026	073 02.68859	
3	ECR-A-228	C	8/25/2021	08:16	-33.45	159998.26	4551548.25	41 02.65018	073 02.69925	
3	ECR-B-229	A	8/25/2021	06:45	-35.82	160985.77	4551811.69	41 02.81690	073 02.00471	
3	ECR-B-229	B	8/25/2021	06:50	-35.86	160971.05	4551808.88	41 02.81502	073 02.01510	
3	ECR-B-229	C	8/25/2021	06:56	-35.77	160966.65	4551794.61	41 02.80722	073 02.01776	
3	ECR-A-230	A	8/25/2021	05:15	-36.00	161950.67	4552043.01	41 02.96567	073 01.32515	
3	ECR-A-230	B	8/25/2021	05:22	-35.93	161948.31	4552058.17	41 02.97379	073 01.32733	
3	ECR-A-230	C	8/25/2021	05:26	-35.86	161936.21	4552049.45	41 02.96879	073 01.33566	
3	ECR-B-231	A	8/25/2021	03:48	-36.70	162930.59	4552286.37	41 03.12125	073 00.63522	
3	ECR-B-231	B	8/25/2021	03:53	-36.58	162920.39	4552294.93	41 03.12561	073 00.64277	
3	ECR-B-231	C	8/25/2021	03:56	-36.57	162906.78	4552290.86	41 03.12308	073 00.65233	
3	ECR-A-232	A	8/25/2021	01:37	-35.22	163894.38	4552518.61	41 03.27036	072 59.95637	
3	ECR-A-232	B	8/25/2021	01:42	-35.25	163881.34	4552522.88	41 03.27234	072 59.96580	
3	ECR-A-232	C	8/25/2021	01:47	-35.08	163878.34	4552537.80	41 03.28031	072 59.96842	
3	ECR-B-233	A	8/25/2021	00:36	-34.82	164861.70	4552762.02	41 03.42552	072 59.27531	
3	ECR-B-233	B	8/25/2021	00:41	-34.86	164867.88	4552775.54	41 03.43296	072 59.27135	
3	ECR-B-233	C	8/25/2021	00:47	-34.94	164857.46	4552786.54	41 03.43863	072 59.27913	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-A-234	A	8/24/2021	22:08	-28.67	165828.85	4552959.64	41 03.55591	072 58.59282	
3	ECR-A-234	B	8/24/2021	22:14	-28.55	165831.88	4552975.38	41 03.56448	072 58.59118	
3	ECR-A-234	C	8/24/2021	22:18	-28.44	165835.43	4552989.82	41 03.57235	072 58.58912	
3	ECR-B-235	A	8/24/2021	20:54	-27.58	166455.27	4552987.70	41 03.58645	072 58.14751	
3	ECR-B-235	B	8/24/2021	20:59	-27.58	166442.97	4552995.79	41 03.59051	072 58.15653	
3	ECR-B-235	C	8/24/2021	21:03	-27.63	166428.37	4552993.94	41 03.58916	072 58.16687	
3	ECR-A-236	A	8/24/2021	19:17	-29.02	167697.92	4552955.20	41 03.59940	072 57.26124	
3	ECR-A-236	B	8/24/2021	19:21	-28.99	167683.02	4552958.04	41 03.60057	072 57.27194	
3	ECR-A-236	C	8/24/2021	19:26	-28.79	167669.85	4552950.07	41 03.59595	072 57.28107	
3	ECR-B-237	A	8/24/2021	14:29	-31.13	168694.35	4553214.19	41 03.76341	072 56.55976	
3	ECR-B-237	B	8/24/2021	14:34	-30.98	168690.52	4553199.38	41 03.75533	072 56.56201	
3	ECR-B-237	C	8/24/2021	14:38	-31.28	168675.48	4553197.20	41 03.75379	072 56.57265	
3	ECR-A-238	A	8/24/2021	11:43	-30.43	169726.77	4553482.67	41 03.93335	072 55.83289	
3	ECR-A-238	B	8/24/2021	11:49	-30.43	169727.56	4553497.11	41 03.94115	072 55.83278	
3	ECR-A-238	C	8/24/2021	11:53	-30.45	169740.61	4553492.90	41 03.93920	072 55.82335	
3	ECR-A-238	D	8/24/2021	12:55	-30.70	169747.04	4553479.31	41 03.93203	072 55.81833	
3	ECR-A-238	E	8/24/2021	13:04	-30.80	169735.46	4553470.41	41 03.92695	072 55.82629	
3	ECR-A-238	F	8/24/2021	13:08	-30.80	169719.42	4553475.51	41 03.92930	072 55.83789	
3	ECR-B-239	A	8/24/2021	10:16	-29.77	170682.86	4553743.72	41 04.09735	072 55.16008	
3	ECR-B-239	B	8/24/2021	10:20	-29.78	170691.55	4553732.53	41 04.09152	072 55.15353	
3	ECR-B-239	C	8/24/2021	10:25	-29.82	170706.56	4553729.59	41 04.09030	072 55.14274	
3	ECR-A-240	A	8/24/2021	07:13	-28.55	171702.06	4553990.63	41 04.25519	072 54.44180	
3	ECR-A-240	B	8/24/2021	07:19	-28.54	171694.38	4554002.10	41 04.26119	072 54.44764	
3	ECR-A-240	C	8/24/2021	07:24	-28.63	171686.70	4553990.21	41 04.25459	072 54.45273	
3	ECR-B-241	A	8/24/2021	04:41	-28.87	172647.10	4554248.35	41 04.41699	072 53.77665	
3	ECR-B-241	B	8/24/2021	04:46	-28.90	172632.57	4554252.58	41 04.41893	072 53.78714	
3	ECR-B-241	C	8/24/2021	04:53	-28.89	172638.01	4554228.45	41 04.40604	072 53.78249	
3	ECR-A-242	A	8/24/2021	03:18	-29.32	173607.58	4554489.19	41 04.57001	072 53.09989	
3	ECR-A-242	B	8/24/2021	03:24	-29.26	173607.16	4554503.76	41 04.57785	072 53.10066	
3	ECR-A-242	C	8/24/2021	03:31	-29.28	173595.51	4554482.12	41 04.56590	072 53.10827	
3	ECR-B-243	A	8/24/2021	00:38	-29.75	174577.13	4554734.44	41 04.72555	072 52.41676	
3	ECR-B-243	B	8/24/2021	00:45	-29.67	174582.59	4554746.93	41 04.73242	072 52.41326	
3	ECR-B-243	C	8/24/2021	00:48	-29.72	174570.65	4554755.61	41 04.73682	072 52.42205	
3	ECR-B-243	D	8/30/2021	04:52	-29.26	174564.64	4554731.82	41 04.72384	072 52.42558	
3	ECR-B-243	E	8/30/2021	04:58	-29.23	174558.81	4554742.98	41 04.72972	072 52.43009	
3	ECR-B-243	F	8/30/2021	05:03	-29.19	174560.61	4554753.97	41 04.73569	072 52.42915	
3	ECR-A-244	A	8/23/2021	22:40	-28.69	175544.07	4555002.99	41 04.89353	072 51.73617	
3	ECR-A-244	B	8/23/2021	22:47	-28.90	175532.45	4554993.36	41 04.88806	072 51.74414	
3	ECR-A-244	C	8/23/2021	22:52	-28.89	175528.57	4555007.58	41 04.89564	072 51.74736	
3	ECR-A-244	D	8/23/2021	23:22	-29.17	175534.38	4554979.78	41 04.88079	072 51.74234	
3	ECR-A-244	E	8/23/2021	23:27	-29.13	175547.59	4554983.65	41 04.88319	072 51.73305	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-A-244	F	8/23/2021	23:32	-29.08	175555.49	4554993.58	41 04.88874	072 51.72773	
3	ECR-A-244	G	8/30/2021	06:27	-28.86	175546.22	4554991.11	41 04.88718	072 51.73425	
3	ECR-A-244	H	8/30/2021	06:34	-28.84	175525.93	4554999.39	41 04.89116	072 51.74898	
3	ECR-A-244	I	8/30/2021	06:39	-28.90	175527.95	4554985.76	41 04.88386	072 51.74711	
3	ECR-B-245	A	8/30/2021	08:08	-28.35	176517.25	4555251.98	41 05.05106	072 51.05044	
3	ECR-B-245	B	8/30/2021	08:13	-28.18	176503.11	4555256.27	41 05.05303	072 51.06066	
3	ECR-B-245	C	8/30/2021	08:18	-28.32	176493.91	4555243.72	41 05.04605	072 51.06682	
3	ECR-A-246	A	8/30/2021	08:51	-28.00	177516.35	4555508.23	41 05.21304	072 50.34642	
3	ECR-A-246	B	8/30/2021	08:58	-27.96	177502.36	4555506.43	41 05.21174	072 50.35633	
3	ECR-A-246	C	8/30/2021	09:02	-27.96	177487.27	4555503.24	41 05.20966	072 50.36699	
3	ECR-B-247	A	8/30/2021	10:28	-27.39	178454.84	4555755.16	41 05.36849	072 49.68524	
3	ECR-B-247	B	8/30/2021	10:34	-27.42	178440.34	4555760.56	41 05.37106	072 49.69574	
3	ECR-B-247	C	8/30/2021	10:39	-27.34	178427.65	4555753.01	41 05.36669	072 49.70455	
3	ECR-A-301	A	8/30/2021	11:18	-27.29	179417.50	4556002.31	41 05.52457	072 49.00678	
3	ECR-A-301	B	8/30/2021	11:23	-27.27	179403.83	4556008.93	41 05.52782	072 49.01673	
3	ECR-A-301	C	8/30/2021	11:30	-27.18	179402.67	4555994.07	41 05.51978	072 49.01709	
3	ECR-B-302	A	8/30/2021	13:27	-27.58	180365.02	4556244.78	41 05.67771	072 48.33891	
3	ECR-B-302	B	8/30/2021	13:33	-27.58	180381.44	4556241.14	41 05.67613	072 48.32709	
3	ECR-B-302	C	8/30/2021	13:38	-27.72	180391.57	4556252.30	41 05.68239	072 48.32022	
3	ECR-A-303	A	8/30/2021	14:21	-27.92	181347.00	4556506.50	41 05.84197	072 47.64701	
3	ECR-A-303	B	8/30/2021	14:26	-27.88	181348.74	4556521.47	41 05.85009	072 47.64624	
3	ECR-A-303	C	8/30/2021	14:34	-27.90	181359.70	4556498.96	41 05.83821	072 47.63772	
3	ECR-B-304	A	8/30/2021	15:50	-28.23	182302.75	4556733.97	41 05.98708	072 46.97270	
3	ECR-B-304	B	8/30/2021	15:56	-28.22	182317.17	4556731.13	41 05.98589	072 46.96232	
3	ECR-B-304	C	8/30/2021	16:01	-28.30	182331.65	4556735.55	41 05.98861	072 46.95214	
3	ECR-A-305	A	8/30/2021	16:50	-28.52	183178.20	4556771.18	41 06.02764	072 46.34970	
3	ECR-A-305	B	8/30/2021	16:55	-28.52	183188.19	4556784.11	41 06.03485	072 46.34297	
3	ECR-A-305	C	8/30/2021	17:01	-28.52	183202.10	4556789.50	41 06.03808	072 46.33322	
3	ECR-B-306	A	8/30/2021	19:04	-28.53	184217.72	4556405.35	41 05.85461	072 45.59728	
3	ECR-B-306	B	8/30/2021	19:10	-28.46	184231.01	4556398.95	41 05.85146	072 45.58761	
3	ECR-B-306	C	8/30/2021	19:15	-28.56	184242.94	4556408.00	41 05.85662	072 45.57938	
3	ECR-A-307	A	8/30/2021	19:55	-28.47	185220.31	4556551.40	41 05.95670	072 44.88697	
3	ECR-A-307	B	8/30/2021	20:00	-28.36	185215.25	4556537.30	41 05.94897	072 44.89015	
3	ECR-A-307	C	8/30/2021	20:05	-28.35	185205.09	4556526.15	41 05.94272	072 44.89705	
3	ECR-B-308	A	8/30/2021	21:46	-27.97	186155.95	4556845.84	41 06.13720	072 44.22890	
3	ECR-B-308	B	8/30/2021	21:51	-27.84	186141.23	4556842.24	41 06.13492	072 44.23929	
3	ECR-B-308	C	8/30/2021	21:56	-27.80	186135.27	4556828.72	41 06.12749	072 44.24313	
3	ECR-A-309	A	8/31/2021	09:52	-27.92	187041.63	4557104.23	41 06.29704	072 43.60529	
3	ECR-A-309	B	8/31/2021	09:57	-27.99	187028.96	4557106.71	41 06.29809	072 43.61441	
3	ECR-A-309	C	8/31/2021	10:00	-28.14	187014.30	4557103.63	41 06.29608	072 43.62477	
3	ECR-B-310	A	8/30/2021	23:26	-27.09	188083.99	4557448.88	41 06.50696	072 42.87253	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-B-310	B	8/30/2021	23:32	-27.08	188070.09	4557446.23	41 06.50521	072 42.88236	
3	ECR-B-310	C	8/30/2021	23:37	-27.08	188062.51	4557433.50	41 06.49817	072 42.88738	
3	ECR-A-311	A	8/31/2021	00:50	-26.84	189031.90	4557734.75	41 06.68293	072 42.20526	
3	ECR-A-311	B	8/31/2021	00:55	-26.78	189037.07	4557719.97	41 06.67508	072 42.20111	
3	ECR-A-311	C	8/31/2021	01:01	-26.90	189023.83	4557726.23	41 06.67815	072 42.21075	
3	ECR-B-312	A	8/31/2021	02:35	-26.90	189973.62	4558029.47	41 06.86348	072 41.54259	
3	ECR-B-312	B	8/31/2021	02:41	-26.92	189979.35	4558043.26	41 06.87105	072 41.53892	
3	ECR-B-312	C	8/31/2021	02:46	-26.99	189993.93	4558042.59	41 06.87102	072 41.52851	
3	ECR-A-313	A	8/31/2021	03:19	-26.73	190934.96	4558323.42	41 07.04400	072 40.86585	
3	ECR-A-313	B	8/31/2021	03:23	-26.80	190941.48	4558337.40	41 07.05169	072 40.86162	
3	ECR-A-313	C	8/31/2021	03:28	-26.75	190955.58	4558338.62	41 07.05267	072 40.85161	
3	ECR-B-314	A	8/31/2021	04:54	-26.97	191883.45	4558624.98	41 07.22826	072 40.19845	
3	ECR-B-314	B	8/31/2021	04:59	-26.96	191885.70	4558638.79	41 07.23576	072 40.19726	
3	ECR-B-314	C	8/31/2021	05:04	-26.94	191899.86	4558643.63	41 07.23869	072 40.18730	
3	ECR-A-315	A	8/31/2021	05:32	-26.89	192852.20	4558922.78	41 07.41089	072 39.51640	
3	ECR-A-315	B	8/31/2021	05:38	-26.92	192842.45	4558934.29	41 07.41688	072 39.52370	
3	ECR-A-315	C	8/31/2021	05:43	-26.94	192856.91	4558935.02	41 07.41760	072 39.51341	
3	ECR-B-316	A	8/31/2021	08:18	-26.58	193814.86	4559235.12	41 07.60117	072 38.83907	
3	ECR-B-316	B	8/31/2021	08:24	-26.54	193801.00	4559241.84	41 07.60448	072 38.84916	
3	ECR-B-316	C	8/31/2021	08:29	-26.45	193791.76	4559230.36	41 07.59808	072 38.85540	
3	ECR-A-317	A	8/31/2021	11:12	-25.59	194757.48	4559530.41	41 07.78173	072 38.17546	
3	ECR-A-317	B	8/31/2021	11:18	-25.45	194749.01	4559543.07	41 07.78837	072 38.18188	
3	ECR-A-317	C	8/31/2021	11:22	-25.57	194744.95	4559529.71	41 07.78107	072 38.18438	
3	ECR-B-318	A	8/31/2021	13:19	-25.09	195724.08	4559837.01	41 07.96887	072 37.49501	
3	ECR-B-318	B	8/31/2021	13:25	-25.18	195710.74	4559842.52	41 07.97154	072 37.50469	
3	ECR-B-318	C	8/31/2021	13:30	-25.17	195697.72	4559835.10	41 07.96724	072 37.51376	
3	ECR-A-319	A	8/31/2021	14:14	-24.49	196654.39	4560116.94	41 08.14075	072 36.83959	
3	ECR-A-319	B	8/31/2021	14:19	-24.54	196664.91	4560130.84	41 08.14848	072 36.83250	
3	ECR-A-319	C	8/31/2021	14:25	-24.56	196675.29	4560141.02	41 08.15420	072 36.82540	
3	ECR-B-320	A	8/31/2021	15:39	-23.47	197609.19	4560415.98	41 08.32342	072 36.16721	
3	ECR-B-320	B	8/31/2021	15:44	-23.43	197624.73	4560419.32	41 08.32556	072 36.15622	
3	ECR-B-320	C	8/31/2021	15:54	-23.51	197632.43	4560433.06	41 08.33315	072 36.15113	
3	ECR-A-321	A	8/31/2021	16:30	-22.57	198573.96	4560714.45	41 08.50594	072 35.48763	
3	ECR-A-321	B	8/31/2021	16:36	-22.74	198573.58	4560729.09	41 08.51382	072 35.48833	
3	ECR-A-321	C	8/31/2021	16:41	-22.76	198576.03	4560744.20	41 08.52203	072 35.48702	
3	ECR-B-322	A	8/31/2021	19:02	-21.55	199556.35	4560828.92	41 08.58953	072 34.79000	
3	ECR-B-322	B	8/31/2021	19:09	-22.11	199544.29	4560836.50	41 08.59335	072 34.79882	
3	ECR-B-322	C	8/31/2021	19:15	-21.86	199546.64	4560848.44	41 08.59984	072 34.79750	
3	ECR-A-323	A	9/1/2021	10:46	-22.54	200555.92	4560746.36	41 08.56715	072 34.07430	
3	ECR-A-323	B	9/1/2021	10:51	-22.70	200557.36	4560732.65	41 08.55979	072 34.07287	
3	ECR-A-323	C	9/1/2021	10:58	-20.60	200534.89	4560738.11	41 08.56224	072 34.08907	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
3	ECR-B-324	A	8/31/2021	21:14	-21.78	201542.28	4560543.19	41 08.47935	072 33.36452	
3	ECR-B-324	B	8/31/2021	21:20	-21.75	201524.62	4560543.53	41 08.47914	072 33.37713	
3	ECR-B-324	C	8/31/2021	21:27	-21.39	201520.16	4560562.85	41 08.48947	072 33.38088	
3	ECR-A-325	A	8/31/2021	22:23	-25.52	202540.07	4560484.15	41 08.46947	072 32.65081	
3	ECR-A-325	B	8/31/2021	22:29	-25.20	202527.86	4560490.90	41 08.47284	072 32.65971	
3	ECR-A-325	C	8/31/2021	22:35	-25.23	202516.89	4560502.14	41 08.47867	072 32.66787	
3	ECR-B-326	A	9/1/2021	01:03	-28.43	203529.19	4560445.11	41 08.47012	072 31.94385	
3	ECR-B-326	B	9/1/2021	01:09	-28.64	203538.40	4560460.30	41 08.47852	072 31.93772	
3	ECR-B-326	C	9/1/2021	01:15	-28.03	203524.42	4560464.96	41 08.48072	072 31.94783	
3	ECR-C-1101	A	9/15/2021	10:37	-21.44	131923.99	4545987.71	40 58.92188	073 22.48674	
3	ECR-C-1101	B	9/15/2021	10:43	-21.45	131912.34	4545984.16	40 58.91965	073 22.49490	
3	ECR-C-1101	C	9/15/2021	10:50	-21.46	131916.50	4545972.10	40 58.91327	073 22.49151	
3	ECR-C-1207	A	8/27/2021	08:44	-20.30	154012.07	4550402.07	41 01.88111	073 06.92331	
3	ECR-C-1207	B	8/27/2021	09:09	-20.03	154004.08	4550404.27	41 01.88209	073 06.92907	
3	ECR-C-1207	C	8/27/2021	09:12	-19.97	153998.39	4550403.29	41 01.88142	073 06.93308	
3	ECR-C-1208	A	8/25/2021	19:23	-19.37	154222.00	4550418.24	41 01.89517	073 06.77439	
3	ECR-C-1208	B	8/25/2021	19:27	-21.53	154214.82	4550411.46	41 01.89133	073 06.77928	
3	ECR-C-1208	C	8/25/2021	19:31	-21.63	154205.17	4550412.85	41 01.89184	073 06.78619	
3	ECR-C-1215	A	9/15/2021	09:03	-23.49	132809.99	4546221.95	40 59.07205	073 21.86499	
3	ECR-C-1215	B	9/15/2021	09:08	-23.45	132798.27	4546219.29	40 59.07030	073 21.87323	
3	ECR-C-1215	C	9/15/2021	09:15	-23.42	132803.51	4546199.94	40 59.06001	073 21.86882	
4	ECR-A-327	A	9/1/2021	02:07	-28.38	204363.49	4559698.87	41 08.08580	072 31.32693	
4	ECR-A-327	B	9/1/2021	02:12	-28.46	204368.42	4559715.84	41 08.09507	072 31.32390	
4	ECR-A-327	C	9/1/2021	02:18	-28.67	204379.17	4559706.12	41 08.09006	072 31.31596	
4	ECR-B-328	A	9/1/2021	04:01	-26.48	205046.11	4559009.96	41 07.72906	072 30.82001	
4	ECR-B-328	B	9/1/2021	04:06	-26.67	205060.18	4559020.66	41 07.73514	072 30.81028	
4	ECR-B-328	C	9/1/2021	04:12	-26.94	205050.78	4559035.35	41 07.74285	072 30.81740	
4	ECR-A-329	A	9/1/2021	04:53	-28.83	206004.69	4559109.74	41 07.80373	072 30.13895	
4	ECR-A-329	B	9/1/2021	04:58	-28.93	206018.84	4559105.38	41 07.80169	072 30.12873	
4	ECR-A-329	C	9/1/2021	05:03	-28.85	206025.95	4559117.79	41 07.80854	072 30.12401	
4	ECR-B-330	A	9/1/2021	06:50	-29.78	206968.83	4559399.06	41 07.98072	072 29.45932	
4	ECR-B-330	B	9/1/2021	06:57	-29.85	206975.96	4559386.21	41 07.97395	072 29.45387	
4	ECR-B-330	C	9/1/2021	07:02	-29.98	206990.90	4559385.42	41 07.97384	072 29.44318	
4	ECR-A-331	A	9/1/2021	07:30	-32.84	207933.35	4559676.52	41 08.15125	072 28.77902	
4	ECR-A-331	B	9/1/2021	07:35	-32.92	207944.24	4559666.22	41 08.14593	072 28.77095	
4	ECR-A-331	C	9/1/2021	07:40	-32.85	207950.81	4559678.79	41 08.15285	072 28.76662	
4	ECR-B-332	A	9/1/2021	13:27	-32.67	208902.24	4559971.27	41 08.33115	072 28.09603	
4	ECR-B-332	B	9/1/2021	13:33	-32.82	208888.49	4559964.26	41 08.32706	072 28.10563	
4	ECR-B-332	C	9/1/2021	13:38	-32.86	208889.97	4559948.86	41 08.31879	072 28.10414	
4	ECR-A-333	A	9/1/2021	14:39	-38.28	209848.67	4560224.64	41 08.48816	072 27.42782	
4	ECR-A-333	B	9/1/2021	14:44	-38.90	209858.56	4560236.79	41 08.49493	072 27.42110	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
4	ECR-A-333	C	9/1/2021	14:49	-39.05	209870.80	4560245.77	41 08.50003	072 27.41263	
4	ECR-B-334	A	9/1/2021	17:34	-35.73	210820.06	4560501.94	41 08.65856	072 26.74242	
4	ECR-B-334	B	9/1/2021	17:41	-35.74	210805.35	4560519.17	41 08.66754	072 26.75341	
4	ECR-B-334	C	9/1/2021	17:47	-36.19	210823.29	4560530.17	41 08.67386	072 26.74091	
4	ECR-A-335	A	9/2/2021	14:05	-37.92	211769.78	4560777.66	41 08.82758	072 26.07238	
4	ECR-A-335	B	9/2/2021	14:10	-38.01	211760.59	4560788.81	41 08.83340	072 26.07925	
4	ECR-A-335	C	9/2/2021	14:14	-39.87	211750.69	4560798.19	41 08.83825	072 26.08658	
4	ECR-B-336	A	9/2/2021	15:49	-37.75	212751.99	4561077.66	41 09.01032	072 25.37977	
4	ECR-B-336	B	9/2/2021	15:54	-37.89	212749.49	4561092.87	41 09.01848	072 25.38198	
4	ECR-B-336	C	9/2/2021	16:01	-38.33	212733.71	4561090.16	41 09.01668	072 25.39317	
4	ECR-B-336	D	9/2/2021	16:46	-38.76	212719.67	4561082.25	41 09.01212	072 25.40296	
4	ECR-B-336	E	9/2/2021	16:52	-38.67	212726.52	4561069.77	41 09.00552	072 25.39773	
4	ECR-B-336	F	9/2/2021	16:58	-38.32	212746.67	4561068.35	41 09.00519	072 25.38330	
4	ECR-A-337	A	9/2/2021	18:22	-36.93	213658.41	4561337.12	41 09.16952	072 24.74006	
4	ECR-A-337	B	9/2/2021	18:27	-36.69	213666.83	4561346.83	41 09.17494	072 24.73432	
4	ECR-A-337	C	9/2/2021	18:31	-36.88	213674.90	4561357.95	41 09.18111	072 24.72887	
4	ECR-B-338	A	9/2/2021	19:59	-37.07	214474.77	4561975.37	41 09.53114	072 24.17516	
4	ECR-B-338	B	9/2/2021	20:05	-37.16	214485.60	4561986.85	41 09.53756	072 24.16775	
4	ECR-B-338	C	9/2/2021	20:10	-37.34	214483.61	4562001.43	41 09.54538	072 24.16957	
4	ECR-A-339	A	9/2/2021	21:09	-44.09	215244.83	4562627.78	41 09.89937	072 23.64361	
4	ECR-A-339	B	9/2/2021	21:13	-43.99	215253.32	4562621.25	41 09.89602	072 23.63736	
4	ECR-A-339	C	9/2/2021	21:17	-43.73	215262.45	4562609.54	41 09.88990	072 23.63052	
4	ECR-B-340	A	9/3/2021	01:34	-42.66	216130.90	4563163.15	41 10.20685	072 23.02586	
4	ECR-B-340	B	9/3/2021	01:40	-42.48	216130.56	4563177.94	41 10.21483	072 23.02652	
4	ECR-B-340	C	9/3/2021	01:50	-42.77	216142.05	4563174.36	41 10.21314	072 23.01821	
4	ECR-B-340	D	9/3/2021	06:36	-43.48	216145.06	4563158.65	41 10.20472	072 23.01563	
4	ECR-B-340	E	9/3/2021	06:45	-43.40	216126.68	4563170.54	41 10.21075	072 23.02908	
4	ECR-B-340	F	9/3/2021	06:53	-43.60	216143.24	4563182.39	41 10.21749	072 23.01758	
4	ECR-A-341	A	9/3/2021	02:49	-43.45	217006.74	4563560.67	41 10.43969	072 22.41151	
4	ECR-A-341	B	9/3/2021	02:56	-43.45	216992.08	4563561.18	41 10.43966	072 22.42199	
4	ECR-A-341	C	9/3/2021	02:59	-43.69	216998.43	4563573.02	41 10.44618	072 22.41779	
4	ECR-B-342	A	9/3/2021	05:09	-41.84	217987.27	4563676.86	41 10.52288	072 21.71455	
4	ECR-B-342	B	9/3/2021	05:13	-41.56	217991.23	4563691.06	41 10.53062	072 21.71212	
4	ECR-B-342	C	9/3/2021	05:19	-41.56	218006.49	4563687.28	41 10.52890	072 21.70112	
4	ECR-A-343	A	9/3/2021	07:56	-39.06	218985.02	4563784.20	41 10.60158	072 21.00501	
4	ECR-A-343	B	9/3/2021	08:01	-39.65	218987.37	4563799.12	41 10.60968	072 21.00375	
4	ECR-A-343	C	9/3/2021	08:07	-39.48	219001.44	4563793.61	41 10.60700	072 20.99355	
4	ECR-A-343	D	9/3/2021	08:42	-39.66	218989.01	4563790.40	41 10.60500	072 21.00233	
4	ECR-A-343	E	9/3/2021	08:52	-39.64	218998.38	4563779.86	41 10.59951	072 20.99536	
4	ECR-A-343	F	9/3/2021	09:00	-39.68	219005.83	4563785.46	41 10.60269	072 20.99019	
4	ECR-B-344	A	9/3/2021	10:54	-34.93	219994.17	4563925.06	41 10.69853	072 20.28823	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
4	ECR-B-344	B	9/3/2021	11:00	-34.85	219982.82	4563917.06	41 10.69398	072 20.29611	
4	ECR-B-344	C	9/3/2021	11:05	-34.76	219979.19	4563902.66	41 10.68613	072 20.29831	
4	ECR-B-344	D	9/3/2021	15:57	-34.14	219994.03	4563904.15	41 10.68724	072 20.28775	
4	ECR-B-344	E	9/3/2021	16:04	-34.40	219981.31	4563925.81	41 10.69867	072 20.29743	
4	ECR-B-344	F	9/3/2021	16:09	-34.16	219970.02	4563916.02	41 10.69315	072 20.30522	
4	ECR-A-345	A	9/3/2021	12:38	-30.18	220992.54	4564016.66	41 10.76860	072 19.57775	
4	ECR-A-345	B	9/3/2021	12:43	-30.18	220978.90	4564013.32	41 10.76652	072 19.58740	
4	ECR-A-345	C	9/3/2021	12:48	-29.96	220966.48	4564009.96	41 10.76445	072 19.59617	
4	ECR-B-346	A	9/3/2021	17:01	-30.32	221963.12	4564116.38	41 10.84241	072 18.88731	
4	ECR-B-346	B	9/3/2021	17:10	-30.26	221978.49	4564122.45	41 10.84601	072 18.87650	
4	ECR-B-346	C	9/3/2021	17:16	-30.19	221982.32	4564136.69	41 10.85376	072 18.87415	
4	ECR-A-347	A	9/3/2021	18:31	-31.28	222861.08	4564475.48	41 11.05462	072 18.25575	
4	ECR-A-347	B	9/3/2021	18:37	-31.08	222876.85	4564476.53	41 11.05551	072 18.24451	
4	ECR-A-347	C	9/3/2021	18:41	-30.94	222891.01	4564479.95	41 11.05765	072 18.23449	
4	ECR-B-348	A	9/3/2021	21:59	-40.32	223788.62	4564902.88	41 11.30424	072 17.60484	
4	ECR-B-348	B	9/3/2021	22:04	-40.66	223803.16	4564899.45	41 11.30268	072 17.59436	
4	ECR-B-348	C	9/3/2021	22:10	-39.38	223811.37	4564917.12	41 11.31239	072 17.58897	
4	ECR-A-349	A	9/3/2021	22:51	-42.56	224724.43	4565284.74	41 11.52939	072 16.94670	
4	ECR-A-349	B	9/3/2021	22:57	-42.56	224713.20	4565298.67	41 11.53667	072 16.95510	
4	ECR-A-349	C	9/3/2021	23:02	-42.57	224699.11	4565296.82	41 11.53539	072 16.96512	
4	ECR-B-350	A	9/4/2021	08:54	-40.98	225631.89	4565681.61	41 11.76200	072 16.30914	
4	ECR-B-350	B	9/4/2021	09:00	-41.14	225647.64	4565679.90	41 11.76139	072 16.29785	
4	ECR-B-350	C	9/4/2021	09:06	-40.99	225662.04	4565682.58	41 11.76314	072 16.28764	
4	ECR-A-401	A	9/4/2021	10:29	-42.96	225886.14	4566230.32	41 12.06324	072 16.14226	
4	ECR-A-401	B	9/4/2021	10:35	-42.96	225871.52	4566227.22	41 12.06127	072 16.15262	
4	ECR-A-401	C	9/4/2021	10:40	-42.96	225874.71	4566241.92	41 12.06927	072 16.15074	
4	ECR-B-402	A	9/4/2021	12:53	-45.11	226325.14	4567033.10	41 12.50533	072 15.85017	
4	ECR-B-402	B	9/4/2021	12:57	-44.79	226310.36	4567034.15	41 12.50559	072 15.86076	
4	ECR-B-402	C	9/4/2021	13:03	-44.51	226297.21	4567041.09	41 12.50907	072 15.87034	
4	ECR-A-403	A	9/4/2021	13:45	-49.06	227195.21	4567543.28	41 12.79823	072 15.24214	
4	ECR-A-403	B	9/4/2021	13:50	-49.06	227180.32	4567540.67	41 12.79652	072 15.25271	
4	ECR-A-403	C	9/4/2021	13:55	-48.76	227166.50	4567534.52	41 12.79293	072 15.26242	
4	ECR-B-404	A	9/4/2021	15:21	-50.05	228060.40	4568043.53	41 13.08563	072 14.63724	
4	ECR-B-404	B	9/4/2021	15:26	-49.89	228044.95	4568042.83	41 13.08494	072 14.64826	
4	ECR-B-404	C	9/4/2021	15:32	-49.92	228036.33	4568031.78	41 13.07880	072 14.65413	
4	ECR-A-405	A	9/4/2021	16:19	-50.05	228930.63	4568526.29	41 13.36364	072 14.02818	
4	ECR-A-405	B	9/4/2021	16:24	-49.97	228916.65	4568525.16	41 13.36275	072 14.03814	
4	ECR-A-405	C	9/4/2021	16:29	-49.99	228903.87	4568523.51	41 13.36160	072 14.04723	
4	ECR-B-406	A	9/4/2021	19:19	-49.64	229831.90	4568937.96	41 13.60386	072 13.39496	
4	ECR-B-406	B	9/4/2021	19:26	-49.36	229827.72	4568951.98	41 13.61135	072 13.39832	
4	ECR-B-406	C	9/4/2021	19:40	-49.39	229838.78	4568947.27	41 13.60902	072 13.39029	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
4	ECR-A-407	A	9/4/2021	21:55	-48.09	230780.63	4569165.04	41 13.74537	072 12.72285	
4	ECR-A-407	B	9/4/2021	21:59	-48.04	230794.89	4569169.92	41 13.74828	072 12.71279	
4	ECR-A-407	C	9/4/2021	22:04	-47.92	230810.49	4569175.38	41 13.75155	072 12.70179	
4	ECR-B-408	A	9/4/2021	23:31	-49.39	231794.89	4569203.98	41 13.78659	072 11.99890	
4	ECR-B-408	B	9/4/2021	23:36	-49.26	231780.74	4569199.67	41 13.78398	072 12.00891	
4	ECR-B-408	C	9/4/2021	23:42	-49.62	231776.14	4569184.71	41 13.77582	072 12.01179	
4	ECR-A-409	A	9/5/2021	00:33	-51.26	232768.43	4569014.25	41 13.70352	072 11.29804	
4	ECR-A-409	B	9/5/2021	00:39	-50.56	232762.55	4569000.00	41 13.69572	072 11.30186	
4	ECR-A-409	C	9/5/2021	00:43	-50.86	232753.16	4569010.76	41 13.70134	072 11.30886	
4	ECR-B-410	A	9/5/2021	02:15	-52.55	233663.63	4568581.57	41 13.48774	072 10.64683	
4	ECR-B-410	B	9/5/2021	02:21	-52.66	233651.64	4568571.81	41 13.48224	072 10.65515	
4	ECR-B-410	C	9/5/2021	02:27	-51.06	233649.18	4568586.56	41 13.49015	072 10.65729	
4	ECR-A-411	A	9/5/2021	03:52	-45.86	234412.70	4567925.74	41 13.14859	072 10.09433	
4	ECR-A-411	B	9/5/2021	03:56	-46.06	234397.16	4567924.26	41 13.14749	072 10.10540	
4	ECR-A-411	C	9/5/2021	04:02	-46.06	234394.16	4567908.92	41 13.13915	072 10.10714	
4	ECR-B-412	A	9/4/2021	01:20	-37.46	235006.41	4567140.30	41 12.73640	072 09.64957	
4	ECR-B-412	B	9/4/2021	01:24	-37.06	234991.09	4567141.01	41 12.73649	072 09.66054	
4	ECR-B-412	C	9/4/2021	01:31	-38.16	234989.97	4567156.94	41 12.74506	072 09.66175	
4	ECR-A-413	A	9/4/2021	02:56	-41.16	235829.93	4566897.93	41 12.62175	072 09.05477	
4	ECR-A-413	B	9/4/2021	03:01	-49.36	235825.86	4566883.94	41 12.61412	072 09.05732	
4	ECR-A-413	C	9/4/2021	03:06	-49.36	235817.84	4566895.96	41 12.62045	072 09.06336	
4	ECR-B-414	A	9/5/2021	11:42	-47.51	236842.59	4567079.93	41 12.73975	072 08.33580	
4	ECR-B-414	B	9/5/2021	11:48	-47.78	236836.44	4567068.75	41 12.73360	072 08.33991	
4	ECR-B-414	C	9/5/2021	11:53	-47.54	236822.05	4567070.98	41 12.73452	072 08.35025	
4	ECR-B-414	D	9/5/2021	12:41	-47.71	236840.35	4567089.27	41 12.74475	072 08.33764	
4	ECR-B-414	E	9/5/2021	12:46	-48.01	236825.48	4567089.72	41 12.74470	072 08.34828	
4	ECR-B-414	F	9/5/2021	12:55	-48.03	236823.96	4567080.11	41 12.73948	072 08.34911	
4	ECR-A-415	A	9/5/2021	17:22	-46.86	237859.19	4567191.64	41 12.81982	072 07.61215	
4	ECR-A-415	B	9/5/2021	17:29	-44.26	237862.87	4567176.48	41 12.81171	072 07.60913	
4	ECR-A-415	C	9/5/2021	17:40	-44.36	237852.42	4567167.22	41 12.80651	072 07.61636	
4	ECR-B-416	A	9/5/2021	20:24	-49.61	238554.24	4567457.28	41 12.97666	072 07.12223	
4	ECR-B-416	B	9/5/2021	20:31	-49.52	238548.30	4567442.69	41 12.96867	072 07.12611	
4	ECR-B-416	C	9/5/2021	20:40	-49.88	238533.58	4567443.97	41 12.96908	072 07.13666	
4	ECR-A-417	A	9/5/2021	21:32	-51.46	239776.66	4567488.89	41 13.01735	072 06.24936	
4	ECR-A-417	B	9/5/2021	21:37	-51.41	239761.61	4567486.41	41 13.01572	072 06.26006	
4	ECR-A-417	C	9/5/2021	21:45	-51.16	239763.42	4567474.54	41 13.00935	072 06.25846	
4	ECR-B-418	A	9/6/2021	01:09	-43.26	240473.33	4567096.33	41 12.81891	072 05.74143	
4	ECR-B-418	B	9/6/2021	01:17	-43.91	240474.66	4567113.04	41 12.82795	072 05.74091	
4	ECR-B-418	C	9/6/2021	01:24	-43.26	240466.19	4567106.27	41 12.82414	072 05.74679	
4	ECR-A-419	A	9/6/2021	02:13	-15.28	241271.81	4566076.04	41 12.28360	072 05.14486	
4	ECR-A-419	B	9/6/2021	02:19	-15.30	241256.46	4566074.67	41 12.28257	072 05.15580	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
4	ECR-A-419	C	9/6/2021	02:24	-14.93	241250.93	4566061.17	41 12.27518	072 05.15941	
4	ECR-B-420	A	9/8/2021	10:26	-23.00	241708.30	4565209.31	41 11.82420	072 04.81099	
4	ECR-B-420	B	9/8/2021	10:34	-23.90	241707.92	4565194.64	41 11.81627	072 04.81089	
4	ECR-B-420	C	9/8/2021	10:40	-24.85	241722.20	4565191.17	41 11.81467	072 04.80060	
4	ECR-A-421	A	9/6/2021	03:19	-30.52	242156.61	4564411.71	41 11.40230	072 04.47050	
4	ECR-A-421	B	9/6/2021	03:25	-30.37	242142.15	4564415.82	41 11.40424	072 04.48094	
4	ECR-A-421	C	9/6/2021	03:32	-30.15	242141.49	4564401.01	41 11.39624	072 04.48104	
4	ECR-B-456	A	9/10/2021	10:59	-43.66	226584.50	4566029.18	41 11.96887	072 15.63794	
4	ECR-B-456	B	9/10/2021	11:07	-43.56	226601.45	4566031.51	41 11.97047	072 15.62589	
4	ECR-B-456	C	9/10/2021	11:15	-43.57	226604.19	4566042.82	41 11.97662	072 15.62423	
4	ECR-A-457	A	9/10/2021	08:36	-45.08	227603.67	4566414.85	41 12.19757	072 14.92011	
4	ECR-A-457	B	9/10/2021	08:45	-45.18	227597.45	4566406.49	41 12.19294	072 14.92433	
4	ECR-A-457	C	9/10/2021	08:56	-45.31	227586.13	4566415.61	41 12.19763	072 14.93266	
4	ECR-A-457	D	9/10/2021	13:13	-46.25	227592.78	4566423.81	41 12.20219	072 14.92813	
4	ECR-A-457	E	9/10/2021	13:19	-46.41	227603.21	4566428.09	41 12.20471	072 14.92079	
4	ECR-A-457	F	9/10/2021	13:26	-46.24	227615.70	4566419.93	41 12.20056	072 14.91165	
4	ECR-B-458	A	9/10/2021	07:13	-47.26	228476.51	4566707.97	41 12.37300	072 14.30400	
4	ECR-B-458	B	9/10/2021	07:15	-47.12	228475.22	4566703.91	41 12.37111	072 14.30510	
4	ECR-B-458	C	9/10/2021	07:49	-48.23	228462.66	4566705.82	41 12.37189	072 14.31413	
4	ECR-A-459	A	9/8/2021	22:06	-52.14	229402.84	4566994.63	41 12.54661	072 13.65002	
4	ECR-A-459	B	9/8/2021	22:13	-51.94	229394.63	4566980.99	41 12.53909	072 13.65552	
4	ECR-A-459	C	9/8/2021	22:17	-52.03	229408.67	4566981.24	41 12.53950	072 13.64550	
4	ECR-B-460	A	9/8/2021	21:06	-53.01	230316.73	4567270.98	41 12.71403	072 13.00431	
4	ECR-B-460	B	9/8/2021	21:16	-53.17	230317.76	4567261.20	41 12.70877	072 13.00331	
4	ECR-B-460	C	9/8/2021	21:21	-53.07	230333.58	4567261.93	41 12.70948	072 12.99202	
4	ECR-A-461	A	9/8/2021	17:13	-46.88	231211.12	4567527.34	41 12.87021	072 12.37194	
4	ECR-A-461	B	9/8/2021	17:16	-46.84	231201.57	4567523.30	41 12.86784	072 12.37865	
4	ECR-A-461	C	9/8/2021	17:20	-46.76	231187.62	4567517.00	41 12.86416	072 12.38846	
4	ECR-B-462	A	9/8/2021	16:15	-51.98	231839.56	4567644.78	41 12.94609	072 11.92592	
4	ECR-B-462	B	9/8/2021	16:20	-51.74	231824.90	4567636.93	41 12.94156	072 11.93619	
4	ECR-B-462	C	9/8/2021	16:25	-51.65	231815.41	4567631.99	41 12.93870	072 11.94285	
4	ECR-A-463	A	9/8/2021	13:51	-47.92	232495.72	4567466.79	41 12.86306	072 11.45233	
4	ECR-A-463	B	9/8/2021	13:57	-48.06	232488.97	4567452.20	41 12.85505	072 11.45677	
4	ECR-A-463	C	9/8/2021	14:02	-48.01	232480.06	4567441.32	41 12.84901	072 11.46285	
4	ECR-A-463	D	9/8/2021	14:39	-47.81	232490.66	4567467.31	41 12.86324	072 11.45596	
4	ECR-A-463	E	9/8/2021	14:44	-47.94	232478.48	4567461.28	41 12.85975	072 11.46451	
4	ECR-A-463	F	9/8/2021	14:48	-47.91	232470.77	4567451.13	41 12.85412	072 11.46975	
4	ECR-B-464	A	9/5/2021	07:20	-51.36	233399.86	4567190.79	41 12.73201	072 10.79897	
4	ECR-B-464	B	9/5/2021	07:27	-51.39	233410.08	4567203.31	41 12.73897	072 10.79199	
4	ECR-B-464	C	9/5/2021	07:34	-51.34	233418.36	4567190.92	41 12.73245	072 10.78575	
4	ECR-A-465	A	9/4/2021	07:02	-49.36	234289.86	4567077.82	41 12.68860	072 10.16001	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
4	ECR-A-465	B	9/4/2021	07:09	-49.26	234297.82	4567090.64	41 12.69567	072 10.15466	
4	ECR-A-465	C	9/4/2021	07:17	-49.36	234307.55	4567081.02	41 12.69067	072 10.14745	
4	ECR-B-466	A	9/5/2021	08:43	-42.76	235718.24	4567184.18	41 12.77404	072 09.14201	
4	ECR-B-466	B	9/5/2021	08:50	-42.16	235714.68	4567198.76	41 12.78184	072 09.14493	
4	ECR-B-466	C	9/5/2021	08:59	-42.36	235731.11	4567198.50	41 12.78202	072 09.13318	
4	ECR-A-467	A	9/5/2021	13:45	-46.96	236683.68	4567288.66	41 12.84929	072 08.45476	
4	ECR-A-467	B	9/5/2021	13:50	-47.39	236668.09	4567286.46	41 12.84780	072 08.46584	
4	ECR-A-467	C	9/5/2021	13:56	-47.16	236658.92	4567297.26	41 12.85345	072 08.47267	
4	ECR-B-468	A	9/5/2021	16:09	-40.06	237540.64	4567362.50	41 12.90584	072 07.84422	
4	ECR-B-468	B	9/5/2021	16:16	-41.27	237531.24	4567351.65	41 12.89980	072 07.85065	
4	ECR-B-468	C	9/5/2021	16:21	-39.71	237516.49	4567356.50	41 12.90213	072 07.86132	
4	ECR-C-1302	A	9/1/2021	19:09	-33.57	210655.73	4560511.23	41 08.66006	072 26.85996	
4	ECR-C-1302	B	9/1/2021	19:16	-33.55	210668.70	4560513.64	41 08.66163	072 26.85077	
4	ECR-C-1302	C	9/1/2021	19:23	-34.42	210670.46	4560503.81	41 08.65637	072 26.84924	
5	ECR-A-469	A	9/10/2021	15:00	-42.65	233249.02	4569819.39	41 14.14752	072 10.97561	
5	ECR-A-469	B	9/10/2021	15:08	-42.79	233243.65	4569804.79	41 14.13953	072 10.97906	
5	ECR-A-469	C	9/10/2021	15:14	-42.51	233236.36	4569820.37	41 14.14780	072 10.98468	
5	ECR-B-470	A	9/10/2021	16:46	-42.65	233227.52	4570812.55	41 14.68304	072 11.01701	
5	ECR-B-470	B	9/10/2021	16:53	-42.68	233222.31	4570802.57	41 14.67756	072 11.02047	
5	ECR-B-470	C	9/10/2021	17:00	-42.40	233208.67	4570811.15	41 14.68191	072 11.03045	
5	ECR-B-471	A	9/10/2021	18:49	-36.25	233229.21	4571839.96	41 15.23750	072 11.04274	
5	ECR-B-471	B	9/10/2021	19:00	-36.31	233212.01	4571841.00	41 15.23772	072 11.05507	
5	ECR-B-471	C	9/10/2021	19:07	-38.83	233201.63	4571835.90	41 15.23477	072 11.06236	
5	ECR-B-472	A	9/10/2021	20:36	-27.08	233194.06	4572813.10	41 15.76194	072 11.09341	
5	ECR-B-472	B	9/10/2021	20:43	-27.41	233183.61	4572818.04	41 15.76440	072 11.10102	
5	ECR-B-472	C	9/10/2021	20:47	-27.41	233171.66	4572813.93	41 15.76195	072 11.10946	
5	ECR-A-473	A	9/11/2021	01:57	-24.23	233118.36	4573748.45	41 16.26519	072 11.17211	
5	ECR-A-473	B	9/11/2021	02:03	-24.20	233110.79	4573754.61	41 16.26836	072 11.17769	
5	ECR-A-473	C	9/11/2021	02:08	-24.42	233096.56	4573753.10	41 16.26727	072 11.18783	
5	ECR-A-473	D	9/11/2021	03:00	-24.05	233127.30	4573746.19	41 16.26415	072 11.16566	
5	ECR-A-473	E	9/11/2021	03:05	-24.24	233113.60	4573746.66	41 16.26413	072 11.17547	
5	ECR-A-473	F	9/11/2021	03:10	-24.27	233098.63	4573747.52	41 16.26430	072 11.18620	
5	ECR-B-474	A	9/11/2021	07:23	-15.04	233298.43	4574824.43	41 16.84939	072 11.07157	
5	ECR-B-474	B	9/11/2021	07:26	-15.21	233289.06	4574821.57	41 16.84766	072 11.07819	
5	ECR-B-474	C	9/11/2021	07:33	-15.20	233291.74	4574803.94	41 16.83820	072 11.07581	
5	ECR-A-475	A	11/10/2021	10:15	no data	233347.08	4575795.54	41 17.374395	072 11.062262	Nearshore Dolphin
5	ECR-A-475	B	11/10/2021	10:18	no data	233338.82	4575810.53	41 17.382320	072 11.068566	Nearshore Dolphin
5	ECR-A-475	C	11/10/2021	10:23	no data	233361.45	4575803.30	41 17.378867	072 11.052185	Nearshore Dolphin
5	ECR-B-476	A	11/10/2021	7:48	no data	233405.70	4576796.22	41 17.915554	072 11.046606	Nearshore Dolphin
5	ECR-B-476	B	11/10/2021	7:51	no data	233407.33	4576818.62	41 17.927674	072 11.046028	Nearshore Dolphin
5	ECR-B-476	C	11/10/2021	7:53	no data	233420.98	4576803.94	41 17.920022	072 11.035875	Nearshore Dolphin

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
5	ECR-A-477	A	11/10/2021	8:17	no data	233527.07	4577782.02	41 18.449925	072 10.985652	Nearshore Dolphin
5	ECR-A-477	B	11/10/2021	8:19	no data	233516.22	4577794.86	41 18.456639	072 10.993754	Nearshore Dolphin
5	ECR-A-477	C	11/10/2021	8:21	no data	233505.15	4577777.82	41 18.447225	072 11.001229	Nearshore Dolphin
5	ECR-B-478	A	11/10/2021	9:46	no data	234228.22	4578475.44	41 18.837990	072 10.502039	Nearshore Dolphin
5	ECR-B-478	B	11/10/2021	9:49	no data	234242.49	4578483.09	41 18.842400	072 10.492026	Nearshore Dolphin
5	ECR-B-478	C	11/10/2021	9:51	no data	234239.94	4578467.71	41 18.834050	072 10.493448	Nearshore Dolphin
5	ECR-A-479	A	11/10/2021	8:11	no data	233533.05	4577745.49	41 18.430331	072 10.980412	Nearshore Dolphin
5	ECR-A-479	B	11/10/2021	8:13	no data	233530.50	4577759.66	41 18.437927	072 10.982610	Nearshore Dolphin
5	ECR-A-479	C	11/10/2021	8:15	no data	233545.00	4577759.11	41 18.437918	072 10.972218	Nearshore Dolphin
5	ECR-B-480-A	A	11/10/2021	9:03	no data	234269.60	4578036.87	41 18.602140	072 10.460929	Nearshore Dolphin
5	ECR-B-480-A	B	11/10/2021	9:06	no data	234268.90	4578057.34	41 18.613173	072 10.461966	Nearshore Dolphin
5	ECR-B-480-A	C	11/10/2021	9:08	no data	234254.72	4578048.24	41 18.607982	072 10.471876	Nearshore Dolphin
5	ECR-A-481	B	9/10/2021	21:23	-26.92	233282.84	4572809.21	41 15.76160	072 11.02982	
5	ECR-A-481	C	9/10/2021	21:30	-26.96	233268.38	4572809.88	41 15.76168	072 11.04018	
5	ECR-A-481	A	9/10/2021	21:17	-26.75	233286.33	4572795.35	41 15.75419	072 11.02696	
5	ECR-B-482	A	9/11/2021	01:04	-21.81	233815.49	4573617.43	41 16.20828	072 10.67005	
5	ECR-B-482	B	9/11/2021	01:10	-21.72	233830.82	4573617.23	41 16.20847	072 10.65908	
5	ECR-B-482	C	9/11/2021	01:16	-21.55	233845.93	4573617.67	41 16.20901	072 10.64828	
5	ECR-A-483	A	9/11/2021	05:19	-15.73	234412.25	4574435.38	41 16.66146	072 10.26460	
5	ECR-A-483	B	9/11/2021	05:26	-15.87	234400.53	4574434.92	41 16.66098	072 10.27296	
5	ECR-A-483	C	9/11/2021	05:31	-15.55	234388.47	4574434.40	41 16.66046	072 10.28158	
5	ECR-B-484	A	9/11/2021	09:33	-10.52	234674.54	4575352.74	41 17.16168	072 10.10094	
5	ECR-B-484	B	9/11/2021	09:39	-10.37	234689.34	4575354.04	41 17.16267	072 10.09038	
5	ECR-B-484	C	9/11/2021	09:45	-10.47	234688.36	4575367.90	41 17.17013	072 10.09145	
5	ECR-A-485	A	11/10/2021	7:24	no data	234857.19	4576355.65	41 17.706485	072 09.996457	Nearshore Dolphin
5	ECR-A-485	B	11/10/2021	7:27	no data	234843.22	4576343.54	41 17.699674	072 10.006136	Nearshore Dolphin
5	ECR-A-485	C	11/10/2021	7:31	no data	234840.21	4576329.39	41 17.691979	072 10.007920	Nearshore Dolphin
5	ECR-B-486	A	11/10/2021	7:00	no data	235634.22	4576939.13	41 18.036643	072 9.4556630	Nearshore Dolphin
5	ECR-B-486	B	11/10/2021	7:02	no data	235652.70	4576942.95	41 18.039068	072 9.4425390	Nearshore Dolphin
5	ECR-B-486	C	11/10/2021	7:04	no data	235643.52	4576947.12	41 18.041138	072 9.4492160	Nearshore Dolphin
5	ECR-B-486	D	11/10/2021	7:06	no data	235650.43	4576945.21	41 18.040243	072 9.4442220	Nearshore Dolphin
5	ECR-A-487	A	11/10/2021	10:55	no data	235982.40	4577752.03	41 18.482158	072 09.227662	Nearshore Dolphin
5	ECR-A-487	B	11/10/2021	10:57	no data	236000.80	4577753.32	41 18.483215	072 09.214527	Nearshore Dolphin
5	ECR-A-487	C	11/10/2021	11:00	no data	235991.90	4577738.96	41 18.475291	072 09.220523	Nearshore Dolphin
5	ECR-B-488	A	11/9/2021	14:37	no data	236006.98	4578008.49	41 18.621038	072 9.2167460	Nearshore Dolphin
5	ECR-B-488	B	11/9/2021	14:42	no data	235980.96	4578010.28	41 18.621493	072 9.2354150	Nearshore Dolphin
5	ECR-B-488	C	11/9/2021	14:43	no data	235994.57	4578005.71	41 18.619294	072 9.2255560	Nearshore Dolphin
5	ECR-C-1437	A	11/10/2021	9:21	no data	234014.80	4578260.79	41 18.717938	072 10.649160	Nearshore Dolphin
5	ECR-C-1437	B	11/10/2021	9:24	no data	234005.30	4578284.15	41 18.730356	072 10.656572	Nearshore Dolphin
5	ECR-C-1437	C	11/10/2021	9:26	no data	233991.20	4578270.85	41 18.722900	072 10.666314	Nearshore Dolphin
6	ECR-B-422	A	9/6/2021	09:28	-25.47	242712.46	4563588.64	41 10.96869	072 04.05262	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
6	ECR-B-422	B	9/6/2021	09:34	-23.58	242712.73	4563602.68	41 10.97627	072 04.05279	
6	ECR-B-422	C	9/6/2021	09:39	-24.03	242727.61	4563606.19	41 10.97845	072 04.04224	
6	ECR-A-423	A	9/6/2021	10:19	-22.51	243417.47	4562871.34	41 10.59497	072 03.53095	
6	ECR-A-423	B	9/6/2021	10:25	-22.64	243416.96	4562885.89	41 10.60281	072 03.53168	
6	ECR-A-423	C	9/6/2021	10:30	-24.77	243430.77	4562892.08	41 10.60641	072 03.52197	
6	ECR-B-424	A	9/6/2021	15:15	-21.85	244249.98	4562306.27	41 10.30577	072 02.92211	
6	ECR-B-424	B	9/6/2021	15:21	-21.98	244238.26	4562315.90	41 10.31075	072 02.93073	
6	ECR-B-424	C	9/6/2021	15:28	-21.93	244223.67	4562311.37	41 10.30803	072 02.94104	
6	ECR-A-425	A	9/6/2021	16:02	-21.34	245054.42	4561745.64	41 10.01839	072 02.33353	
6	ECR-A-425	B	9/6/2021	16:08	-21.27	245054.21	4561730.99	41 10.01048	072 02.33331	
6	ECR-A-425	C	9/6/2021	16:14	-21.20	245054.22	4561716.07	41 10.00243	072 02.33294	
6	ECR-B-426	A	9/6/2021	17:26	-22.13	245883.50	4561167.63	41 09.72204	072 01.72700	
6	ECR-B-426	B	9/6/2021	17:32	-22.01	245876.56	4561150.80	41 09.71282	072 01.73154	
6	ECR-B-426	C	9/6/2021	17:36	-21.89	245865.64	4561145.41	41 09.70971	072 01.73920	
6	ECR-A-427	A	9/6/2021	18:42	-26.08	246679.83	4560592.45	41 09.42654	072 01.14401	
6	ECR-A-427	B	9/6/2021	18:57	-25.92	246688.86	4560569.22	41 09.41417	072 01.13699	
6	ECR-A-427	C	9/6/2021	19:03	-26.28	246691.97	4560584.29	41 09.42237	072 01.13515	
6	ECR-B-428	A	9/6/2021	20:24	-25.56	247587.25	4560178.68	41 09.22019	072 00.48578	
6	ECR-B-428	B	9/6/2021	20:29	-26.17	247599.98	4560185.62	41 09.22417	072 00.47686	
6	ECR-B-428	C	9/6/2021	20:33	-26.26	247614.06	4560183.56	41 09.22332	072 00.46676	
6	ECR-A-429	A	9/6/2021	21:08	-22.51	248508.40	4559793.96	41 09.02970	071 59.81852	
6	ECR-A-429	B	9/6/2021	21:15	-22.26	248513.55	4559780.80	41 09.02269	071 59.81451	
6	ECR-A-429	C	9/6/2021	21:20	-21.89	248530.33	4559778.69	41 09.02186	071 59.80248	
6	ECR-B-430	A	9/6/2021	22:55	-23.78	249456.77	4559471.60	41 08.87331	071 59.13341	
6	ECR-B-430	B	9/6/2021	23:01	-23.17	249473.05	4559481.44	41 08.87892	071 59.12202	
6	ECR-B-430	C	9/6/2021	23:06	-23.70	249483.44	4559471.14	41 08.87355	071 59.11435	
6	ECR-A-431	A	9/7/2021	00:32	-26.64	250432.50	4559220.01	41 08.75555	071 58.43054	
6	ECR-A-431	B	9/7/2021	00:38	-26.25	250441.61	4559231.97	41 08.76218	071 58.42432	
6	ECR-A-431	C	9/7/2021	00:44	-26.70	250442.49	4559244.63	41 08.76903	071 58.42401	
6	ECR-B-432	A	9/7/2021	02:38	-29.74	251419.36	4558998.14	41 08.65397	071 57.72048	
6	ECR-B-432	B	9/7/2021	02:44	-29.71	251406.13	4558993.79	41 08.65138	071 57.72982	
6	ECR-B-432	C	9/7/2021	02:49	-29.65	251405.86	4558978.31	41 08.64301	071 57.72964	
6	ECR-A-433	A	9/7/2021	04:03	-25.38	252440.23	4558734.64	41 08.53046	071 56.98517	
6	ECR-A-433	B	9/7/2021	04:08	-25.69	252423.74	4558730.01	41 08.52766	071 56.99684	
6	ECR-A-433	C	9/7/2021	04:14	-25.95	252423.43	4558743.77	41 08.53508	071 56.99739	
6	ECR-B-434	A	9/7/2021	06:46	-25.06	253166.95	4558787.50	41 08.57227	071 56.46756	
6	ECR-B-434	B	9/7/2021	06:52	-25.86	253181.51	4558788.09	41 08.57286	071 56.45718	
6	ECR-A-435	A	9/7/2021	07:38	-26.46	254283.51	4559015.78	41 08.71582	071 55.67578	
6	ECR-A-435	B	9/7/2021	07:45	-26.48	254285.09	4558996.32	41 08.70534	071 55.67418	
6	ECR-A-435	C	9/7/2021	07:45	-26.62	254293.04	4559004.67	41 08.71000	071 55.66871	
6	ECR-B-436	A	9/7/2021	09:55	-27.64	255371.00	4558815.34	41 08.62734	071 54.89445	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
6	ECR-B-436	B	9/7/2021	10:02	-27.84	255375.02	4558830.01	41 08.63533	071 54.89193	
6	ECR-B-436	C	9/7/2021	10:06	-27.76	255391.32	4558829.55	41 08.63537	071 54.88028	
6	ECR-A-437	A	9/7/2021	12:19	-33.68	256384.03	4558837.90	41 08.65779	071 54.17162	
6	ECR-A-437	B	9/7/2021	12:25	-33.40	256386.86	4558852.65	41 08.66581	071 54.16995	
6	ECR-A-437	C	9/7/2021	12:30	-33.30	256375.66	4558847.24	41 08.66269	071 54.17782	
6	ECR-B-438	A	9/7/2021	14:05	-29.12	257398.76	4558865.20	41 08.69077	071 53.44768	
6	ECR-B-438	B	9/7/2021	14:10	-29.12	257382.96	4558871.86	41 08.69408	071 53.45912	
6	ECR-B-438	C	9/7/2021	14:16	-29.23	257372.17	4558861.94	41 08.68853	071 53.46659	
6	ECR-A-439	A	9/7/2021	15:59	-30.36	258418.43	4558885.80	41 08.72014	071 52.72004	
6	ECR-A-439	B	9/7/2021	16:05	-30.36	258400.31	4558879.60	41 08.71647	071 52.73283	
6	ECR-A-439	C	9/7/2021	16:11	-30.56	258398.20	4558864.70	41 08.70839	071 52.73399	
6	ECR-B-440	A	9/7/2021	23:17	-22.66	259303.89	4558905.80	41 08.74672	071 52.08821	
6	ECR-B-440	B	9/7/2021	23:23	-23.06	259293.02	4558896.49	41 08.74150	071 52.09575	
6	ECR-B-440	C	9/7/2021	23:28	-23.16	259301.37	4558885.23	41 08.73557	071 52.08952	
6	ECR-A-441	A	9/7/2021	21:59	-23.16	260724.10	4558914.29	41 08.77650	071 51.07422	
6	ECR-A-441	B	9/7/2021	22:05	-23.66	260722.87	4558899.06	41 08.76826	071 51.07474	
6	ECR-A-441	C	9/7/2021	22:09	-23.76	260729.91	4558887.98	41 08.76240	071 51.06945	
6	ECR-B-442	A	9/7/2021	19:08	-23.26	261265.95	4558948.55	41 08.80457	071 50.68807	
6	ECR-B-442	B	9/7/2021	19:13	-23.16	261262.46	4558939.46	41 08.79960	071 50.69035	
6	ECR-B-442	C	9/7/2021	19:17	-22.96	261268.31	4558928.10	41 08.79357	071 50.68591	
6	ECR-A-443	A	9/8/2021	01:26	-14.06	262386.39	4558733.61	41 08.70827	071 49.88293	
6	ECR-A-443	B	9/8/2021	01:33	-13.91	262384.28	4558748.80	41 08.71643	071 49.88479	
6	ECR-A-443	C	9/8/2021	01:39	-13.68	262369.69	4558744.47	41 08.71384	071 49.89511	
6	ECR-B-444	A	9/8/2021	02:54	-18.15	262875.86	4558529.94	41 08.60691	071 49.52866	
6	ECR-B-444	B	9/8/2021	03:00	-18.19	262862.14	4558514.65	41 08.59842	071 49.53810	
6	ECR-B-444	C	9/8/2021	03:06	-15.82	262860.67	4558528.76	41 08.60601	071 49.53949	
6	ECR-A-445	A	9/8/2021	03:37	-21.66	263797.75	4558127.64	41 08.40587	071 48.86104	
6	ECR-A-445	B	9/8/2021	03:43	-19.63	263784.12	4558128.46	41 08.40607	071 48.87079	
6	ECR-A-445	C	9/8/2021	03:49	-19.62	263780.65	4558143.47	41 08.41411	071 48.87362	
6	ECR-B-446	A	9/8/2021	06:26	-18.03	264711.85	4557747.42	41 08.21654	071 48.19955	
6	ECR-B-446	B	9/8/2021	06:31	-18.26	264702.39	4557750.98	41 08.21830	071 48.20639	
6	ECR-B-446	C	9/8/2021	06:37	-18.24	264695.48	4557737.53	41 08.21092	071 48.21102	
6	ECR-A-447	A	9/11/2021	15:18	-17.91	265639.29	4557355.62	41 08.02113	071 47.52834	
6	ECR-A-447	B	9/11/2021	15:26	-17.98	265624.86	4557358.50	41 08.02244	071 47.53870	
6	ECR-A-447	C	9/11/2021	15:35	-17.88	265627.85	4557339.52	41 08.01224	071 47.53614	
6	ECR-A-447	D	9/14/2021	20:30	-17.11	265637.44	4557342.06	41 08.01378	071 47.52935	
6	ECR-A-447	E	9/14/2021	20:34	-18.26	265628.34	4557350.50	41 08.01818	071 47.53604	
6	ECR-A-447	F	9/14/2021	20:38	-17.86	265619.19	4557359.55	41 08.02290	071 47.54278	
7	ECR-B-448	A	9/11/2021	18:51	-17.30	266555.98	4556945.28	41 07.81546	071 46.86444	
7	ECR-B-448	B	9/11/2021	18:57	-17.38	266540.12	4556955.25	41 07.82056	071 46.87599	
7	ECR-B-448	C	9/11/2021	19:03	-20.37	266524.59	4556964.52	41 07.82530	071 46.88728	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
7	ECR-B-448	D	9/11/2021	19:31	-17.24	266554.93	4556946.92	41 07.81633	071 46.86522	
7	ECR-B-448	E	9/11/2021	19:41	-17.41	266536.27	4556947.77	41 07.81646	071 46.87857	
7	ECR-B-448	F	9/11/2021	19:44	-17.50	266525.15	4556953.64	41 07.81944	071 46.88664	
7	ECR-A-449	A	9/11/2021	20:24	-16.53	267473.07	4556582.30	41 07.63529	071 46.20139	
7	ECR-A-449	B	9/11/2021	20:31	-16.23	267461.03	4556581.93	41 07.63488	071 46.20998	
7	ECR-A-449	C	9/11/2021	20:34	-16.26	267448.65	4556582.27	41 07.63486	071 46.21883	
7	ECR-B-450	A	9/14/2021	19:06	-16.41	269959.41	4553641.37	41 06.09007	071 44.36014	
7	ECR-B-450	B	9/14/2021	19:06	-16.32	269964.92	4553626.76	41 06.08228	071 44.35588	
7	ECR-B-450	C	9/14/2021	19:10	-16.22	269963.92	4553611.92	41 06.07425	071 44.35626	
7	ECR-A-451	A	9/14/2021	17:39	-16.35	270098.50	4552645.81	41 05.55496	071 44.23854	
7	ECR-A-451	B	9/14/2021	17:44	-16.25	270109.02	4552639.60	41 05.55179	071 44.23089	
7	ECR-A-451	C	9/14/2021	17:49	-16.30	270119.63	4552634.40	41 05.54916	071 44.22321	
7	ECR-B-452	A	9/14/2021	16:50	-14.36	270457.73	4551712.41	41 05.05714	071 43.96130	
7	ECR-B-452	B	9/14/2021	16:57	-14.23	270443.53	4551705.16	41 05.05298	071 43.97126	
7	ECR-B-452	C	9/14/2021	17:02	-14.09	270456.99	4551698.47	41 05.04960	071 43.96151	
7	ECR-A-453	A	9/14/2021	14:48	-29.59	270787.56	4550766.94	41 04.55229	071 43.70483	
7	ECR-A-453	B	9/14/2021	14:52	-29.65	270793.17	4550775.05	41 04.55676	071 43.70101	
7	ECR-A-453	C	9/14/2021	14:56	-29.78	270800.99	4550769.15	41 04.55371	071 43.69530	
7	ECR-B-454	A	9/14/2021	13:26	-35.18	271340.68	4549919.11	41 04.10390	071 43.29132	
7	ECR-B-454	B	9/14/2021	13:32	-35.36	271355.85	4549922.10	41 04.10578	071 43.28057	
7	ECR-B-454	C	9/14/2021	13:37	-35.34	271350.18	4549934.36	41 04.11230	071 43.28488	
7	ECR-B-454	D	9/14/2021	14:09	-35.31	271341.05	4549939.15	41 04.11473	071 43.29150	
7	ECR-B-454	E	9/14/2021	14:14	-35.20	271336.62	4549929.27	41 04.10932	071 43.29444	
7	ECR-B-454	F	9/14/2021	14:18	-35.13	271332.36	4549920.42	41 04.10447	071 43.29729	
7	ECR-A-455	A	9/14/2021	09:53	-36.59	271905.72	4549085.51	41 03.66337	071 42.86973	
7	ECR-A-455	B	9/14/2021	09:58	-36.70	271902.98	4549097.94	41 03.67004	071 42.87196	
7	ECR-A-455	C	9/14/2021	10:03	-36.70	271901.27	4549109.19	41 03.67608	071 42.87343	
7	ECR-A-501	A	9/14/2021	08:25	-35.65	272464.03	4548254.13	41 03.22390	071 42.45308	
7	ECR-A-501	B	9/14/2021	08:30	-35.67	272462.47	4548266.40	41 03.23050	071 42.45446	
7	ECR-A-501	C	9/14/2021	08:34	-35.85	272461.81	4548277.64	41 03.23656	071 42.45518	
7	ECR-B-502	A	9/14/2021	07:40	-39.41	273025.56	4547447.42	41 02.79777	071 42.03477	
7	ECR-B-502	B	9/14/2021	07:46	-39.39	273010.74	4547448.77	41 02.79826	071 42.04536	
7	ECR-B-502	C	9/14/2021	07:51	-39.34	273010.42	4547433.78	41 02.79015	071 42.04526	
7	ECR-B-502	D	9/14/2021	10:41	-39.66	273016.17	4547423.64	41 02.78478	071 42.04093	
7	ECR-B-502	E	9/14/2021	10:47	-39.67	273025.65	4547430.37	41 02.78857	071 42.03432	
7	ECR-B-502	F	9/14/2021	10:52	-39.80	273030.32	4547438.96	41 02.79329	071 42.03119	
7	ECR-A-503	A	9/14/2021	06:46	-40.46	273584.52	4546615.80	41 02.35813	071 41.61783	
7	ECR-A-503	B	9/14/2021	06:53	-40.35	273570.04	4546614.75	41 02.35732	071 41.62813	
7	ECR-A-503	C	9/14/2021	06:58	-40.40	273574.40	4546600.49	41 02.34969	071 41.62471	
7	ECR-B-504	A	9/14/2021	05:00	-43.12	274135.18	4545791.62	41 01.92232	071 41.20707	
7	ECR-B-504	B	9/14/2021	05:03	-43.06	274134.99	4545776.48	41 01.91415	071 41.20687	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
7	ECR-B-504	C	9/14/2021	05:08	-42.84	274135.02	4545761.46	41 01.90604	071 41.20652	
7	ECR-A-505	A	9/14/2021	04:12	-43.03	274696.09	4544961.42	41 01.48342	071 40.78896	
7	ECR-A-505	B	9/14/2021	04:17	-43.01	274694.83	4544946.39	41 01.47529	071 40.78953	
7	ECR-A-505	C	9/14/2021	04:21	-42.91	274693.61	4544931.29	41 01.46711	071 40.79007	
7	ECR-A-506	A	9/14/2021	03:08	-43.00	275248.07	4544128.89	41 01.04308	071 40.37726	
7	ECR-A-506	B	9/14/2021	03:11	-43.85	275246.75	4544117.59	41 01.03695	071 40.37796	
7	ECR-A-506	C	9/14/2021	03:16	-43.69	275243.97	4544105.63	41 01.03045	071 40.37968	
7	ECR-A-507	A	9/14/2021	02:20	-44.10	275828.13	4543299.73	41 00.60500	071 39.94571	
7	ECR-A-507	B	9/14/2021	02:24	-43.94	275817.05	4543289.00	41 00.59902	071 39.95338	
7	ECR-A-507	C	9/14/2021	02:30	-43.83	275805.68	4543278.23	41 00.59302	071 39.96125	
7	ECR-B-508	A	9/14/2021	01:29	-44.09	276568.31	4542648.69	41 00.26568	071 39.40401	
7	ECR-B-508	B	9/14/2021	01:36	-44.22	276556.90	4542641.82	41 00.26178	071 39.41200	
7	ECR-B-508	c	9/14/2021	01:41	-44.15	276542.86	4542633.06	41 00.25682	071 39.42181	
7	ECR-B-509	A	9/13/2021	22:35	-42.05	277531.97	4542447.72	41 00.17298	071 38.71287	
7	ECR-B-509	B	9/13/2021	22:40	-41.98	277520.68	4542437.36	41 00.16720	071 38.72069	
7	ECR-B-509	C	9/13/2021	22:46	-42.22	277509.56	4542426.61	41 00.16121	071 38.72838	
7	ECR-B-510	A	9/13/2021	21:33	-40.99	278521.07	4542335.01	41 00.12827	071 38.00551	
7	ECR-B-510	B	9/13/2021	21:38	-41.22	278515.11	4542321.69	41 00.12098	071 38.00947	
7	ECR-B-510	C	9/13/2021	21:43	-41.07	278507.54	4542308.06	41 00.11351	071 38.01458	
7	ECR-B-511	A	9/13/2021	18:59	-40.15	279513.44	4542218.05	41 00.08125	071 37.29575	
7	ECR-B-511	B	9/13/2021	19:06	-40.25	279510.76	4542203.65	41 00.07344	071 37.29735	
7	ECR-B-511	C	9/13/2021	19:11	-40.18	279507.33	4542188.42	41 00.06516	071 37.29947	
7	ECR-B-512	A	9/13/2021	17:41	-40.03	280487.98	4542095.08	41 00.03063	071 36.59858	
7	ECR-B-512	B	9/13/2021	17:50	-39.54	280510.93	4542090.10	41 00.02831	071 36.58212	
7	ECR-B-512	C	9/13/2021	18:00	-39.55	280504.37	4542074.84	41 00.01997	071 36.58647	
7	ECR-A-513	A	9/13/2021	15:55	-39.61	281450.98	4541987.24	40 59.98792	071 35.90997	
7	ECR-A-513	B	9/13/2021	16:02	-39.43	281444.69	4541976.44	40 59.98199	071 35.91422	
7	ECR-A-513	C	9/13/2021	16:08	-39.27	281437.16	4541962.22	40 59.97419	071 35.91928	
7	ECR-A-513	D	9/13/2021	16:15	-39.21	281431.32	4541974.08	40 59.98050	071 35.92370	
7	ECR-B-514	A	9/13/2021	14:23	-41.14	282479.11	4541840.33	40 59.92509	071 35.17412	
7	ECR-B-514	B	9/13/2021	14:31	-41.66	282490.26	4541830.85	40 59.92015	071 35.16598	
7	ECR-B-514	C	9/13/2021	14:38	-41.49	282477.36	4541825.48	40 59.91704	071 35.17506	
7	ECR-B-514	D	9/13/2021	15:06	-40.80	282468.39	4541840.38	40 59.92495	071 35.18177	
7	ECR-B-514	E	9/13/2021	15:11	-41.00	282475.09	4541846.81	40 59.92852	071 35.17713	
7	ECR-B-514	F	9/13/2021	15:18	-41.41	282485.69	4541848.74	40 59.92974	071 35.16961	
7	ECR-C-1429	A	9/12/2021	01:57	-16.06	268301.59	4556057.62	41 07.36625	071 45.59798	
7	ECR-C-1429	B	9/12/2021	02:04	-16.08	268298.65	4556045.55	41 07.35968	071 45.59981	
7	ECR-C-1429	C	9/12/2021	02:05	-16.02	268294.82	4556033.39	41 07.35305	071 45.60227	
7	ECR-C-1430	A	9/12/2021	01:01	-19.22	269026.06	4555376.86	41 07.01111	071 45.06540	
7	ECR-C-1430	B	9/12/2021	01:07	-18.90	269022.52	4555357.47	41 07.00059	071 45.06750	
7	ECR-C-1430	C	9/12/2021	01:14	-18.74	269020.14	4555341.88	41 06.99213	071 45.06884	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
7	ECR-C-1431	A	9/12/2021	03:51	-10.31	269584.04	4554564.55	41 06.58208	071 44.64881	
7	ECR-C-1431	B	9/12/2021	03:53	-13.82	269589.35	4554549.26	41 06.57392	071 44.64467	
7	ECR-C-1431	C	9/12/2021	03:57	-13.82	269596.92	4554538.57	41 06.56828	071 44.63903	
8	ECR-A-515	A	9/13/2021	13:23	-44.99	283387.72	4541432.24	40 59.71925	071 34.51799	
8	ECR-A-515	B	9/13/2021	13:30	-44.93	283394.13	4541418.31	40 59.71183	071 34.51313	
8	ECR-A-515	C	9/13/2021	13:36	-45.01	283385.00	4541409.04	40 59.70668	071 34.51944	
8	ECR-B-516	A	8/21/2021	07:51	-46.50	283940.51	4540823.83	40 59.39953	071 34.11128	
8	ECR-B-516	B	8/21/2021	07:55	-46.56	283952.97	4540817.02	40 59.39605	071 34.10226	
8	ECR-B-516	C	8/21/2021	08:02	-46.63	283966.98	4540823.21	40 59.39962	071 34.09241	
8	ECR-A-517	A	8/21/2021	05:19	-48.83	284783.66	4539913.63	40 58.92144	071 33.49145	
8	ECR-A-517	B	8/21/2021	05:25	-48.70	284777.14	4539921.09	40 58.92536	071 33.49625	
8	ECR-A-517	C	8/21/2021	05:29	-48.75	284783.10	4539934.50	40 58.93270	071 33.49228	
8	ECR-B-518	A	8/21/2021	01:20	-48.76	285432.54	4539212.97	40 58.55336	071 33.01452	
8	ECR-B-518	B	8/21/2021	01:25	-48.65	285431.65	4539228.76	40 58.56187	071 33.01549	
8	ECR-B-518	C	8/21/2021	01:30	-48.46	285417.18	4539230.29	40 58.56247	071 33.02583	
8	ECR-A-519	A	8/20/2021	23:01	-49.87	286118.27	4538475.74	40 58.16608	071 32.51068	
8	ECR-A-519	B	8/20/2021	23:08	-50.04	286103.16	4538486.13	40 58.17145	071 32.52166	
8	ECR-A-519	C	8/20/2021	23:13	-50.02	286092.63	4538495.44	40 58.17631	071 32.52936	
8	ECR-B-520	A	8/20/2021	21:25	-50.84	286764.19	4537757.95	40 57.78863	071 32.03570	
8	ECR-B-520	B	8/20/2021	21:30	-50.77	286773.37	4537742.61	40 57.78049	071 32.02884	
8	ECR-B-520	C	8/20/2021	21:37	-50.74	286791.88	4537740.22	40 57.77949	071 32.01561	
8	ECR-A-521	A	8/20/2021	19:55	-51.72	287460.79	4537029.24	40 57.40604	071 31.52448	
8	ECR-A-521	B	8/20/2021	19:59	-51.68	287456.92	4537014.54	40 57.39805	071 31.52693	
8	ECR-A-521	C	8/20/2021	20:04	-51.69	287456.40	4536999.55	40 57.38994	071 31.52700	
8	ECR-B-522	A	8/20/2021	18:53	-52.12	288118.38	4536274.49	40 57.00875	071 31.04061	
8	ECR-B-522	B	8/20/2021	19:00	-51.13	288134.92	4536265.64	40 57.00422	071 31.02864	
8	ECR-B-522	C	8/20/2021	19:09	-51.77	288148.03	4536275.95	40 57.01000	071 31.01952	
8	ECR-A-523	A	8/20/2021	16:38	-51.97	288810.15	4535550.20	40 56.62839	071 30.53312	
8	ECR-A-523	B	8/20/2021	16:44	-52.13	288802.57	4535536.51	40 56.62088	071 30.53824	
8	ECR-A-523	C	8/20/2021	16:49	-52.12	288816.97	4535535.88	40 56.62076	071 30.52797	
8	ECR-B-524	A	8/20/2021	15:43	-52.06	289476.44	4534816.80	40 56.24268	071 30.04368	
8	ECR-B-524	B	8/20/2021	15:47	-51.96	289478.49	4534803.99	40 56.23579	071 30.04196	
8	ECR-B-524	C	8/20/2021	15:51	-51.96	289489.67	4534790.96	40 56.22893	071 30.03374	
8	ECR-A-525	A	8/20/2021	13:36	-52.43	290165.60	4534070.36	40 55.85024	071 29.53779	
8	ECR-A-525	B	8/20/2021	13:41	-52.38	290176.25	4534080.29	40 55.85577	071 29.53041	
8	ECR-A-525	C	8/20/2021	13:47	-52.25	290183.77	4534093.88	40 55.86322	071 29.52533	
8	ECR-B-526	A	8/20/2021	12:54	-52.20	290779.31	4533516.22	40 55.56045	071 29.08961	
8	ECR-B-526	B	8/20/2021	12:58	-52.35	290793.24	4533510.22	40 55.55742	071 29.07957	
8	ECR-B-526	C	8/20/2021	13:03	-52.48	290794.45	4533496.31	40 55.54993	071 29.07843	
8	ECR-A-527	A	8/20/2021	10:26	-54.59	291742.92	4532584.00	40 55.07181	071 28.38478	
8	ECR-A-527	B	8/20/2021	10:31	-54.46	291728.90	4532589.76	40 55.07471	071 28.39488	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-A-527	C	8/20/2021	10:36	-54.10	291730.73	4532574.66	40 55.06658	071 28.39327	
8	ECR-B-528	A	8/20/2021	09:37	-54.58	292355.61	4532012.13	40 54.77234	071 27.93714	
8	ECR-B-528	B	8/20/2021	09:41	-54.46	292341.87	4532019.48	40 54.77610	071 27.94706	
8	ECR-B-528	C	8/20/2021	09:45	-54.41	292333.42	4532008.33	40 54.76996	071 27.95285	
8	ECR-A-529	A	8/19/2021	13:21	-54.48	293118.76	4531284.69	40 54.39112	071 27.37936	
8	ECR-A-529	B	8/19/2021	13:26	-56.26	293115.62	4531270.76	40 54.38356	071 27.38132	
8	ECR-A-529	C	8/19/2021	13:32	-56.44	293102.86	4531264.57	40 54.38002	071 27.39027	
8	ECR-B-530	A	8/19/2021	12:29	-57.55	293790.54	4530636.95	40 54.05151	071 26.88830	
8	ECR-B-530	B	8/19/2021	12:35	-57.48	293803.89	4530627.65	40 54.04669	071 26.87862	
8	ECR-B-530	C	8/19/2021	12:39	-57.37	293798.46	4530612.59	40 54.03848	071 26.88219	
8	ECR-A-531	A	8/19/2021	10:31	-57.58	294520.05	4529941.55	40 53.68700	071 26.35530	
8	ECR-A-531	B	8/19/2021	10:36	-57.60	294510.42	4529930.35	40 53.68080	071 26.36193	
8	ECR-A-531	C	8/19/2021	10:42	-57.45	294521.04	4529920.93	40 53.67588	071 26.35419	
8	ECR-B-532	A	8/19/2021	09:40	-56.99	295197.77	4529295.97	40 53.34856	071 25.86023	
8	ECR-B-532	B	8/19/2021	09:45	-57.10	295188.74	4529285.06	40 53.34253	071 25.86645	
8	ECR-B-532	C	8/19/2021	09:49	-57.31	295194.50	4529272.29	40 53.33572	071 25.86209	
8	ECR-A-533	A	8/19/2021	05:10	-57.62	295957.07	4528561.10	40 52.96309	071 25.30545	
8	ECR-A-533	B	8/19/2021	05:16	-57.41	295949.45	4528548.79	40 52.95633	071 25.31063	
8	ECR-A-533	C	8/19/2021	05:21	-57.55	295963.35	4528544.40	40 52.95416	071 25.30065	
8	ECR-B-534	A	8/19/2021	04:24	-58.18	296680.04	4527873.27	40 52.60243	071 24.77754	
8	ECR-B-534	B	8/19/2021	04:30	-58.11	296671.44	4527862.71	40 52.59660	071 24.78345	
8	ECR-B-534	C	8/19/2021	04:34	-58.24	296675.77	4527848.62	40 52.58906	071 24.78009	
8	ECR-A-535	A	8/19/2021	02:38	-57.44	297407.90	4527172.12	40 52.23461	071 24.24598	
8	ECR-A-535	B	8/19/2021	02:43	-57.29	297398.14	4527161.81	40 52.22890	071 24.25272	
8	ECR-A-535	C	8/19/2021	02:48	-57.29	297393.33	4527174.56	40 52.23572	071 24.25640	
8	ECR-B-536	A	8/19/2021	01:52	-55.92	298140.69	4526475.20	40 51.86910	071 23.71110	
8	ECR-B-536	B	8/19/2021	01:58	-55.93	298128.30	4526467.27	40 51.86464	071 23.71976	
8	ECR-B-536	C	8/19/2021	02:03	-55.92	298114.60	4526472.49	40 51.86725	071 23.72960	
8	ECR-A-537	A	8/18/2021	23:34	-54.65	298863.35	4525780.54	40 51.50462	071 23.18356	
8	ECR-A-537	B	8/18/2021	23:39	-54.51	298859.88	4525794.09	40 51.51189	071 23.18630	
8	ECR-A-537	C	8/18/2021	23:43	-54.59	298847.84	4525803.39	40 51.51673	071 23.19504	
8	ECR-B-538	A	8/18/2021	22:05	-54.80	299575.16	4525111.62	40 51.15384	071 22.66434	
8	ECR-B-538	B	8/18/2021	22:11	-54.81	299588.63	4525093.00	40 51.14398	071 22.65440	
8	ECR-B-538	C	8/18/2021	22:16	-54.82	299579.75	4525081.86	40 51.13783	071 22.66050	
8	ECR-A-539	A	8/18/2021	20:30	-56.71	300215.08	4524337.47	40 50.74514	071 22.19431	
8	ECR-A-539	B	8/18/2021	20:35	-56.58	300206.39	4524326.70	40 50.73919	071 22.20028	
8	ECR-A-539	C	8/18/2021	20:41	-56.16	300223.67	4524326.14	40 50.73914	071 22.18798	
8	ECR-B-540	A	8/18/2021	18:56	-57.48	301170.29	4523518.40	40 50.31673	071 21.49931	
8	ECR-B-540	B	8/18/2021	19:01	-57.38	301178.42	4523506.46	40 50.31040	071 21.49330	
8	ECR-B-540	C	8/18/2021	19:09	-57.42	301200.02	4523512.43	40 50.31393	071 21.47806	
8	ECR-A-541	A	8/18/2021	16:42	-57.51	301700.29	4523079.57	40 50.08743	071 21.11405	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-A-541	B	8/18/2021	16:51	-57.59	301697.61	4523063.83	40 50.07889	071 21.11566	
8	ECR-A-541	C	8/18/2021	16:57	-57.52	301712.13	4523067.62	40 50.08115	071 21.10540	
8	ECR-B-542	A	8/18/2021	15:52	-58.38	302404.45	4522380.17	40 49.71991	071 20.60005	
8	ECR-B-542	B	8/18/2021	15:56	-58.46	302414.24	4522366.95	40 49.71291	071 20.59284	
8	ECR-B-542	C	8/18/2021	16:01	-58.57	302429.84	4522362.79	40 49.71089	071 20.58167	
8	ECR-A-543	A	8/18/2021	13:59	-58.98	303175.63	4521655.79	40 49.33982	071 20.03802	
8	ECR-A-543	B	8/18/2021	14:04	-58.96	303189.30	4521648.99	40 49.33635	071 20.02818	
8	ECR-A-543	C	8/18/2021	14:10	-58.87	303203.99	4521646.78	40 49.33536	071 20.01770	
8	ECR-B-544	A	8/18/2021	13:10	-59.16	303851.11	4521002.58	40 48.99675	071 19.54548	
8	ECR-B-544	B	8/18/2021	13:15	-59.36	303858.51	4520986.61	40 48.98823	071 19.53992	
8	ECR-B-544	C	8/18/2021	13:22	-59.33	303879.72	4520990.02	40 48.99038	071 19.52491	
8	ECR-A-545	A	8/18/2021	11:31	-58.94	304638.56	4520260.60	40 48.60730	071 18.97176	
8	ECR-A-545	B	8/18/2021	11:38	-57.29	304654.26	4520260.77	40 48.60761	071 18.96061	
8	ECR-A-545	C	8/18/2021	11:42	-59.04	304651.27	4520248.09	40 48.60072	071 18.96249	
8	ECR-B-546	A	8/18/2021	10:52	-58.08	305326.62	4519619.98	40 48.27112	071 18.47069	
8	ECR-B-546	B	8/18/2021	10:56	-58.01	305319.79	4519606.72	40 48.26386	071 18.47530	
8	ECR-B-546	C	8/18/2021	11:01	-58.03	305305.49	4519609.27	40 48.26504	071 18.48551	
8	ECR-A-547	A	8/18/2021	09:12	-57.00	306044.63	4518932.12	40 47.90982	071 17.94754	
8	ECR-A-547	B	8/18/2021	09:17	-57.19	306031.25	4518929.29	40 47.90810	071 17.95700	
8	ECR-A-547	C	8/18/2021	09:22	-56.92	306036.41	4518916.17	40 47.90109	071 17.95308	
8	ECR-B-548	A	8/18/2021	07:46	-57.80	306757.66	4518249.77	40 47.55137	071 17.42812	
8	ECR-B-548	B	8/18/2021	07:52	-57.71	306770.20	4518243.19	40 47.54800	071 17.41909	
8	ECR-B-548	C	8/18/2021	07:56	-57.72	306770.60	4518228.79	40 47.54023	071 17.41854	
8	ECR-A-601	A	8/18/2021	05:39	-58.30	307584.66	4517449.38	40 47.13075	071 16.82563	
8	ECR-A-601	B	8/18/2021	05:46	-58.25	307571.85	4517453.44	40 47.13276	071 16.83481	
8	ECR-A-601	C	8/18/2021	05:50	-58.25	307575.70	4517439.15	40 47.12510	071 16.83181	
8	ECR-B-602	A	8/18/2021	04:51	-58.44	308204.97	4516867.20	40 46.82502	071 16.37414	
8	ECR-B-602	B	8/18/2021	04:57	-58.30	308218.22	4516860.88	40 46.82179	071 16.36461	
8	ECR-B-602	C	8/18/2021	05:01	-58.24	308219.30	4516846.74	40 46.81417	071 16.36358	
8	ECR-A-603	A	8/18/2021	02:16	-58.35	309006.04	4516275.00	40 46.51637	071 15.79411	
8	ECR-A-603	B	8/18/2021	02:21	-58.34	309014.10	4516261.22	40 46.50904	071 15.78813	
8	ECR-A-603	C	8/18/2021	02:26	-58.25	309000.16	4516262.93	40 46.50977	071 15.79806	
8	ECR-A-603	D	8/18/2021	02:32	-58.36	309006.66	4516250.14	40 46.50295	071 15.79321	
8	ECR-B-604	A	8/18/2021	01:25	-57.85	309821.04	4515700.31	40 46.21731	071 15.20459	
8	ECR-B-604	B	8/18/2021	01:31	-57.91	309825.10	4515687.28	40 46.21033	071 15.20147	
8	ECR-B-604	C	8/18/2021	01:37	-57.96	309830.58	4515674.32	40 46.20341	071 15.19734	
8	ECR-A-605	A	8/17/2021	23:23	-57.85	310666.87	4515108.89	40 45.90960	071 14.59295	
8	ECR-A-605	B	8/17/2021	23:28	-57.98	310652.51	4515118.53	40 45.91461	071 14.60333	
8	ECR-A-605	C	8/17/2021	23:33	-58.33	310640.19	4515127.51	40 45.91929	071 14.61224	
8	ECR-B-606	A	8/17/2021	21:59	-57.35	311463.51	4514532.13	40 45.60908	071 14.01661	
8	ECR-B-606	B	8/17/2021	22:04	-57.39	311459.59	4514545.88	40 45.61645	071 14.01965	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-B-606	C	8/17/2021	22:10	-57.29	311466.21	4514560.16	40 45.62425	071 14.01520	
8	ECR-A-607	A	8/17/2021	19:33	-56.95	312348.81	4513950.94	40 45.30731	071 13.37731	
8	ECR-A-607	B	8/17/2021	19:38	-56.90	312345.23	4513934.85	40 45.29858	071 13.37957	
8	ECR-A-607	C	8/17/2021	19:44	-56.93	312343.67	4513919.97	40 45.29052	071 13.38040	
8	ECR-B-608	A	8/17/2021	17:01	-57.42	313094.68	4513405.15	40 45.02271	071 12.83776	
8	ECR-B-608	B	8/17/2021	17:07	-57.32	313100.65	4513390.50	40 45.01488	071 12.83326	
8	ECR-B-608	C	8/17/2021	17:13	-57.41	313117.56	4513386.83	40 45.01313	071 12.82119	
8	ECR-A-609	A	8/17/2021	15:18	-56.83	313925.14	4512826.60	40 44.72152	071 12.23763	
8	ECR-A-609	B	8/17/2021	15:23	-57.13	313922.13	4512811.77	40 44.71348	071 12.23950	
8	ECR-A-609	C	8/17/2021	15:29	-57.21	313939.23	4512814.77	40 44.71532	071 12.22741	
8	ECR-B-610	A	8/17/2021	14:20	-56.49	314732.56	4512250.37	40 44.42122	071 11.65399	
8	ECR-B-610	B	8/17/2021	14:25	-56.44	314746.95	4512239.65	40 44.41562	071 11.64358	
8	ECR-B-610	C	8/17/2021	14:32	-56.44	314762.99	4512251.72	40 44.42236	071 11.63241	
8	ECR-A-611	A	8/17/2021	12:30	-58.74	315567.27	4511677.97	40 44.12330	071 11.05112	
8	ECR-A-611	B	8/17/2021	12:35	-58.81	315569.81	4511663.96	40 44.11577	071 11.04908	
8	ECR-A-611	C	8/17/2021	12:43	-58.85	315583.64	4511682.92	40 44.12620	071 11.03959	
8	ECR-B-612	A	8/17/2021	11:01	-58.01	316374.87	4511112.08	40 43.82848	071 10.46771	
8	ECR-B-612	B	8/17/2021	11:06	-58.04	316387.32	4511119.44	40 43.83262	071 10.45900	
8	ECR-B-612	C	8/17/2021	11:12	-58.03	316399.02	4511112.56	40 43.82906	071 10.45057	
8	ECR-A-613	A	8/17/2021	09:22	-57.11	317204.08	4510533.51	40 43.52705	071 09.86882	
8	ECR-A-613	B	8/17/2021	09:27	-57.13	317215.63	4510542.24	40 43.53192	071 09.86077	
8	ECR-A-613	C	8/17/2021	09:32	-57.18	317221.71	4510529.21	40 43.52496	071 09.85623	
8	ECR-B-614	A	8/17/2021	08:42	-56.74	318029.37	4509989.45	40 43.24415	071 09.27340	
8	ECR-B-614	B	8/17/2021	08:48	-56.72	318043.29	4509992.92	40 43.24621	071 09.26358	
8	ECR-B-614	C	8/17/2021	08:53	-56.75	318055.25	4509983.75	40 43.24141	071 09.25493	
8	ECR-A-615	A	8/17/2021	07:21	-57.03	318891.56	4509464.14	40 42.97181	071 08.65220	
8	ECR-A-615	B	8/17/2021	07:26	-57.22	318904.72	4509469.97	40 42.97513	071 08.64295	
8	ECR-A-615	C	8/17/2021	07:31	-57.21	318907.04	4509455.65	40 42.96743	071 08.64106	
8	ECR-B-616	A	8/17/2021	06:30	-56.27	319783.94	4508914.26	40 42.68653	071 08.00922	
8	ECR-B-616	B	8/17/2021	06:35	-56.26	319798.30	4508911.35	40 42.68515	071 07.99897	
8	ECR-B-616	C	8/17/2021	06:40	-56.30	319810.59	4508919.56	40 42.68975	071 07.99039	
8	ECR-A-617	A	8/17/2021	04:43	-56.43	320606.80	4508430.52	40 42.43602	071 07.41681	
8	ECR-A-617	B	8/17/2021	04:49	-56.37	320615.45	4508443.04	40 42.44289	071 07.41089	
8	ECR-A-617	C	8/17/2021	04:54	-56.33	320621.03	4508429.43	40 42.43562	071 07.40669	
8	ECR-B-618	A	8/17/2021	03:59	-57.13	321452.07	4507904.43	40 42.16287	071 06.80784	
8	ECR-B-618	B	8/17/2021	04:04	-57.25	321467.48	4507903.72	40 42.16268	071 06.79690	
8	ECR-B-618	C	8/17/2021	04:10	-57.22	321477.98	4507914.83	40 42.16882	071 06.78964	
8	ECR-A-619	A	8/17/2021	01:57	-59.38	322308.32	4507400.02	40 41.90151	071 06.19154	
8	ECR-A-619	B	8/17/2021	02:03	-59.23	322321.52	4507393.52	40 41.89817	071 06.18206	
8	ECR-A-619	C	8/17/2021	02:07	-59.28	322336.66	4507392.81	40 41.89798	071 06.17130	
8	ECR-B-620	A	8/17/2021	01:10	-60.68	323166.88	4506868.96	40 41.62573	071 05.57322	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-B-620	B	8/17/2021	01:16	-60.63	323182.74	4506870.69	40 41.62687	071 05.56200	
8	ECR-B-620	C	8/17/2021	01:21	-60.61	323188.85	4506883.85	40 41.63406	071 05.55789	
8	ECR-A-621	A	8/16/2021	22:51	-60.27	323956.76	4506259.83	40 41.30684	071 05.00241	
8	ECR-A-621	B	8/16/2021	22:56	-60.21	323970.79	4506258.71	40 41.30642	071 04.99244	
8	ECR-A-621	C	8/16/2021	23:03	-60.18	323958.08	4506275.31	40 41.31522	071 05.00174	
8	ECR-B-622	A	8/16/2021	21:52	-60.59	324753.96	4505676.31	40 41.00184	071 04.42693	
8	ECR-B-622	B	8/16/2021	21:56	-60.57	324768.80	4505681.47	40 41.00481	071 04.41648	
8	ECR-B-622	C	8/16/2021	22:03	-60.52	324775.55	4505697.14	40 41.01336	071 04.41196	
8	ECR-A-623	A	8/16/2021	19:53	-61.28	325669.30	4505364.28	40 40.84492	071 03.77223	
8	ECR-A-623	B	8/16/2021	19:59	-61.36	325683.37	4505365.86	40 40.84595	071 03.76227	
8	ECR-A-623	C	8/16/2021	20:04	-61.32	325697.43	4505366.97	40 40.84674	071 03.75231	
8	ECR-B-624	A	8/16/2021	19:06	-62.15	326563.22	4504843.37	40 40.57485	071 03.12931	
8	ECR-B-624	B	8/16/2021	19:11	-62.03	326580.10	4504841.85	40 40.57424	071 03.11731	
8	ECR-B-624	C	8/16/2021	19:17	-62.02	326584.41	4504827.72	40 40.56666	071 03.11402	
8	ECR-A-625	A	8/16/2021	17:05	-62.60	327408.32	4504335.99	40 40.31141	071 02.52134	
8	ECR-A-625	B	8/16/2021	17:10	-62.58	327394.69	4504332.18	40 40.30918	071 02.53095	
8	ECR-A-625	C	8/16/2021	17:14	-62.49	327382.24	4504339.10	40 40.31276	071 02.53990	
8	ECR-B-626	A	8/16/2021	16:16	-63.43	328237.30	4503820.99	40 40.04359	071 01.92476	
8	ECR-B-626	B	8/16/2021	16:25	-63.43	328245.18	4503807.24	40 40.03626	071 01.91894	
8	ECR-B-626	C	8/16/2021	16:31	-63.35	328262.27	4503805.44	40 40.03550	071 01.90679	
8	ECR-A-627	A	8/16/2021	13:59	-64.17	329106.84	4503315.10	40 39.78115	071 01.29963	
8	ECR-A-627	B	8/16/2021	14:04	-64.19	329110.86	4503301.38	40 39.77379	071 01.29656	
8	ECR-A-627	C	8/16/2021	14:09	-64.15	329110.86	4503285.17	40 39.76503	071 01.29630	
8	ECR-B-628	A	8/16/2021	13:16	-64.79	330018.02	4502946.30	40 39.59322	071 00.64728	
8	ECR-B-628	B	8/16/2021	13:23	-64.65	330031.00	4502961.55	40 39.60162	071 00.63831	
8	ECR-B-628	C	8/16/2021	13:28	-64.74	330048.43	4502957.07	40 39.59941	071 00.62588	
8	ECR-A-629	A	8/16/2021	11:28	-64.48	330992.15	4502705.20	40 39.47498	070 59.95238	
8	ECR-A-629	B	8/16/2021	11:34	-64.57	331005.89	4502705.24	40 39.47517	070 59.94263	
8	ECR-A-629	C	8/16/2021	11:39	-64.60	331017.69	4502696.95	40 39.47083	070 59.93413	
8	ECR-B-630	A	8/16/2021	10:46	-64.62	331967.22	4502495.93	40 39.37388	070 59.25737	
8	ECR-B-630	B	8/16/2021	10:50	-64.53	331982.28	4502496.61	40 39.37443	070 59.24670	
8	ECR-B-630	C	8/16/2021	10:55	-64.59	331991.17	4502485.00	40 39.36827	070 59.24021	
8	ECR-A-631	A	8/16/2021	08:41	-64.63	332968.19	4502449.22	40 39.36083	070 58.54661	
8	ECR-A-631	B	8/16/2021	08:47	-64.59	332977.33	4502461.17	40 39.36740	070 58.54033	
8	ECR-A-631	C	8/16/2021	08:52	-64.67	332986.21	4502450.24	40 39.36160	070 58.53385	
8	ECR-B-632	A	8/16/2021	07:58	-64.69	333889.58	4502408.46	40 39.34997	070 57.89240	
8	ECR-B-632	B	8/16/2021	08:01	-64.65	333904.69	4502409.74	40 39.35084	070 57.88170	
8	ECR-B-632	C	8/16/2021	08:07	-64.64	333910.19	4502423.60	40 39.35840	070 57.87803	
8	ECR-A-633	A	8/16/2021	06:30	-64.95	334974.93	4502389.72	40 39.35291	070 57.12223	
8	ECR-A-633	B	8/16/2021	06:37	-64.96	334974.52	4502374.36	40 39.34461	070 57.12229	
8	ECR-A-633	C	8/16/2021	06:42	-64.96	334987.64	4502381.19	40 39.34846	070 57.11308	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-B-634	A	8/16/2021	05:14	-65.22	335965.89	4502335.26	40 39.33534	070 56.41846	
8	ECR-B-634	B	8/16/2021	05:20	-65.33	335981.47	4502339.54	40 39.33784	070 56.40747	
8	ECR-B-634	C	8/16/2021	05:27	-65.25	335985.37	4502355.18	40 39.34634	070 56.40496	
8	ECR-A-635	A	8/16/2021	03:10	-65.92	336976.62	4502310.46	40 39.33396	070 55.70113	
8	ECR-A-635	B	8/16/2021	03:17	-65.81	336975.48	4502326.38	40 39.34255	070 55.70218	
8	ECR-A-635	C	8/16/2021	03:24	-65.89	336989.17	4502319.19	40 39.33882	070 55.69236	
8	ECR-B-636	A	8/16/2021	02:20	-66.00	337966.19	4502266.99	40 39.32217	070 54.99851	
8	ECR-B-636	B	8/16/2021	02:25	-65.98	337980.55	4502268.94	40 39.32339	070 54.98836	
8	ECR-B-636	C	8/16/2021	02:31	-65.99	337985.73	4502288.96	40 39.33426	070 54.98499	
8	ECR-A-637	A	8/15/2021	23:33	-65.88	338957.96	4502241.73	40 39.32016	070 54.29461	
8	ECR-A-637	B	8/15/2021	23:38	-65.87	338972.67	4502246.95	40 39.32316	070 54.28426	
8	ECR-A-637	C	8/15/2021	23:43	-65.91	338987.58	4502252.57	40 39.32637	070 54.27377	
8	ECR-B-638	A	8/15/2021	21:59	-65.64	339958.68	4502203.91	40 39.31141	070 53.58418	
8	ECR-B-638	B	8/15/2021	22:04	-65.70	339973.00	4502198.44	40 39.30863	070 53.57393	
8	ECR-B-638	C	8/15/2021	22:09	-65.68	339986.77	4502207.45	40 39.31365	070 53.56430	
8	ECR-A-639	A	8/15/2021	20:13	-65.46	340955.14	4502172.03	40 39.30575	070 52.87685	
8	ECR-A-639	B	8/15/2021	20:19	-65.48	340972.19	4502178.08	40 39.30921	070 52.86485	
8	ECR-A-639	C	8/15/2021	20:24	-65.42	340987.96	4502184.35	40 39.31278	070 52.85375	
8	ECR-B-640	A	8/15/2021	19:06	-65.43	341940.10	4502138.36	40 39.29891	070 52.17766	
8	ECR-B-640	B	8/15/2021	19:12	-65.41	341955.31	4502131.75	40 39.29551	070 52.16677	
8	ECR-B-640	C	8/15/2021	19:19	-65.39	341966.41	4502148.30	40 39.30458	070 52.15914	
8	ECR-A-641	A	8/15/2021	17:04	-65.51	342958.38	4502099.62	40 39.28964	070 51.45475	
8	ECR-A-641	B	8/15/2021	17:09	-65.48	342971.42	4502109.17	40 39.29495	070 51.44564	
8	ECR-A-641	C	8/15/2021	17:13	-65.48	342984.75	4502116.94	40 39.29930	070 51.43630	
8	ECR-B-642	A	8/15/2021	16:12	-65.15	343956.96	4502064.79	40 39.28219	070 50.74587	
8	ECR-B-642	B	8/15/2021	16:19	-65.26	343975.57	4502061.42	40 39.28057	070 50.73262	
8	ECR-B-642	C	8/15/2021	16:24	-65.30	343985.15	4502072.56	40 39.28670	070 50.72599	
8	ECR-A-643	A	8/15/2021	14:04	-65.41	344958.26	4502031.38	40 39.27546	070 50.03509	
8	ECR-A-643	B	8/15/2021	14:15	-65.39	344970.09	4502042.46	40 39.28158	070 50.02686	
8	ECR-A-643	C	8/15/2021	14:19	-65.40	344984.36	4502047.39	40 39.28440	070 50.01681	
8	ECR-B-644	A	8/15/2021	13:12	-64.97	345961.40	4501992.15	40 39.26553	070 49.32291	
8	ECR-B-644	B	8/15/2021	13:16	-65.00	345976.76	4501995.79	40 39.26767	070 49.31207	
8	ECR-B-644	C	8/15/2021	13:22	-64.96	345981.98	4502012.50	40 39.27675	070 49.30861	
8	ECR-A-645	A	8/15/2021	11:01	-63.75	346956.29	4501963.38	40 39.26109	070 48.61675	
8	ECR-A-645	B	8/15/2021	11:06	-63.95	346968.51	4501972.77	40 39.26630	070 48.60822	
8	ECR-A-645	C	8/15/2021	11:10	-63.95	346976.61	4501985.25	40 39.27313	070 48.60265	
8	ECR-B-646	A	8/15/2021	10:14	-63.49	347961.18	4501925.81	40 39.25194	070 47.90336	
8	ECR-B-646	B	8/15/2021	10:20	-63.49	347975.90	4501927.09	40 39.25279	070 47.89293	
8	ECR-B-646	C	8/15/2021	10:25	-63.46	347976.45	4501948.12	40 39.26416	070 47.89284	
8	ECR-A-647	A	8/15/2021	08:08	-62.79	348969.08	4501903.17	40 39.25080	070 47.18805	
8	ECR-A-647	B	8/15/2021	08:13	-62.81	348960.51	4501914.78	40 39.25699	070 47.19429	

Segment	Station	Replicate	Date	Time (local)	Height (m)	X	Y	Lat (N)	Long (W)	Notes_1
8	ECR-A-647	C	8/15/2021	08:19	-62.77	348975.03	4501917.59	40 39.25866	070 47.18403	
8	ECR-B-648	A	8/15/2021	07:13	-62.33	349959.19	4501880.24	40 39.24925	070 46.48534	
8	ECR-B-648	B	8/15/2021	07:17	-62.27	349946.19	4501885.21	40 39.25180	070 46.49464	
8	ECR-B-648	C	8/15/2021	07:23	-62.36	349935.85	4501875.26	40 39.24631	070 46.50183	
8	ECR-A-649	A	8/15/2021	04:34	-62.35	350965.37	4501834.35	40 39.23540	070 45.77092	
8	ECR-A-649	B	8/15/2021	04:40	-62.21	350979.51	4501830.13	40 39.23327	070 45.76083	
8	ECR-A-649	C	8/15/2021	04:46	-62.29	350966.88	4501820.87	40 39.22813	070 45.76966	
8	ECR-B-650	A	8/15/2021	03:44	-62.15	351956.85	4501812.57	40 39.23434	070 45.06727	
8	ECR-B-650	B	8/15/2021	03:50	-62.14	351954.88	4501797.88	40 39.22638	070 45.06846	
8	ECR-B-650	C	8/15/2021	03:58	-62.05	351973.89	4501788.60	40 39.22157	070 45.05484	
8	ECR-A-651	A	8/15/2021	01:38	-62.19	352955.94	4501764.51	40 39.21909	070 44.35784	
8	ECR-A-651	B	8/15/2021	01:45	-62.17	352968.62	4501755.17	40 39.21417	070 44.34872	
8	ECR-A-651	C	8/15/2021	01:53	-62.29	352972.15	4501771.53	40 39.22305	070 44.34644	
8	ECR-B-652	A	8/15/2021	00:37	-61.90	353953.06	4501720.18	40 39.20576	070 43.64987	
8	ECR-B-652	B	8/15/2021	00:43	-61.88	353969.43	4501719.76	40 39.20570	070 43.63825	
8	ECR-B-652	C	8/15/2021	00:50	-62.03	353962.48	4501743.79	40 39.21861	070 43.64352	
8	ECR-A-653	A	8/14/2021	22:13	-61.28	354948.32	4501690.80	40 39.20041	070 42.94343	
8	ECR-A-653	B	8/14/2021	22:18	-61.33	354963.43	4501698.82	40 39.20490	070 42.93282	
8	ECR-A-653	C	8/14/2021	22:23	-61.27	354973.93	4501709.49	40 39.21078	070 42.92552	
8	ECR-B-654	A	8/14/2021	21:14	-61.07	355973.30	4501653.94	40 39.19127	070 42.21580	
8	ECR-B-654	B	8/14/2021	21:20	-61.19	355978.19	4501669.20	40 39.19956	070 42.21254	
8	ECR-B-654	C	8/14/2021	21:26	-61.19	355965.65	4501678.19	40 39.20428	070 42.22156	
8	ECR-A-655	A	8/14/2021	19:33	-60.51	356963.39	4501613.57	40 39.17978	070 41.51287	
8	ECR-A-655	B	8/14/2021	19:39	-60.49	356962.80	4501631.09	40 39.18924	070 41.51353	
8	ECR-A-655	C	8/14/2021	19:44	-60.51	356963.10	4501645.62	40 39.19710	070 41.51351	
8	ECR-B-656	A	8/14/2021	17:34	-60.04	357975.35	4501607.22	40 39.18683	070 40.79489	
8	ECR-B-656	B	8/14/2021	17:40	-60.25	357954.27	4501607.21	40 39.18661	070 40.80985	
8	ECR-B-656	C	8/14/2021	17:46	-60.45	357949.56	4501588.46	40 39.17643	070 40.81294	
8	ECR-A-657	A	8/14/2021	16:02	-60.22	358976.22	4501563.10	40 39.17329	070 40.08427	
8	ECR-A-657	B	8/14/2021	16:07	-60.40	358961.07	4501561.77	40 39.17242	070 40.09500	
8	ECR-A-657	C	8/14/2021	16:12	-60.34	358947.22	4501556.92	40 39.16966	070 40.10476	
8	ECR-B-658	A	8/14/2021	15:05	-60.10	359964.82	4501541.80	40 39.17188	070 39.38266	
8	ECR-B-658	B	8/14/2021	15:11	-60.12	359950.18	4501532.49	40 39.16670	070 39.39292	
8	ECR-B-658	C	8/14/2021	15:18	-60.06	359959.61	4501514.78	40 39.15723	070 39.38600	
8	ECR-C-1516	A	8/21/2021	03:20	-48.34	284835.94	4539906.80	40 58.91858	071 33.45406	
8	ECR-C-1516	B	8/21/2021	03:26	-48.34	284821.44	4539909.37	40 58.91973	071 33.46444	
8	ECR-C-1516	C	8/21/2021	03:32	-48.44	284838.29	4539928.69	40 58.93043	071 33.45284	
8	ECR-C-1516	D	8/21/2021	04:18	-48.58	284846.53	4539916.60	40 58.92403	071 33.44672	
8	ECR-C-1516	E	8/21/2021	04:25	-48.58	284817.79	4539919.10	40 58.92493	071 33.46724	
8	ECR-C-1516	F	8/21/2021	04:30	-48.25	284825.25	4539928.94	40 58.93036	071 33.46214	

Deployment/Stations	Source(s)
SPI/PV - Deep Helder	ECR_SPI_PV_Positions_Deep_Helder_All_Final_NAD83
SPI/PV - Dolphin	3664_SPI_BLK1_BLK4_NAV (Nearshore Dolphin)
Benthic Grabs - Deep Helder	ECR_SPI_Grab_Positions_B1_Final_NAD83.xlsx ECR_Grab_Positions_B2_Final_NAD83.xlsx ECR_Grab_Positions_B3_Final_NAD83.xlsx ECR_Grab_Positions_B6_Final_NAD83.xlsx
Benthic Grabs - Dolphin	DPRs / 3664_Electronic_Field_Data_Log_01-17-2022-EH
Benthic Video - Deep Helder	Survey tab of MMT's online log + missing positions provided by MMT / 3664_Electronic_Field_Data_Log_01-17-2022-EH
Benthic Video - Dolphin	DPRs / 3664_Electronic_Field_Data_Log_01-17-2022-EH

Segment	Description
1	East River – Astoria to Throgs Neck KP 0.000 – KP 11.000
2	Long Island Sound KP 11.000 – KP 55.000
3	Long Island Sound – Eatons Neck KP 55.000 – KP 130.000
4	Long Island Sound – The Race KP 130.000 – KP 175.000
5	Millstone Alternatives KP 0.000 – KP 10.395
5.1	Millstone Alternatives KP 0.000 – KP 10.395 (NE spur - awaiting Equinor's decision whether to include)
6	Block Island Sound – KP 175.000 – KP 200.000
7	Block Island Sound – KP 200.000 – KP 225.000
8	Offshore ECR to Lease Area – KP 225.00 – KP 317.00

ATTACHMENT B BENTHIC FIELD SAMPLING LOG

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment B - Electronic Field Data Log

			Drop Camera								Benthic Grab								Grab Mounted Camera	
Segment	Station	Date	Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
1	ECR-A-101-A	2021-11-04	85871.39	4527267.35	10:13	85880.96	4527261.92	10:18	Heavy snow in water column, flat soft substrate, heavy shell and shell material with occasional boulders, common algal growth on boulders, butterfish (*Peprilus triacanthus*)	Moved from ECR-A-101 to workable depth.	85860.68	4527283.44	> 7 cm	nd	dark yellowish brown 10YR 3/4	Coarse-medium sand	None	Coarse sand with shell fragments	Soft substrate and shell fragments	10:29:00
1	ECR-B-102	2021-11-03	86471.33	4527824.65	12:00	86440.06	4527821.92	12:07	High percentage of shell hash/shell fragments with some cobble/gravel sediment, razor clams, some soft sediment (medium coarse sand) habitat in the lee of larger cobble areas, attached algae, bryozoans, and hydrozoans	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no successful grab collected due to too little material (consisted of shell fragments and rock); grab video showed high % of gravel, cobble, shell fragments and whole shell; grab attempts made on 2021-11-04	N/A
1	ECR-B-104	2021-11-03	88409.11	4527741.50	11:22	88293.78	4527794.47	11:29	High percentage of substrate composed of cobble and gravel component, boulders present with attached algae, clams/razors clams, large shell fragments.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no successful grab collected due to too little material (consisted of shell fragments and rock); grab video showed substrate with gravel, cobble, shell fragments and whole shell; grab attempts made on 2021-11-04	N/A
1	ECR-B-106	2021-11-03	90304.73	4527630.70	10:26	90289.91	4527654.03	10:31	Coarse sand throughout the site with low percentage of shell hash, no attached algae, high current habitat	N/A	90302.35	4527642.14	> 7 cm	nd	grayish brown 2.5Y 5/2	Coarse-medium sand	None	Coarse sand with shell fragments	Soft substrate; grab collected on 2021-11-04	8:54:00
1	ECR-B-108	2021-11-03	92174.13	4527769.22	9:43	92109.09	4527743.93	9:50	Fine silty sand with large shell fragments, boulders present, horseshoe crabs (*Limulus polyphemus*), slipper shells (*Crepidula* spp.), large gastropod shell (*Busycon* sp.), razor clams, gastropods, branching algaes on boulders, orange sponge	N/A	92161.97	4527771.04	> 7 cm	15-20	dark yellowish brown 10YR 3/4	Fine, silty sand	Anoxic	Shells, shell fragments with some cobble	Soft substrate and shell fragments	9:09:00
1	ECR-B-110	2021-09-18	93971.02	4527872.85	10:04	93989.06	4527877.83	10:09	Flat silt with striated surface, some small exposed rocks, anthropogenic debris, few shells and shell fragments	N/A	93991.64	4527876.67	> 7 cm	30	olive gray 5Y 5/2	Silt, shell, and coarse sand	Anoxic	None	None	10:20:00
1	ECR-C-1107	2021-11-03	92473.08	4527876.40	9:58	92525.46	4527862.95	10:04	Heavy shell fragments with silty sand substrate, sediment a dark-green black color, cobble, clam shells and razor clam shells, boulders observed with branching algae attached, no northern star coral observed. Low profile small boulders with cobble mixed in - open areas of shell hash and coarse sand. Mussel and clam shells and fragments. Boulders with hydrozoan and bryozoan growth (heavily silted).	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	ECR-C-1108	2021-11-03	87929.72	4527942.07	11:36	87905.63	4527958.71	11:45	Heavy snow in water column, gravel/cobble bottom with occasional boulders, sponge, macroalgae, occasional hydroics and bryozoa possible cunner, shells and shell fragments, possible northern star coral (*Astrangia* sp.)(closed polyps) at 11:39:07, crab, carpet tunicate (*Didemnum* sp.) at 11:40:32, flat fish	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	ECR-C-1110	2021-11-03	88798.20	4527666.45	11:06	88759.98	4527664.30	11:13	Large boulers on cobble substrate, attached algae, hydroids, bryozoans, and sponge. on boulders. Heavy shell and fragments amongst cobble.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	ECR-C-1113	2021-09-18	93041.99	4528218.73	12:36	93090.28	4528233.84	12:57	Boulder substrate with northern star corals (*Astrangia* sp.), bryozoans, hydrozoans, possible orange sponge, shell hash on substrate between boulders, blue crab (*Callinectes sapidus*), razor clams, slipper shells (*Crepidula* spp.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	ECR-B-1150	2021-11-03	86358.78	4527694.30	12:33	86374.87	4527674.81	12:43	Shell hash, gravel, cobble substrate, razor clam shells and large clam shells, bryozoan/hydrozoan/algae growth.	N/A	86364.06	4527656.18	> 7 cm	N/A	dark gray 2.5 Y 4/1	Coarse sand/shell hash	None	Shell hash/heavy gravel	Soft substrate with shells and shell fragments; grab collected on 2021-11-04	13:52:00
1	ECR-B-1151	2021-11-03	86377.24	4527503.47	12:48	86393.97	4527495.29	12:55	Heavy snow in water column, coarse sand and cobble substrate, boulders present, macroalgae and sponge growth on boulders, carpet tunicate on boulders, plentiful shell and shell fragment, unknown fish, hermit crab (Paguroidea)	N/A	86388.35	4527477.59	> 7 cm	nd	dark gray 2.5 Y 4/1	Coarse sand/shell hash	None	Coarse sand with shell fragments	Soft substrate with shells and shell fragments; grab collected on 2021-11-04	14:56:00
1	ECR-B-1152	2021-11-03	86484.16	4527338.53	13:00	86495.62	4527329.05	13:06	Cobble and gravel substrate with large shell component, whole shells and yellow-brown sponge, bryozoan/hydrozoan/algal growth on surface of large cobble/ boulders	N/A	86510.09	4527319.53	> 7 cm	N/A	dark gray 2.5Y 4/1	Coarse sand/shell hash	None	Gravel, shell hass, coarse sand	Coarse sand shells and shell fragments; grab collected on 2021-11-05	9:33:00
1	ECR-B-1153	2021-11-03	86598.74	4527180.26	13:10	86589.79	4527163.87	13:17	Coarse sand, gravel, shell hash substrate. Occasional boulders. Bryozoan/hydrozoan/algal growth on surface of large cobble	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no successful grab.	N/A
1	ECR-B-1154	2021-11-03	86736.72	4526960.81	13:22	86748.68	4526962.15	13:30	Medium to coarse sand, gravel, shell hash substrate, with attached algae/bryozoan/hydrozoan growth, cobble with some juvenile fish in the area	N/A	86733.89	4526955.48	> 7 cm	N/A	reddish brown 5YR 4/4	Medium to coarse sand, gravel, shell hash	None	Fine-medium sand	Soft susbtrate with shells and shell fragments; grab collected on 2021-11-05	11:23:00
1	ECR-B-1155	2021-11-03	86857.66	4526662.69	13:46	86881.79	4526651.11	13:52	Heavy snow in water column, soft sediment substrate, medium to fine sand, with occasional fine silt macroalgae, shells and shell fragments, hermit crabs (Paguroidea), detritus	N/A	86868.34	4526647.60	> 7 cm	30	dark gray 2.5Y 4/1	Fine-medium sand with some mud	None	Fine-medium sand	Soft substrate with shells and shell fragments	15:57:00
1	ECR-B-1156	2021-11-03	86848.34	4526352.72	13:57	86871.88	4526359.74	14:05	Heavy snow in water column, flat soft substrate, fine silt overlaying sand, occasional small pockmarks, relatively devoid of unique features (appears heavy sedimentation may cover quickly), occasional detritus, occasional depressions, several burrows, unknown fish	N/A	86836.51	4526334.69	> 7 cm	55	dark gray 2.5Y 4/2	Fine-medium sand with some mud	None	Fine-medium sand	Soft substrate and shell fragments	15:01:00
1	ECR-B-1157	2021-11-03	86670.52	4526824.97	13:34	86668.74	4526790.84	13:41	Heavy snow in water column, flat soft substrate, fine silt overlaying sand, shell and shell fragments, macroalgae, hydrozaons and bryozoans attached to shell, occasional areas of increased shell, debris	N/A	86676.46	4526790.29	> 7 cm	25	dark gray 2.5Y 4/3	Fine-medium sand	None	Fine-medium sand with shell fragments	Soft substrate with shells and shell fragments; grab collected on 2021-11-05	13:19:00
1	ECR-B-1158	2021-11-04	85995.02	4527432.52	11:34	86011.72	4527428.07	11:42	Heavy snow in water column, soft substrate, coarse to medium sand, small sand waves, shell hash in troughs, macroalgae, carpet tunicates, detritus, occasional boulder with macroalgae, hydrozaons and bryozoans attached to shell,	N/A	86014.12	4527431.12	> 7 cm	50	dark gray 10YR 4/1	Medium to coarse sand	None	Medium-coarse sand	Soft substrate with shells and shell fragments	11:53:00
2	ECR-B-112	2021-09-18	96241.48	4527601.69	7:39	96227.53	4527593.64	7:44	Visibility very poor, silt with shell and shell fragments, anthropogenic debris, hermit crabs (Paguroidea) , bivalve siphons.	N/A	96235.48	4527587.69	> 7 cm	20	olive gray 5Y 5/2	Silt, sand, shells, rocks	Faint organic	None	None	7:54:00
2	ECR-B-114	2021-09-18	96836.76	4529273.98	4:26	96835.66	4529257.12	4:31	Flat silt with striated surface from currents, few shells and shell fragments	USBL position not provided - only vessel position.	96829.59	4529266.59	> 7 cm	40	olive gray 5Y 5/2	Silt and shell hash	Organic	None	None	4:45:00
2	ECR-B-116	2021-09-18	97693.58	4531009.63	0:34	97670.86	4530985.14	0:40	Flat silt with few shells and shell fragments, bioturbation as tracks and burrows	USBL position not provided - only vessel position.	97681.32	4530997.90	> 7 cm	40-50	olive gray 5Y 5/2	Silt, loose clay, shells	Organic	None	None	0:51:00
2	ECR-B-118	2021-09-17	98865.67	4532581.25	21:25	98865.67	4532581.25	21:36	Algal detritus, soft silty sediment, mantis shrimp burrows, shrimp, few shell fragments	Stationary video collected - used single position provided for start and end.	98879.06	4532569.59	> 7 cm	65	olive gray 5Y 5/2	Very soft	Heavy hydrogen sulfide	None	None	21:47:53
2	ECR-B-120	2021-09-17	99868.72	4534408.69	16:23	99905.88	4534403.31	16:37	Substrate very soft silt, poor visibility and marginal for observations, linear tracks within substrate, juvenile (16:25:30) and multiple large scup (*Stenotomus chrysops*), mantis shrimp burrows	N/A	99886.35	4534411.97	> 7 cm	45	olive gray 5Y 5/2	Very soft silt	Heavy hydrogen sulfide	None	Coordinates from third grab	17:01:03

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
2	ECR-A-121	2021-09-17	100311.40	4535090.66	14:35	100275.63	4535159.10	15:20	Visibility poor at times, substrate mix of very soft silt and boulder areas with shell immediately surrounding the boulders, most boulders with northern star coral (*Astrangia* sp.), horseshoe crab (Limulidae). Note, boulders were isolated - predominantly a sand transect.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No grab collected due to boulders and corals in the area	N/A
2	ECR-B-122	2021-09-17	101415.13	4535784.06	12:29	101538.32	4535718.88	12:59	Sediment very fine silt with some shell hash mixed in and not seen on surface, possible horseshoe crab (Limulidae), northern star corals (*Astrangia* sp.) on boulders, blue crab (*Callinectes sapidus*)	N/A	101516.55	4535744.76	> 7 cm	40	very dark gray 5Y 3/1	Very fine silt to muck	Mild hydrogen sulfide	Slimey	Coordinates from second grab	13:28:21
2	ECR-B-124	2021-09-17	102776.41	4537513.23	9:35	102793.02	4537536.17	9:40	Flat silt with very few shells and fragments on surface, burrows, tracks, depressions, mantis shrimp, black seabass (*Centropristis striata*). Note *Astrangia* on some isolated boulders (12:32:40) with surrounding shell fragments then again (12:33:52) on small boulders. More isolated and larger boulders at 12:43:42 - possible rope. Majority of transect is sand. Bioturbation evident as burrows, tracks and pockmarks. Tow marks in latter part of video - 12:47:15	N/A	102783.02	4537535.47	> 7 cm	40	very dark gray 5Y 3/1	Silt, ooze with shell hash	Organic	None	None	9:51:00
2	ECR-B-126	2021-09-17	104271.27	4538796.38	7:26	104303.77	4538812.95	7:32	Silt with moderate density of shells and shell fragments at surface, burrows, depressions, visibility very poor	N/A	104283.57	4538812.22	> 7 cm	40	very dark gray 5Y 3/1	Silt, loose clay, shells	Organic	None	None	7:44:19
2	ECR-B-128	2021-09-17	106082.81	4539678.78	4:30	106103.94	4539738.50	4:42	Flat silt with numerous shells and shell fragments, tracks, burrows, less abundant shell throughout the transect	USBL position not provided for transect start - only vessel position.	106086.91	4539697.48	> 7 cm	40	very dark gray 5Y 3/1	Silt, loose clay	Faint organic	None	None	4:57:00
2	ECR-B-130	2021-09-17	107751.35	4540161.95	2:27	107751.35	4540161.95	2:32	Flat silt with few shells and shell fragments, bioturbation as tracks and burrows, depressions	Stationary video collected - used single position provided for start and end.	107743.22	4540155.48	> 7 cm	50	very dark gray 5Y 3/1	Silt	Faint organic	None	None	2:47:00
2	ECR-B-132	2021-09-16	109690.68	4540586.65	23:28	109702.43	4540530.88	23:43	Soft silt substrate, slightly higher cover of shell fragments than surrounding stations, poor visibility, mantis shrimp burrows, juvenile scup (*Stenotomus chrysops*)	Stationary video collected due to low visibility, video collected on 2021-09-16; sediment grab collected on 2021-09-17. USBL position not provided for stationary transect - only vessel position.	109700.97	4540552.65	> 7 cm	40	very dark gray 5Y 3/1	Ooze	Faint organic	None	Grab collected on 2021-09-17	0:41:42
2	ECR-B-134	2021-09-16	111646.86	4540907.62	20:20	111685.91	4540904.83	20:47	Habitat stayed homogenous throughout transect, fine silt substrate, bioturbation, bluefish (Pomatomus saltatrix) and sea robins (*Prionotus* sp.), mantis shrimp burrows, squid (Loliginidae), and clam siphons, anchovies (*Anchoa* spp.), unidentified clupeid (herring)	USBL position not provided - only vessel position.	111666.33	4540903.23	> 7 cm	30-35	dark gray 5Y 4/1	Very soft silt	Mild hydrogen sulfide	None	None	20:57:00
2	ECR-B-136	2021-09-16	113657.67	4541255.23	17:32	113657.67	4541255.23	17:43	Fine soft sediment, bioturbation, mantis shrimp burrows, straight linear trails in mud, low number of shell fragments, juvenile scup (*Stenotomus chrysops*)	Conducted stationary drop due to visiblity - used single position (referred to in MMT's log as drop camera laydown)	113625.55	4541258.48	> 7 cm	30	dark gray 5Y 4/1	Very fine	Hydrogen sulfide	None	None	18:42:52
2	ECR-B-138	2021-09-16	115437.61	4542079.02	14:24	115425.54	4542050.52	14:32	Soft silt sediment, mantis shrimp burrows, low shell fragment cover, juvenile scup (*Stenotomus chrysops*), visibility deteriorated along the transect, linear tracks of foraging animal, polychaete casts	N/A	115418.74	4542062.79	> 7 cm	30	dark gray 5Y 4/1	Very soft silt	Hydrogen sulfide	None	Turbellaria tube	14:53:30
2	ECR-B-140	2021-09-16	116213.00	4543872.15	12:13	116197.05	4543834.29	12:24	Soft silt sediment, bioturbation, dark gray color, polychaete casts, minimal shell fragments, juvenile scup (*Stenotomus chrysops*), mantis shrimp burrows, very homogenous area	N/A	116215.87	4543860.06	> 7 cm	20	dark gray 5Y 4/1	Polychaete casts, fine silt and mud	Slight hydrogen sulfide	None	None	12:34:44
2	ECR-B-142	2021-09-16	117931.09	4544613.26	9:21	118001.97	4544534.35	9:39	Flat silt sediment with very abundant shells and shell fragments, few burrows and tracks, horseshoe crab (Limulidae), shell density decreased with increased depth	N/A	117934.10	4544628.01	> 7 cm	40	very dark gray 5Y 3/1	Silt and coarse sand	Faint organic	Shells, shell fragments	None	9:50:59
2	ECR-B-144	2021-09-16	119931.02	4544991.34	6:39	119957.32	4545007.48	6:45	Flat silty sediment, burrows, shells, and shell fragments, scup (*Stenotomus chrysops*)	N/A	119937.68	4545007.71	> 7 cm	40	very dark gray 5Y 3/1	Ooze, sand, shells	Faint organic	None	Poor visiblity	6:57:00
2	ECR-B-146	2021-09-16	121963.19	4545431.41	3:19	121909.94	4545426.47	3:28	Fine silt substrate, mounds with shells and shell fragments,buried boulder and hydrozoans, anchovies (*Anchoa* spp.), unidentified clupeid (herring), red hake (*Urophysic chuss*) and bluefish (*Pomatomus saltatrix*)	USBL position not provided - only vessel position.	121942.03	4545428.77	> 7 cm	50	very dark gray 5Y 3/1	Ooze, sand	Faint organic	None	Poor visiblity	4:00:00
2	ECR-B-148	2021-09-15	123936.25	4545381.38	23:35	123833.97	4545331.93	23:55	Soft silt substrate, mantis shrimp burrows, clam siphons, juvenile scup (*Stenotomus chrysops*), clam siphons, sea robin (*Prionotus* sp.), northern star corals (*Astrangia* sp.) on boulders with hydrozoans	USBL position not provided - only vessel position.	123898.51	4545360.25	> 7 cm	60	very dark gray 5Y 3/1	Ooze	Organic	None	Poor visiblity; grab collected on 2021-09-16	0:52:00
2	ECR-B-150	2021-09-15	125992.49	4545296.90	20:53	125965.89	4545331.85	21:10	Fine substrate with shell fragments, bioturbation, mantis shrimp burrows, polychaete tubes with casts, rocks with northern star coral (*Astrangia* sp.) at 21:07:10, substrate could be rocks or anthropogenic material, anchovies (*Anchoa* spp.), unidentified clupeid (herring), bluefish (*Pomatomus saltatrix*), striped sea robin (*Prionotus evolans*), butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), and scup (*Stenotomus chrysops*)	USBL position not provided - only vessel position.	125985.64	4545306.16	> 7 cm	25	reddish brown 5YR 4/3	Very fine silt	Hydrogen sulfide	Very smooth with polychaete tubes/casts	Two attempts made, first grab was overfilled; removed two weights and second grab (with no weight) was successful; coordinates from second grab	21:29:55
2	ECR-B-152	2021-09-15	127880.72	4545287.79	17:53	127906.75	4545251.25	18:03	Fine silt sediment from grab, video looked like medium to fine sand, shell fragments, bioturbation, mantis shrimp burrows, polychaete casts on surface, fresh sediment surrounding mantis shrimp burrows and mounds, hermit crab (Paguroidea), juvenile scup (*Stenotomus chrysops*)	Only start USBL position provided.	127892.77	4545279.28	> 7 cm	65	weak red 2.5YR 4/2	Fine silt	Heavy hydrogen sulfide	Very smooth with few shell fragments	Two attempts made, first grab was overfilled; removed two weights and second grab (with two weights remaining) was successful; coordinates from second grab	19:01:10
2	ECR-B-154	2021-09-15	129881.39	4545438.71	13:44	129810.96	4545394.22	13:57	Initial area high abundance of cobble with slipper shells (*Crepidula* sp.), transitioned into large sand waves, rocks with hydrozoan and bryozoan growth, razor clams, scup (*Stenotomus chrysops*)	N/A	129891.74	4545436.41	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no grab collected due to substrate type (cobble caught in grab closure); coordinates from second grab attempt	N/A
2	ECR-C-1102	2021-09-15	129308.02	4545350.13	16:03	129353.97	4545357.96	16:12	Possible Turbellaria worm tubes, clam siphons protruding from substrate, low abundance of shell fragments at beginning of transect, large deposit of slipper shells (*Crepidula* sp.) on the back side of the sand wave. hermit crabs (Paguroidea), small sand waves followed by transition to isolated area of heavy shell hash/gravel at 16:10:05 to clumps of intact shell at 16:11:15 and transition to sand ripples at 16:11:28. Assume this region was area of interest for added station.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1103	2021-09-16	121991.48	4545300.54	2:50	121947.82	4545306.28	3:00	Flat silt substrate, black sea bass (*Centropristis striata*), mounds with shells, boulders with northern star coral (*Astrangia* sp.) , bryozoans, and hydrozoans, mounds observed in SSS data appear to be either silt-covered with shells and shell fragments or buried bouldres with *Astrangia* coral colonies,hydrozoans, sponge (possibly *Cliona* spp.) and bryozoan growth, horseshoe crab (Limulidae), Anchovies (*Anchoa* spp.), unidentified clupeid (herring), scup (*Stenotomus chrysops*). Burrows observed in silt/sand substrate. Assume boulders were area of interest for added station.	Video collected to groundtruth SSS signature. End USBL position not provided - only vessel position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
2	ECR-C-1104	2021-09-16	119245.41	4544854.55	7:48	119350.93	4544879.31	8:06	Flat silt substrate with burrows and tracks, few shells and shell fragments, numerous tracks, patches of filamentous red algae on seafloor and in burrows. Scup (*Stenotomus chrysops*).	150 m transect at 0.2 kn vessel speed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1105	2021-09-16	109931.48	4540613.24	22:52	109898.29	4540571.86	23:04	Soft silt substrate, low cover of shell fragments, mantis shrimp burrows, juvenile scup (*Stenotomus chrysops*), visibility poor to marginal, benthic habitat homogenous	USBL position not provided - only vessel position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1106	2021-09-17	99685.14	4534052.99	18:40	99706.31	4534085.11	18:56	Fine silt substrate, linear tracks in sediment surface, mantis shrimp burrows, small rocks at the beginning of transect developed into larger boulders with northern star corals (*Astrangia* sp.), gray sponge, and orange bryozoan, area around boulders covered with cobble intermixed with shell and shell fragments. Assume boulder area was the focus of the added station.	USBL position not provided - only vessel position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1109	2021-11-05	97109.57	4530335.27	15:06	97138.04	4530337.43	15:17	Gravel substrate with boulders present, northern star corals (*Astrangia* sp.) observed on boulders, encrusting sponge (*Cliona* sp.) on boulders and slipper shells (*Crepidula fornicata*) covering large areas of shell within site, Scup (*Stenotomus chrysops*).	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1111	2021-09-17	98574.68	4531938.01	22:59	98573.98	4531927.50	23:05	Soft silt substrate, mantis shrimp (Squillid) burrows, mantis shrimp came out of burrow at 22:59:35, scup (*Stenotomus chrysops*), no unique habitat at this station	Collected video to groundtruth SSS signature; USBL position not provided - only vessel position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-C-1112	2021-09-18	97072.49	4530668.62	1:49	97157.54	4530559.35	2:15	Linear broken ridge of exposed rock with ~1 m relief, abundant northern star corals (*Astrangia* sp.) with hydrozoans, branching and encrusting sponges, area between rocks typical silt sediment with abundant shell and shell fragments. Blue crab (*Callinectes sapidus*), anchovy *(Anchoa* spp.)	USBL position not provided - only vessel position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	ECR-B-1131	2021-11-06	100419.75	4536403.50	8:46	100412.60	4536391.51	8:54	Heavy snow in water column, soft substrate, bioturbations as tracks, mounds, depressions, and burrows, fine silt material, macroalgae, butterfish (*Peprilus triacanthus*), multiple horseshoe crabs (Limulidae), sponge, colonial tunicates, hydrozoans, and bryozoans, amphipods	N/A	100421.76	4536394.93	> 7 cm	40	dark gray 5YR 4/1	Silt on top of clay	Anoxic	Amphipod (*Ampelisca* sp.) tubes (green layer)	Soft substrate	12:51:00
2	ECR-B-1133	2021-11-06	101189.86	4538202.98	9:11	101133.10	4538159.47	9:20	Silty substrate, boulders present with clusters of northern star coral (*Astrangia* sp.) growth, *Busycon* sp. shell, *Ampelisca* sp. tubes, Juvenile fish and shrimp present.	N/A	101190.01	4538196.99	> 7 cm	40	dark gray 5YR 4/1	Silt and shell hash	Strongly anoxic	Amphipod (*Ampelisca* sp.) tubes and shell hash	Soft substrate, shell fragments	12:01:00
2	ECR-B-1135	2021-11-06	102896.47	4538829.88	9:36	102878.78	4538778.47	9:45	Medium to fine sand, 30% shell hash, polychaete and amphipod tubes on surface, branching algae/detritus, possible scup (*Stenotomus chrysops*) in the frame. Spotted hake (*Urophycis regia*).	N/A	102896.24	4538825.90	> 7 cm	10 - 15	dark gray 5YR 4/1	Silty with shell-hash under surface	Medium anoxic	Smooth with little shell hash	Soft substrate, shell fragments	11:19:00
2	ECR-B-1137	2021-11-06	104824.99	4539435.27	10:05	104793.16	4539380.45	10:14	Heavy snow in water column, flat soft substrate, medium to fine sand with some overlaying silt/mud and flocculent material, shells and shell fragments, butterfish (*Peprilus triacanthus*), areas of small sand waves, bioturbation as small mounds, occasional detritus, several bivalve siphons	N/A	104819.06	4539425.10	> 7 cm	50	dark gray 5YR 4/1	Fine-medium sand	None	Fine-medium sand and mud with shell fragments	Soft substrate, shell fragments	11:37:00
3	ECR-B-201	2021-08-29	133717.50	4546457.35	16:06	133772.56	4546467.71	16:24	Fine sediments, polychaete tubes, clam siphons, small burrows, large whelk (16:18), many shrimp, scup (*Stenotomus chrysops*)	N/A	133747.81	4546461.87	> 7 cm	None	yellow 10YR 7/6	Fine silty mud on top; fine sand on bottom	None	Thin brown surface layer	None	16:37:13
3	ECR-B-203	2021-08-29	135619.36	4546960.21	12:40	135671.27	4546965.70	13:05	Fine sediments, small vertical burrows, large number of Ctenophora in water column, squid (Loliginidae), polychaete tubes, clam siphons, anchovies (*Anchoa* sp.) and butterfish (*Peprilus triacanthus*)	N/A	135648.81	4546963.24	> 7 cm	None	light olive brown 2.5Y 5/3	Silty mud	None	Thin brown surface layer	None	13:18:15
3	ECR-B-205	2021-08-29	137650.83	4547494.87	9:27	137604.87	4547481.76	9:36	Fine silty sediment, tracks, polychaete tubes, possible mantis shrimp burrows, bioturbation deposits, bivalve siphons, bivalve shell fragments, scup (*Stenotomus chrysops*)	N/A	137615.20	4547491.19	> 7 cm	30	olive 5Y 4/3	Fine silt	Slight sulfur	None	Coordinates from second grab	9:51:55
3	ECR-B-207	2021-08-29	139562.79	4548016.04	10:19	139517.99	4547981.67	10:37	First attempt: first area with low visibility, soft gray-green sediment, bioturbation, polychaete burrows; second area with fine sediments, squid (Loliginidae), small burrows, sea robin (*Prionotus* sp.), small hermit crabs (Paguroidea); third area with fine soft sediment, bioturbation as polychaete burrows; Second attempt: fine sediment, bioturbation as track and burrows, squid (Loliginidae), small burrows, bivalve siphons,large squid at 19:56, sea robin (*Prionotus* sp.) (20:02:40), small hermit crabs (Paguroidea) Anchovies (*Anchoa* spp.), unidentified clupeid (herring), scup (*Stenotomus chrysops*), bluefish (*Pomatomus saltatrix*)	Collected video on two attempts, both on 2021-08-29. First attempt (06:19 - 06:36): collected stationary video at three areas within the station due to poor visibility; Second attempt: normal video transect labeled 207a. Start and end coordinates for 207a are 139561.83, 4548018.59 and 139517.93, 4547978.27	139533.68	4548000.17	> 7 cm	70	olive 5Y 5/4	Fine silt	None	Bioturbation	None	6:48:59
3	ECR-B-209	2021-08-29	141468.58	4548388.97	20:49	141525.44	4548386.02	21:09	First attempt: first area with butterfish (*Peprilus triacanthus*), squid (Loliginidae), fine, brownish-gray soft substrate; second area similar to first; area three soft bottom silt habitat with polychaete tubes, burrows and tracks; Second attempt: fine soft substrate, many burrows, ?*Nassarius* mollusk, gastropods. Anchovies (*Anchoa* spp.), unidentified clupeid (herring), bluefish (*Pomatomus saltatrix*), searobin (*Prionotus* sp.), butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrysops*), skate (Rajidae)	Collected video on two attempts, both on 2021-08-29. First attempt (02:57 - 03:15): collected stationary video at three areas within the station due to poor visibility; Second attempt: normal video transect labeled 209a. Start and end coordinates for 209a are 141530.75, 4548410.87 and 141489.93, 4548367.05	141501.41	4548389.13	> 7 cm	None	dark gray 5Y 4/1	Fine silt	None	Bioturbation	Three attempts needed to collect grab due to substrate type (added weights); coordinates from third grab	3:46:19
3	ECR-B-211	2021-08-29	143373.95	4547963.75	0:19	143413.95	4547973.79	2:00	Fine soft substrate, squid (Loliginidae), polychaete tubes, burrows on surface of sediment, bioturbation, anchovies (*Anchoa* sp.) and bluefish (*Pomatomus saltatrix*)	N/A	143411.26	4547968.42	> 7 cm	50	dark gray 5Y 4/1	Fine silt	None	Bioturbation, polychaete burrows	Coordinates from second grab	0:42:41
3	ECR-A-212	2021-08-28	144353.82	4548168.59	2:42	144389.96	4548187.43	2:49	Soft substrate, bioturbation as burrows and tracks,, squid (Loliginidae), polychaete tubes, high turbidity, low visibility, mantis shrimp burrow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-B-213	2021-08-27	145355.32	4548409.61	23:37	145412.67	4548417.00	23:55	Fine soft substrate, bioturbation, occasional burrows, mounds, and tracks, mantis shrimp in burrow (23:49:50),	N/A	145387.61	4548414.10	> 7 cm	50	very dark greyish brown 10YR 3/2	Soft silt	None	None	Grab collected on 2021-08-28; coordinates from second grab	0:38:11
3	ECR-B-215	2021-08-27	147341.06	4548864.98	20:30	147283.41	4548858.52	20:47	Fine soft substrate, squid (Loliginidae), unidentified fish, burrows, bioturbation as trails, hermit crabs (Paguroidea), hake (*Merluccius merluccius*) at 20:41	N/A	147308.92	4548862.42	> 7 cm	70	light yellowish brown 10YR 6/4	Silt with fine sand	None	Bioturbation	Many fish	20:59:15
3	ECR-B-217	2021-08-27	149328.22	4549332.07	17:25	149280.78	4549320.69	17:42	Fine soft substrate, possible cuttlefish, horseshoe crab (Limulidae) at 17:31:20, scup (*Stenotomus chrysops*)	N/A	149306.71	4549327.69	> 7 cm	None	light yellowish brown 10YR 6/4	Silty fine sand	None	None	None	18:38:18
3	ECR-B-219	2021-08-27	151112.45	4549749.99	13:48	151166.68	4549755.09	13:59	Fine soft substrate, bioturbation as burrows, tracks and mounds, two squid at beginning of transect	N/A	151145.96	4549752.23	> 7 cm	None	light yellowish brown 10YR 6/4	Fine sand with silt	None	None	None	14:18:38
3	ECR-B-221	2021-08-27	153205.31	4550233.72	10:01	152977.57	4550201.68	10:30	Flat soft substrate, fish burrows, unidentified clupeid (herring), bioturbation as burrows, tracks, and mounds, bivalve siphons	N/A	153151.45	4550222.15	> 7 cm	50	pink 5YR 7/3	Fine sediment	None	Polychaete tubes	None	11:44:00

Segment	Station	Date	Drop Camera								Benthic Grab									Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
3	ECR-B-223	2021-08-25	155133.26	4550630.24	15:56	155085.50	4550620.84	16:08	Heavy marine snow, soft substrate, bioturbation, some sand over mud, heavy shell and shell fragments, brown algae (possibly *Sargassum* sp.), scup (*Stenotomus chrysops*), sea robin (*Prionotus* sp.)	N/A	155117.08	4550624.88	> 7 cm	None	grayish brown 10YR 5/2	Sandy mud	None	Shell fragments, some gravel	Soft substrate, many shells and shell fragments	16:21:10
3	ECR-B-225	2021-08-25	157053.79	4550928.29	12:31	157107.73	4550939.32	12:49	Soft substrate, bioturbation, flat, heavy marine snow, strong current, some polychaete tubes and burrows, hermit crab (Paguroidea), scup (Stenotomus chrysops), unidentified fish, bioturbation as burrows, tracks, bivalve siphons.	N/A	157079.03	4550929.81	> 7 cm	28	yellowish brown 10YR 5/4	Muddy clay with sand	Anoxic deep	None	Soft substrate	11:13:49
3	ECR-B-227	2021-08-25	159001.34	4551305.45	9:42	159064.90	4551319.63	9:59	Poor visiblity, current 2 kn, conducted three drops at station, all drops with flat soft substrate, some unidentified benthic fishes	Conducted three stationary drops, one each in the southwest, center, and northeast area of station ; Start position is for first start and end position is for third drop end position	159036.28	4551312.44	> 7 cm	38	brown 10YR 5/3	Muddy clay	None	Polychaete tubes	None	8:47:40
3	ECR-B-229	2021-08-25	161010.19	4551804.43	7:28	160978.03	4551796.51	7:38	Flat soft substate, poor visibility (<1 m), burrows, pock marks, scup (*Stenotomus chrysops*), small school of bait fish anchovies (*Anchoa* spp.) / unidentified clupeid (herring), polychaete tubes	N/A	160979.94	4551801.36	> 7 cm	30	brown 10YR 5/3	Silty mud with clay	None	None	None	6:28:27
3	ECR-B-231	2021-08-25	162953.37	4552294.74	4:28	162893.50	4552280.36	4:48	All three locations with flat soft substrate, bioturbation as pockmarks and burrows, high turbidity, scattered shells, anchovies (*Anchoa* spp.)	Conducted three drops along transect; Start position is for first start and end position is for third drop end position	162917.33	4552285.28	> 7 cm	30	yellowish brown 10YR 5/4	Silty mud with clay	None	None	Soft substrate	3:22:42
3	ECR-B-233	2021-08-30	164843.76	4552723.27	0:33	164915.64	4553048.68	1:28	First attempt: heavy marine snow, very strong current, soft substrate at each location; bioturbation as pockmarks and burrows Second attempt: soft silty sediment, polychaete burrows, squid (Loliginidae), mantis shrimp, shell fragments on surface, hydroid, hermit crab (Paguroidea)	Collected video on two attempts: First attempt on 2021-08-24 (22:59-23:05), conducted three stationary drops due to high current; Second attempt on 2021-08-30 as a normal transect; Note: this station was originally combined with ECR-C-1211 due to proximity, but aborted; Station ECR-C-1211 was visited again on 2021-08-30	164853.21	4552770.68	> 7 cm	58	brown 10YR 5/3	Silty mud	None	None	Soft substrate; grab collected on 2021-08-25	23:28:47
3	ECR-B-235	2021-08-24	166470.95	4552973.11	20:03	166407.76	4552987.34	20:25	Heavy marine snow, soft substrate, heavy shell and shall framents, unidentified fish, hermit crabs (Paguroidea), Ctenophora, squid (Loliginidae), burrows, butterfish (*Peprilus triacanthus*), anchovies (*Anchoa* spp.)	N/A	166441.00	4552983.94	> 7 cm	70	brown 10YR 5/3	Silty sand with shells	None	Shells	Soft substrate with many shells, hermit crab	20:37:06
3	ECR-A-236	2021-08-24	167739.42	4552950.98	17:37	167659.63	4552943.83	17:58	Flat soft substrate, heavy marine snow, bioturbation as small mounds, occasional shell fragments, polychaete tubes and burrows, scup (*Stenotomus chrysops*) (17:41:52), gastropod, sargassum debris, polychaete tubes at 17:51:00, debris at 17:55:18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-B-237	2021-08-24	168714.86	4553206.57	15:16	168650.20	4553209.56	15:38	Soft substrate, bioturbation, scattered shells, polychaete tubes, burrows, scup (*Stenotomus chrysops*), northern sea robin (*Prionotus carolinus*) (15:23:30), Ctenophora, drift algae (*Sargassum* sp.), large hermit crab (Paguroidea)	Extra transect conducted from 16:17 - 16:57 to investigate sonar contacts for Equinor; Second transect: start 168820.82, 4553225.4 and end 168756.09, 4553209.29	168675.48	4553213.79	> 7 cm	45	brown 10YR 5/3	Silty mud	None	None	Heavy plume, soft mud substrate	13:50:05
3	ECR-B-239	2021-08-30	170664.67	4553732.67	3:10	170711.95	4553744.92	3:18	First attempt: flat soft substrate, bioturbation as burrows and tracks, clam siphons, shell hash, squid (Loliginidae), unidentified clupeid (herring), sea robins (*Prionotus* sp.), very turbid water, burrows; Second attempt: soft silty sediment, mantis shrimp, polychaete burrows, tubes and casts, squid (Loliginidae), few shell fragments, small unidentified eel (possibly Congridae)	Collected video on two attempts: First attempt on 2021-08-24 (08:09-08:13), two drops conducted, recovered camera early due to bottom current coming from stern of vessel, second drop conducted from 08:35 - 08:42 from northwest to southeast; Second attempt on 2021-08-30 as a normal transect; Note: this station was originally combined with ECR-C-1212 on 2021-08-24 due to proximity, but ECR-C-1212 was also visited again on 2021-08-30	170695.51	4553740.03	> 7 cm	24	very pale brown 10YR 7/3	Silty mud with clay	None	None	Soft bottom substrate; grab collected on 2021-08-24	9:56:10
3	ECR-B-241	2021-08-24	172669.56	4554244.90	4:13	172659.68	4554242.08	4:16	Flat soft substrate, bioturbation, scattered shells, turbid water, striped sea robin (*Prionotus evolans*) (04:15:20)	Ran one short transect then stationary hold	172636.46	4554242.29	> 7 cm	30	brown 10YR 5/3	Mud	None	None	Soft substrate	4:28:26
3	ECR-B-243	2021-08-24	174547.71	4554744.58	2:38	174573.89	4554744.36	2:46	Flat soft substrate, bioturbation, shell fragments, turbid water, squid (Loliginidae), pock marks, scup (*Stenotomus chrysops*), anchovies (Anchoa spp.), large burrow, observed SPI impact mark	First drop conducted from 01:25 - 01:26, recovered early due to position error	174568.77	4554745.10	> 7 cm	<20	brown 10YR 5/3	Silty mud with clay deep	Anoxic deep	None	Soft substrate	1:46:10
3	ECR-B-245	2021-08-30	176537.73	4555261.50	7:29	176486.64	4555235.98	7:39	Silty sediment, bioturbation as trails and burrows, grayish green color, polychaete tubes, shell fragments, mantis shrimp burrows on surface	N/A	176505.45	4555248.18	> 7 cm	20-30	grayish brown 10YR 5/2	Silty soft sediment	Hydrogen sulfide	None	None	7:49:50
3	ECR-B-247	2021-08-30	178477.63	4555758.17	9:39	178418.76	4555745.34	9:50	Soft sediment, grayish green color, mantis shrimp burrows, polychaete tubes (Serpulidae), inshore lizardfish (*Synodus foetens*), small gastropods, hermit crabs (Paguroidea), scup (*Stenotomus chrysops*)	N/A	178437.87	4555751.80	> 7 cm	25	grayish brown 10YR 5/2	Soft silt sediment	Slight hydrogen sulfide	None	Coordinates from second grab	10:11:47
3	ECR-B-302	2021-08-30	180339.68	4556239.58	12:33	180380.16	4556254.87	12:48	Fine sediment, small burrows, bioturbation as trails, disturbed sediment	N/A	180379.86	4556255.63	> 7 cm	None	yellow 10YR 7/6	Fine silt	None	Thin light brown surface layer, gray under	Overlay incorrectly labeled as station 301; coordinates from third grab	13:15:16
3	ECR-B-304	2021-08-30	182291.43	4556740.23	15:19	182326.54	4556741.53	15:27	Fine sediment, bioturbation, bivalve siphons, squid	N/A	182312.41	4556740.80	> 7 cm	None	very pale brown 10YR 7/4	Silt, some clay, no sand faction noted	None	Thin light brown surface layer	None	15:38:42
3	ECR-B-306	2021-08-30	184208.76	4556409.55	17:48	184242.63	4556418.92	18:00	Fine sediment, large amount of bioturbation as trails, tracks, and burrows, polychaete tubes, squid (Loliginidae), gastropods, scup (*Stenotomus chrysops*)	Could not run N-S transect as proposed due to current	184228.09	4556412.02	> 7 cm	None	light yellowish brown 10YR 6/4	Fine silt and mud, minimal sand	None	Bioturbation in video, thin light brown surface layer	None	18:49:17
3	ECR-B-308	2021-08-30	186170.19	4556841.83	21:00	186140.83	4556823.64	21:11	Fine sediments, bioturbation as tracks and small burrows, two shrimp at 21:03	N/A	186152.28	4556834.57	> 7 cm	None	light yellowish brown 10YR 6/4	Fine silt and mud, minimal sand	None	Light brown surface layer	None	21:28:17
3	ECR-B-310	2021-08-30	188096.55	4557450.17	22:49	188064.57	4557426.54	23:03	Fine sediment, bioturbation as trails and tracks, worm casting, polychaete tubes, anchovies (*Anchoa* spp.) and northern sea robin (*Prionotus carolinus*), squid	N/A	188079.38	4557437.83	> 7 cm	None	light yellowish brown 10YR 6/4	Silty mud	None	Thin light brown surface layer, gray under	None	23:15:01
3	ECR-B-312	2021-08-31	189950.72	4558022.27	1:38	190007.91	4558043.62	1:49	Fine sand, bioturbation, multiple Turbellaria tubes, amphipods, black seabass (*Centropristis striata*) and spotted hake (*Urophycis regia*)	N/A	189985.09	4558029.97	> 7 cm	15-20	gray 2.5Y 5/1	Fine sand	Slight hydrogen sulfide	Fine sand, dark gray, multiple Turbellaria, very large polychaete (*Capitella* sp)	Four attempts needed to collect adequate grab sample; coordinates from fourth grab	2:21:25
3	ECR-B-314	2021-08-31	191859.17	4558621.67	4:00	191918.43	4558643.76	4:11	Fine sand and shell fragments, bioturbation, hermit crab (Paguroidea), Turbellaria worms, hydroids, moon snail, mantis shrimp burrows, mucus strings, jellyfish at 04:10:41	N/A	191893.98	4558632.83	> 7 cm	20	brown 10YR 5/3	Fine sand, <500 micron	None	Smooth hard packed sand	None	4:26:20
3	ECR-B-316	2021-08-31	193825.72	4559279.95	7:29	193786.75	4559183.92	7:46	Fine sand, mounds, burrows, multiple hermit crabs (Paguroidea), bioturbation, blowing/venting polychaete burrows, sea robin (*Prionotus* sp.)	N/A	193802.85	4559233.10	> 7 cm	20	brown 10YR 5/3	Fine sand	None	Turbellaria tubes	None	8:04:07
3	ECR-B-318	2021-08-31	195736.98	4559833.41	12:33	195704.86	4559829.28	12:48	Very fine sand with silt layer, bioturbation as tracks and burrows, dozens of hermit crabs (Paguroidea), polychaete tubes, scattered gastropod (*Crepidula* spp.) and bivalve shells, flounder, portunid crab, spider crab (*Libinia* sp.) at 12:47	N/A	195713.54	4559831.28	> 7 cm	30	brown 10YR 5/3	Very fine sand	None	Thin light brown surface layer	None	13:00:34

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
3	ECR-B-320	2021-08-31	197598.25	4560414.71	15:01	197625.82	4560436.29	15:13	Fine sand, small sand ripples, bioturbation, shell fragments, numerouse hermit crabs (Paguroidea), dead razor clam shell, flounder (possibly *Etropus* sp.) at 15:11	N/A	197615.77	4560427.29	> 7 cm	45	dark yellowish brown 10YR 4/4	Very fine sand	None	Thin light brown surface layer, gray under	None	15:24:31
3	ECR-B-322	2021-08-31	199539.32	4560814.07	18:11	199573.35	4560857.09	18:30	Fine sand, large sand waves/dunes with smaller ripple marks, scattered shells, bioturbation, large number of hermit crabs (Paguroidea), polychaete tubes, clusters of slipper shells (*Crepidula* spp.; one in grab sample with 5-6 stacked shells), stringy bryozoans	N/A	199558.77	4560839.55	> 7 cm	40	dark brown 10YR 3/3	Very fine sand	None	Ripple marks, minimal silt layer	None	18:48:01
3	ECR-B-324	2021-08-31	201552.52	4560542.67	20:30	201515.45	4560558.77	20:46	Find sand with shell fragments, sand ripples and waves, numerous hermit crabs (Paguroidea), many scup (*Stenotomus chrysops*), crest of large sand wave at 20:36:30, shell fragments in wave troughs, squid and spider crab at 20:37, whelk (*Busycon* spp.) at 20:43	N/A	201536.06	4560550.91	> 7 cm	30	brown 10YR 4/3	Fine sand and shell	None	Shell fragments	None	20:56:30
3	ECR-B-326	2021-08-31	203544.24	4560441.06	23:36	203491.28	4560497.42	0:03	Starts with fine sand and shell, hermit crabs (Paguroidea), squid (Loliginidae), flounder, polychaete tubes, bryozoans? at 23:39:20, transitions to shell and gravel at 23:45, transitions back to sand at 23:52, bottom drops off from sand to shell and gravel again at 23:55, transitions back to sand at 23:59, sea robins (*Prionotus* sp.) (23:57); anchovies (*Anchoa* sp.), butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrysops*)	Transect began on 2021-08-31 and ended on 2021-09-01	203528.17	4560455.72	> 7 cm	25	brown 10YR 4/3	Fine sand and shell fragments	None	Shell fragments, fine to medium coarse sand	Grab collected on 2021-09-01	0:45:40
3	ECR-C-1101	2021-09-15	131972.03	4545986.17	9:56	131871.62	4545959.07	10:13	Flat silt substrate, low density of shells and shell fragments, mantis shrimp burrows, hermit crab (Paguroidea)	Added station, full benthic suite	131929.53	4545966.99	> 7 cm	60	very dark gray 2.5Y 3/1	Silt and sand	Faint organic	Flat	None	10:25:07
3	ECR-C-1201	2021-08-29	133517.34	4546370.95	18:27	133465.41	4546348.42	18:46	Fine soft substrate, bioturbation as trails and burrows, scattered shells, emergent polychaete tubes and small burrows, large clam siphon at 18:37, small eel, scup (*Stenotomus chrysops*), Atlantic croaker (*Micropogonias undulatus*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1202	2021-08-29	135081.04	4547055.56	14:28	135128.56	4547078.85	14:46	Fine soft sediment with bioturbation as burrows, polychaete tubes, dark SSS signature seems to correspond with exposed deposits of cobble intermixed with dead bivalve shells, 2-5 cm burrows throughout, scup (*Stenotomus chrysops*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1203	2021-08-29	138359.20	4547684.19	8:41	138222.37	4547646.75	9:00	Soft fine silt substrate, bioturbation, some small bivalve shells, mantis shrimp and polychaete burrows, scup (*Stenotomus chrysops*), sea robin (*Prionotus* sp.) at 08:53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1204	2021-08-29	144493.40	4548168.66	21:24	144343.90	4548183.65	22:13	First attempt: silty mud substrate, small amounts of bioturbation, small burrows; Second attempt: fine flat sediment with steep-sided burrows (2-5 cm diameter), small squid (Loliginidae), sea robin (*Prionotus* sp.) at 21:35 and 21:36, small hermit crab (Paguroidea), striped sea robin (*Prionotus evolan* s)	Made two attempts to collect video due to rough seas: First attempt on 2021-08-21 (19:00-19:12); second attempt on 2021-08-29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1205	2021-08-27	146355.11	4548639.75	22:11	146313.51	4548628.40	22:30	Soft substrate, fine sediment, heavy bioturbation as holes and burrows, small black sea bass (*Centropristis striata*), no gravel noted at station, observed SSS signature may be caused by heavy bioturbation, anchovies (*Anchoa* spp.), unidentified clupeid (herring), Atlantic croaker (*Micropogonias undulatus*), northern sea robin (*Prionotus carolinus*), scup (*Stenotomus chrysops*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1206	2021-08-27	150191.16	4549535.60	15:53	150244.94	4549541.44	16:12	Fine sediment, occasional burrows, small squid (Loliginidae), hermit crabs (Paguroidea), anchovies (*Anchoa* spp.), northern sea robin (*Prionotus carolinus*), and blue crab (*Callinectes sapidus*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1207	2021-08-27	154035.37	4550391.82	7:22	153982.37	4550380.36	7:35	Shell hash and sand substrate, bryozoans, northern star coral (*Astrangia* sp.) corals observed growing on cobble, and boulders, potential brown sponge, hydrozoans, and bryozoans	N/A	154008.14	4550402.99	> 7 cm	40	brown 2.5Y 3/2	Heavy sand	None	Coarse sand	None	8:27:44
3	ECR-C-1208	2021-08-25	154230.05	4550437.59	17:49	154189.70	4550406.83	18:10	Boulder substrate, heavy marine snow, hydrozoan, bryozoan, and potential spongel cover, northern star coral (*Astrangia* sp.) coral, soft sediment between boulders, unidentified crab at 17:59:30, transitions to soft substrate at 18:03:20	Collected sediment grab and SPI/PV southwest of station to avoid rock/boulder field	154211.91	4550418.50	> 7 cm	None	grayish brown 10YR 5/2	Muddy sand	None	Shells and some gravel	Soft substrate, shells, some algae	19:08:50
3	ECR-C-1209	2021-08-25	156720.68	4550948.51	13:43	156736.95	4550955.89	14:07	Heavy marine snow, mix of soft substrate and possible hard bottom, heavy shell, moon snail, hermit crab (Paguroidea), algae, boulder at 13:53:20, possible northern star coral (*Astrangia* sp.), sponge, bryozoan, and hydrozoan cover	Captured visual of SSS contacts S-B2-3081 and S-B2-3084	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1210	2021-08-25	163622.00	4552462.72	2:22	163723.66	4552489.15	2:33	Flat soft substrate throughout, some pockmarks, anchovies (*Anchoa* spp.), scup (*Stenotomus chrysops*), and squids	Conducted short transect until visibility deteriorated then conducted three stationary drops along transect; Start position is for first start and end position is for third drop end position	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1211	2021-08-30	164876.21	4552746.08	1:53	164889.21	4552804.44	2:04	soft silt sediment, polychaete burrows, shell fragments, mantis shrimp burrows	Originally attempted on 2021-08-24 but current was too strong	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1212	2021-08-30	171664.40	4553946.22	3:56	171710.87	4554034.11	4:14	Soft silt-sand sediment,bioturbation as burrows and tracks, polychataes tubes, shell fragments.	Conducted two attempts: First attempt on 2021-08-24 (08:13-08:17; 08:35-08:41) had poor visibility, conducted five minute stationary video drop; Second attempt on 2021-08-30; transect adjusted to run southwest to northeast due to current	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1213	2021-08-24	171782.13	4553857.61	5:59	171782.13	4553857.61	6:13	Boulder with heavyepiphyte growth, sponge, hydrozoans, and bryozoans, covered in silt, squid (Loliginidae), hermit crab (Paguroidea), turbid water, large shell fragments, spider crab	Conducted stationary drops to investigate potential boulder in SSS data; first drop from 05:40-05:47 was aborted due to position issues; Start position also used for end position (USBL end position not provided - perhaps due to position issues)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1214	2021-08-27	153671.32	4550339.80	3:12	154221.78	4550460.02	5:17	Lengthy video - Dark silt and sand with low density of exposed shells and shell fragments, numerous mantis shrimp burrows, possibly other taxa, soft substrate, sandy bottom with shell hash, hermit crabs (Paguroidea), branching bryozoans, numerous observations of northern star coral (*Astrangia* sp.), areas of boulders, shell-laden bottom, sponge, yellow brown sponge, eel, transitions to cobble seafloor to sand/shell hash, anemone, sponge, polychaete tube worms, anchovies (*Anchoa* spp.), unidentified clupeid (herring), bluefish (*Pomatomus saltatrix*), striped sea robin (*Prionotus evolans*), butterfish (*Peprilus triacanthus*), spotted hake (*Urophycis regia*), Atlantic croaker (*Micropogonias undulatus*), black seabass (*Centropristis striata*), and tautog (*Tautoga onitus*)	Video only, originally named ECR-C-1213	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	ECR-C-1215	2021-09-15	132822.92	4546217.51	8:19	132795.23	4546209.60	8:25	Flat sand and silt substrate, low density of shells and shell fragments, holes and depressions	Full benthic suite, originally named ECR-C-1214	132802.34	4546210.67	> 7 cm	60	black 2.5Y 2.5/1	Fine ooze	Organic	Flat	None	8:38:03
4	ECR-B-328	2021-09-01	205019.58	4559006.13	3:18	205070.26	4559039.34	3:29	Multiple transitions along the transect cover, sand ripples, troughs had large shell fragments, peaks had coarse sand, abundant scup (*Stenotomus chrysops*) and hermit crabs (Paguroidea), bioturbation as tracks and burrows.	Transect was oriented SW to NE, not possible to run along with the route due to current	205047.85	4559021.10	> 7 cm	20	dark gray 10YR 4/1	Medium coarse sand	None	Shell fragments, sand ripples	Grab location was adjusted 2 m to avoid seafloor slope	3:47:24

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
4	ECR-B-330	2021-09-01	206939.83	4559386.14	5:34	206999.14	4559405.46	5:44	Multiple transitions from sand ripples to flatter areas, troughs contain shell hash and large clam shell pieces, smooth sand at peak of sand waves, bioturbation as tracks and burrows, scup (*Stenotomus chrysops*), whelk (*Busycon* spp.)	N/A	206981.07	4559395.63	> 7 cm	15-20	dark gray 10YR 4/1	Coarse to fine sand with shell hash	None	None	None	6:28:01
4	ECR-B-332	2021-09-01	208919.05	4559984.94	12:29	208878.48	4559909.04	12:57	Transitional from smooth to shell bottom with area of gravel, hermit crabs (Paguroidea), squid (Loliginidae), bryozoans/hydroids?, polychaete tubes	N/A	208900.53	4559959.84	> 7 cm	None	dark brown 10YR 3/3	Fine sand, thin silt layer	None	Three slipper shell (*Crepidula* spp.) clusters in grab sample	None	13:11:37
4	ECR-B-334	2021-09-01	210773.15	4560496.59	16:46	210831.11	4560522.66	17:08	Fine sand and shell fragments, sand ripples, areas of concentrated shell material, hermit crabs (Paguroidea), dense shell at 16:49, dozens of squid at 16:51, many invertebrates in water column at 16:56	Ran transect at 063° heading at 0.1 kn vessel speed.	210812.35	4560513.07	> 7 cm	None	yellowish brown 10YR 5/6	Medium coarse sand	None	None	None	17:20:09
4	ECR-B-336	2021-09-02	212748.48	4561047.12	15:09	212731.90	4561088.16	15:24	Fine sand with thin silt layer, small ripple marks, occasional shells, hermit crabs (Paguroidea), squid (Loliginidae), flounder	N/A	212737.13	4561076.53	> 7 cm	20	dark yellowish brown 10YR 4/6	Fine sand	None	Thin silt layer	None	15:34:16
4	ECR-B-338	2021-09-02	214455.21	4561963.19	19:16	214471.53	4562004.63	19:31	Fine sand with thin silt layer, small ripple/waves at crests of larger sand ripple/waves, occasional shell fragments, hermit crabs (Paguroidea), Flounder (*Etropus* sp.), northern searobin (*Prionotus carolinus*), scup (*Stenotomus chrysops*), squid	Strong current pushed vessel starboard during transect, towed into current	214472.49	4561987.29	> 7 cm	20	yellowish brown 10YR 5/6	Fine sand with thin silt layer	None	None	None	19:43:27
4	ECR-B-340	2021-09-02	216178.82	4563162.18	23:20	216131.73	4563173.85	23:32	Fine sand, ripple waves, occasional shell rubble, northern sea robin (*Prionotus carolinus*), squid (Loliginidae), hermit crabs (Paguroidea)	Towed into current at 276° heading	216140.15	4563170.33	> 7 cm	10	yellowish brown 10YR 5/6	Fine and coarse sand	None	Sand with shell fragments	None	2:19:46
4	ECR-B-342	2021-09-03	218027.05	4563645.77	3:57	217950.02	4563719.04	4:14	Shell hash deposit transition into coarse sand, hermit crabs (Paguroidea), squid (Loliginidae), transition between sand wave peaks (coarse) and large bivalve and gastropod shell hash	N/A	217994.24	4563678.92	> 7 cm	20-30	yellowish brown 10YR 5/6	Coarse sand with shell hash	None	None	None	4:44:44
4	ECR-B-344	2021-09-03	220002.24	4563920.63	15:18	219973.37	4563911.60	15:27	Second visit: sand waves 0.3 - 0.5 m high, fine sand with ripple waves on crests, shell debris and silt in troughs	Visibility was too poor during first visit on 2021-09-03 (10:02-10:08); Collected extra video of SSS feature west of station, camera facing backward due to current	219991.15	4563912.18	> 7 cm	20-30	yellowish brown 10YR 5/6	Coarse sand	None	None	None	10:37:35
4	ECR-B-346	2021-09-03	221980.17	4564132.37	14:27	221950.71	4564117.76	14:34	Fine sand and small ripples at station, hermit crabs (Paguroidea); Extra video collected northeast of station to confirm habitat: sand waves and sand ripples; Transit to west-southwest, fine sand with coarse sand and shell crests, fine shell in troughs, flounder (possibly *Etropus* sp.), northern sea robin (*Prionotus carolinus*), squid (Loliginidae), hermit crabs (Paguroidea), algal debris drifting on bottom	N/A	221964.54	4564128.90	> 7 cm	None	yellowish brown 10YR 5/6	Fine sand and gravel	None	None	None	16:47:50
4	ECR-B-348	2021-09-03	223765.20	4564899.24	21:18	223810.74	4564920.07	21:26	Depressions with shell hash (21.22), fine sand with ripple waves on sand ridges, squid grabbing fish (21:23:30), anchovies (*Anchoa* sp.), butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrysops*), unidentified clupeid (herring), flounder (possibly *Etropus* sp.), northern sea robin (*Prionotus carolinus*), and squid	N/A	223797.04	4564908.39	> 7 cm	None	yellowish brown 10YR 5/4	Fine sand, four anchovies in grab sample	None	None	None	21:40:12
4	ECR-B-350	2021-09-04	225604.90	4565682.74	9:25	225671.13	4565673.89	9:37	Shell hash, sand ripples, medium sand, sea robins (*Prionotus* sp.), hermit crabs (Paguroidea), seafloor characteristics stayed same throughout transect	N/A	225645.33	4565682.26	> 7 cm	40	dark gray 10YR 4/1	Gravelly sand and shell hash	None	None	None	9:52:52
4	ECR-B-402	2021-09-04	226356.28	4567044.25	11:30	226302.20	4567042.52	11:41	Gravel, pebbles, sand, shell, hermit crabs (Paguroidea), hydroids, shell mounds, possible clam vents	N/A	226318.31	4567041.08	> 7 cm	None	brownish yellow 10YR 6/6	Fine sand with gravel	None	None	None	12:19:59
4	ECR-B-404	2021-09-04	228082.28	4568035.19	14:46	228043.68	4568028.57	14:53	Shell and gravel, occasional silt layer, cluster of slipper shells (*Crepidula fornicata*) (living)	N/A	228057.66	4568033.12	> 7 cm	None	brownish yellow 10YR 6/6	Fine sand with gravel	None	None	None	15:04:50
4	ECR-B-406	2021-09-04	229805.81	4568936.51	17:50	229838.41	4568931.60	17:57	Bivalve shells and gravel bottom, occasional squid (Loliginidae), hermit crabs (Paguroidea)	N/A	229815.48	4568934.36	> 7 cm	None	light yellowish brown 10YR 6/4	Shell, gravel, fine sand	None	Shell and gravel	None	18:58:47
4	ECR-B-408	2021-09-04	231767.46	4569184.19	22:48	231808.15	4569201.92	22:56	Shell fragments and gravel/pebble bottom, Atlantic purple sea urchin (*Arbacia punctulata*), squid (Loliginidae), anemone (possibly *Metridium* sp.), hermit crabs (Paguroidea), scup (*Stenotomus chrysops*)	N/A	231791.34	4569192.69	> 7 cm	None	dark yellowish brown 10YR 4/4	Shell and gravel	None	None	None	23:18:15
4	ECR-B-410	2021-09-05	233708.00	4568579.80	2:50	233646.45	4568584.22	3:01	SPI/PV data showed northern star coral (*Astrangia* sp.) on gravel/pebble bottom with grayish sponge, many slipper shells (*Crepidula fornicata*), shell hash mixed with sea urchins and hermit crabs (Paguroidea)	N/A	233654.48	4568580.66	> 7 cm	20	dark gray 10YR 4/1	Gravel and pebble, shell hash	None	Gravel and pebble with gray sponge, bivalve shells,	None	5:16:00
4	ECR-B-412	2021-09-08	234958.85	4567081.73	12:32	235009.32	4567155.18	12:39	Gravel bottom with fine sand, dozens of small spider crabs, hermit crabs (Paguroidea), squid	Video not collected the same day as sediment grab sample: video on 2021-09-08, Grab on 2021-09-04	234996.71	4567144.06	> 7 cm	20	dark gray 10YR 4/1	Pebbles with coarse sand and shell hash	None	Pebbles on the surface	Grab collected on 2021-09-04	5:10:18
4	ECR-B-414	2021-09-05	236853.72	4567087.49	10:32	236808.63	4567063.68	10:40	Fine sand, slight shell hash, hermit crab (Paguroidea), large whelk (*Busycon* spp.), hydroids, sponge, crab, bioturbation as tracks and burrows	N/A	236831.64	4567077.67	> 7 cm	None	brownish yellow 10YR 6/6	Fine sand, some shell hash	None	None	None	11:25:11
4	ECR-B-416	2021-09-05	238495.58	4567449.72	18:36	238562.51	4567452.14	18:50	Sand, small shell fragments, ripple waves, hermit crabs (Paguroidea), northern sea robins (*Prionotus carolinus*), squid (Loliginidae), bioturbation as tracks and burrows	Towed in east direction	238538.54	4567459.29	> 7 cm	None	brownish yellow 10YR 6/6	Medium sand, >500 micron	None	None	None	20:08:49
4	ECR-B-418	2021-09-06	240730.83	4567103.70	4:58	240457.64	4567109.73	5:08	Large cobble, white and gray sponge covering large area of substrate, multiple spider crabs (*Libinia* sp.), Atlantic rock crab (*Cancer irroratus*), sea urchin (*Arbacia* sp.), hermit crabs (Paguroidea), cobble covered in barnacles and branching algae, butterfish (*Peprilus triacanthus*), small sea robin (*Prionotus* sp.)	Two attempts made to collect video, first attempt was aborted due to strong current	240479.24	4567102.53	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no grab collected due to substrate type (cobble caught in grab closure); coordinates from second grab	N/A
4	ECR-B-420	2021-09-08	241719.01	4565347.87	9:25	241715.37	4565172.98	9:45	Medium coarse sand with cobble and smaller boulders, northern star coral (*Astrangia* sp.) on most cobble, orange bryozoans (possibly *Schizoporella unicornis*), Turbellaria worm tubes, scup (*Stenotomus chrysops*), northern sea robin (*Prionotus carolinus*) and hermit crabs (Paguroidea); cobble replaced by sand habitat and pebbles further south	N/A	241720.83	4565204.78	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no grab collected due to substrate type (cobble caught in grab closure); coordinates from second grab	N/A
4	ECR-B-456	2021-09-10	226531.21	4566022.90	11:39	226580.21	4566052.72	12:00	Sand substrate with pebble-sized rocks, mollusk shells, inshore lizardfish (*Synodus foetens*) burying itself in video	Poor visibility during drop camera, aborted first attempt; second attempt collected three recordings, first two outside of survey target due to extreme layback (40-50 m); third attempt was closer and acceptable	226584.92	4566040.37	> 7 cm	None	dark gray 10YR 4/1	Coarse sand	None	None	None	10:22:56
4	ECR-B-458	2021-09-10	228518.18	4566724.90	5:19	228446.84	4566717.09	5:33	Sand substrate with abundant bivalve and gastropod shells, sea robin (*Prionotus* sp.), hermit crabs (Paguroidea), flounder (with ocellations), portly spider crab, slipper shells (*Crepidula* spp.)	Strong current	228471.84	4566714.04	> 7 cm	20	dark gray 10YR 4/1	Gravel, shell, sand	None	None	None	5:44:00
4	ECR-B-460	2021-09-08	230352.97	4567272.57	18:27	230310.13	4567257.49	18:37	Gravel bottom with shell fragments, silt, and fine sand, hermit crabs (Paguroidea)	N/A	230305.57	4567258.35	> 7 cm	None	light yellowish brown 10YR 6/4	Fine sand, shell, and gravel	None	Gravel and shell	None	20:51:00
4	ECR-B-462	2021-09-08	231847.83	4567647.75	19:08	231823.08	4567627.64	19:20	Gravel and shell covered bottom with little silt, sea star (*Asterias* sp.), hermit crabs (Paguroidea), sculpins, scup (*Stenotomus chrysops*)	No video from first attempt on 2021-09-08 at 15:36 due to high current in the area; second attempt successful	231843.14	4567633.41	> 7 cm	40	dark yellowish brown 10YR 4/4	Fine sand with shell fragments	None	Shell and gravel	None	15:57:36

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
4	ECR-B-464	2021-09-05	233370.40	4567187.59	6:22	233389.54	4567202.10	6:27	Gravel and pebbles, shell hash, abundant slipper shells (*Crepidula* spp.), possible colonial tunicate covering entire area, hermit crabs (Paguroidea), squid (Loliginidae), razor clam siphons	N/A	233384.53	4567187.09	> 7 cm	None	dark gray 10YR 4/1	Mixed gravel, pebble, and coarse sand	None	Slipper shells (*Crepidula* spp.), gravel, coarse sand, encrusting sponge	None	6:57:39
4	ECR-B-466	2021-09-05	235694.81	4567184.79	9:19	235738.24	4567196.65	9:27	Slipper shells (*Crepidula* spp.), gravel, pebble, shell hash, northern sea robin (*Prionotus carolinus*), sea grass debris	N/A	235719.79	4567190.31	> 7 cm	40	brownish yellow 10YR 6/6	Gravel and shell hash	None	Coarse sand and shell hash	None	9:44:49
4	ECR-B-468	2021-09-05	237587.85	4567371.44	14:42	237491.86	4567371.01	15:00	Fine sand and shell hash, sand waves with ripple marks on crests, shell and shell hash in troughs, sand waves ~0.5 m height, sea robins (*Prionotus* sp.), hermit crabs (Paguroidea)	Towed into current at 264°, ~3 kn current	237531.46	4567368.55	> 7 cm	None	very pale brown 10YR 7/4	Coarse sand	None	None	None	15:55:22
4	ECR-C-1301	2021-09-01	204295.42	4559908.64	9:10	204182.56	4559872.56	9:30	Shell hash and coarse sand, hermit crabs (Paguroidea), juvenile scup (*Stenotomus chrysops*), multiple transitions between sand wave peaks and troughs, multiple mounds of clumped slipper shells (*Crepidula fornicata*), hydroids attached to shells, gastropod eggs, squid at 09:23:20	Station moved approximately 315 m north due to fishing gear in the area	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1302	2021-09-01	210622.41	4560481.31	16:09	210681.65	4560515.10	16:34	Fine sand with shell, sea robins (*Prionotus* sp.), hermit crabs (Paguroidea), bottom current from south to southeast at base of dune, current from east to west, towed to northeast, invertebrates in water column at east end of two	Full benthic suite, towed up the west face of large sand wave	210662.13	4560499.01	> 7 cm	None	dark yellowish brown 10YR 4/4	Fine sand	None	None	None	19:38:33
4	ECR-C-1303	2021-09-02	216078.82	4563122.18	22:23	216027.19	4563143.97	22:50	First attempt: northern star coral (*Astrangia* sp.) on largest feature to the east, orange anemones on remaining rock features, scoured areas around base of boulders, orange sponges on 2-3 boulders, anchovies (*Anchoa* sp.), black seabass (*Centropristis striata*), striped sea robin (*Prionotus evolans*) and squid	Position and time taken from below notes - moved "first attempt" notes to this line. This becomes 1303 and subsequent attempt is 1303a - JC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1303a	2021-09-03	216120.91	4563095.48	0:12	216028.11	4563102.80	0:35	Second attempt: transitioned over multiple boulders, boulders covered in pink/orange anemones, no northern star coral identified, multiple sea robins (*Prionotus* sp.), sculpins, kelp debris, flounder, black sea bass (*Centropristis striata*), area surrounding large boulders scoured with shell piled around boulders	Video collected on two attempts: First attempt on 2021-09-02 (22:23-22:50), start at 216078.82, 4563122.18 and end at 216027.19, 4563143.97: video across boulder feature with heading of 287°, towed slowly across three distinct features and over hard bottom and boulders just to west; Second attempt on 2021-09-03, labeled as ECR-C-1303a in video data (start and end)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1304	2021-09-03	223650.56	4564717.40	19:52	223714.42	4564729.07	20:13	Sand with ripples to the west, sculpins, squid (Loliginidae), hermit crabs (Paguroidea), small to large boulders with orange anemones, sea robin (*Prionotus* sp.), white tube sponges	Video collected across boulder area, bearing of 080° at 0.1 kn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1305	2021-09-03	223733.70	4564818.52	20:33	223777.92	4564833.76	20:49	Variable seafloor with small rubble with silt grading to gravel, also large boulder and other low-relief rocks, orange anemones, sponges, colonial tunicates, sea bass (20:45:55), squid (Loliginidae), polychaete tubes	Video collected to groundtruth seafloor for cobble, gravel, rocks, bearing of 080°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1401	2021-09-04	229745.52	4568899.04	17:23	229780.47	4568893.57	17:31	Shell and gravel bottom, transiting to east, squid (Loliginidae), gravel/pebble and dead bivalve shells, occasional silt, hermit crabs (Paguroidea), nothing unique about the area, same as Station ECR-B-404	Extra video to investigate unique habitat	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1402	2021-09-04	230541.94	4569122.01	20:48	230597.54	4569109.20	20:59	Shell and gravel bottom (dead bivalves), hermit crabs (Paguroidea), sea robins (*Prionotus* sp.), squid (Loliginidae), bivalve shells, gravel, and silt	Tow to investigate unique habitat; towed into current west to east	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1403	2021-09-05	233678.49	4568666.47	4:47	233614.61	4568609.75	4:54	Slipper shells (*Crepidula fornicata*), gravel/pebble bottom with shell, butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrysops*), pieces of detritus	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1404	2021-09-08	234998.67	4567161.22	12:48	234997.69	4566945.62	13:01	Southwest end of transect from 12:48 - 12:55 was gravel, few shells, fine sediment, Southwest of station center the bottom quickly changed to fine sediment with ripple waves (no or minimal gravel and shell), remainder of the transect to northeast was fine sediments, hermit crabs (Paguroidea), spider crabs,scup (*Stenotomus chrysops*), sea robin (*Prionotus* spp.) squid	Station immediately northwest of Station ECR-B-412, towed southwest to northeast down a slope break that occurred near center of station, purpose to characterize unique habitat/obstruction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1405	2021-09-05	236772.93	4567089.50	10:51	236739.54	4567046.96	11:04	Fine sand with shell pieces, no gravel, some hydrozoans, orange sponge, boulder with anemones, northern star coral (*Astrangi* a sp.), transitioned to fine sand , scup (*Stenotomus chrysops*), sea robin (*Prionotus* spp.)	First attempt on 2021-09-04, aborted due to strong current, no video collected; second attempt successful	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1406	2021-09-05	238846.60	4567513.73	22:30	238836.81	4567479.26	22:43	Medium sand, squid (Loliginidae), small shells (22:29), small boulder with ?*Astrangia* coral (22:31), large and small boulders with anemones (22:32, 22:34), white/gray anemones, colonial tunicates, *Astrangia* coral, rock nearly continuous along transect, avoided very large boulders due to very poor visibility, current picking up from the west, scup (Stenotomus chrysops), sea robin (*Prionotus* spp.)	Slow video tow from northeast toward southwest sides of circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1407	2021-09-05	238692.74	4567499.94	19:13	238718.06	4567523.34	19:34	Sand bottom with shell and gravel, large amounts of drift algae, cobble up to "fist size", small boulder; sand, cobble, and shell on northwest side of circle (19:23), 0.5-m boulder at 19:24, black sea bass (*Centropristis striata*)	Video tow primarily along westernmost northwest side of circle, currents prevented vessel from reaching center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1408	2021-09-05	238829.56	4567494.87	22:53	238776.00	4567469.88	23:35	1) Northeast edge: small boulders, anemones, possible northern star coral (*Astrangia* sp.), urchins (23:12), kelp drifting by; 2) Center: several boulders, anemones, sponges, colonial tunicates, very turbid water; 3) Southwest edge: boulder, orange and white ?anemones, possible northern star coral (*Astrangia* sp.) corals, good video of white sponge (blade-like Clionid?) at 23:33:30	Conducted three stationary drops due to currents and high turbidity, turbidity plumes extending more than 10 m above bottom, performed drops at northeast, center, and southwest part of circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1409	2021-09-06	240613.79	4567068.27	11:33	240581.59	4567297.76	11:36	Large cobble, orange anemone, white bryozoans, gray/white sponge, cobble and small boulders with sea bass (*Centropristis striata*) at 11:35:18, scup (*Stenotomus chrysops*)	Two attempts to collect video, first attempt on 2021-09-06 (05:30-06:47), start and end coordinates are 240619.82, 4567024.87 and 240570.95, 4567081.12), aborted due to strong current; second attempt normal transect and times and coordinates are provided in this table	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1410	2021-09-06	240732.80	4566848.99	12:29	240694.90	4566854.58	12:48	Sea bass, orange anemones, scattered northern star coral (*Astrangia* sp.) coral, orange encrusting sponge, small (0.3 m) to medium (1.0 m) boulders, current increased during dives, could not remain in circle	Video drop to groundtruth boulder feature, deployed on southeast edge of circle, current from west northwest at ~2 kn, visibility <1 m, two videos collected on same drop	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1411	2021-09-06	240866.44	4566695.09	13:27	240855.52	4566697.76	13:40	Sea robin (*Prionotus* sp.), sea bass, gray sponge, orange encrusting sponges, orange anemone, northern star coral (*Astrangia* sp.), no sand or shell bottom observed, current increased to 4 kn during tow, wire angle 30° during retrieval but drag not excessive, snagged possible colony of bryozoan (?*Bugula*) during tow	Video drop at southeast edge of circle, continuous boulders from 0.2 to 1.0 m diameter, visiblity 0.5 m, two videos collected, first video from 13:27-13:28, second video from 13:34-13:40, start and end coordinates for entire video drop are provided in this table	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
4	ECR-C-1427	2021-09-08	231755.70	4567588.35	19:28	231718.61	4567554.66	19:53	Gravel and shell bottom and scattered clusters of boulders, large feature up to 3 m height at 19:36:30, orange sponge, anemone, small boulder with large number of northern star corals (*Astrangia* sp.), urchins (*Arbaci* a sp.), and orange anemones at 19:30:54, gray encrusting sponge, northern star corals noted on rocks from <10 cm up to several meters diameter, several black sea bass (*Centropristis striata*), northern star corals also on boulders at center of station	Video to groundtruth cobble habitat, towed from northeast of station to the center	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	ECR-C-1428	2021-09-05	237569.69	4567386.99	15:23	237992.01	4567647.16	15:37	Coarse sand with shell in troughs of sand waves, ripple waves on wave crests, scup (*Stenotomus chrysops*)	Video tow immediately north of and parallel to Station ECR-B-468 tow	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-B-470	2021-09-10	233232.14	4570820.42	16:00	233200.18	4570826.82	16:18	Shell hash, slipper shells (*Crepidula* spp.), hermit crabs (Paguroidea), razor clam shells, squid (Loliginidae), gray sponge covering large portion of the substrate, sea urchins	N/A	233226.36	4570828.74	> 7 cm	30	very dark gray 10YR 3/1	Shell hash, pebbles, slipper shells	None	Shell hash with coarse to medium sand	None	16:25:00
5	ECR-B-472	2021-09-10	233176.45	4572813.70	19:51	233149.13	4572830.32	20:01	Shell hash covering large portion of substrate, cobble mixed with substrate, gray sponge covering cobble and large shells, some slipper shells (*Crepidula* spp.) but not as abundant as other stations, scup (*Stenotomus chrysops*), anchovy (*Anchoa* spp.)	N/A	233173.41	4572807.65	> 7 cm	30	very dark gray 10YR 3/1	Shell hash and medium sand	None	Mixed shells	None	20:15:28
5	ECR-B-474	2021-09-11	233309.13	4574814.58	6:37	233292.87	4574811.38	6:43	Flat sand with shells and shell fragments, small rocks at beginning, sand dollars, hermit crabs (Paguroidea), bioturbation as tracks	N/A	233305.19	4574804.85	> 7 cm	None	dark gray 10YR 4/1	Coarse sand and shell	None	None	None	6:52:52
5	ECR-B-476	2021-11-01	233407.28	4576808.14	11:30	233462.31	4576836.42	11:40	Strong pitch, medium to fine sand, bioturbation as tracks, clam siphons, algae detritus, polychaete and amphipod tubes on substrate	N/A	233401.42	4576815.63	> 7 cm	N/A	dark grayish olive 5GY 4/2	Fine sand	N/A	Amphipod tubes	Soft substrate; grab collected on 2021-10-31	12:48:00
5	ECR-B-478	2021-11-01	234268.98	4578395.20	8:55	234324.03	4578446.62	9:09	Eelgrass area, large cobble/pebbles with branching macroalgae growth (including some potential *Sargassum* spp.), area of large shell/shell hash, some seafloor appears to buried boulders with sand veneer	Adjusted from original site to allow for depth; second video 09:03 - 09:09 (start X,Y from first video while end X,Y from second video).	234234.95	4578477.90	N/A	N/A	N/A	N/A	N/A	N/A	Three attempts made, no grab collected; No imagery from video; grab attempt made on 2021-11-01	N/A
5	ECR-B-478-cable landing	2021-11-01	234236.96	4578478.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5.1	ECR-B-480-A	2021-11-01	234247.93	4578074.20	10:11	234255.28	4577971.80	10:25	Fine-medium sand bottom, shell hash, areas of sand ripples, small gastropod shells, algae detritus, some attached algae (possibly *Ulva* sp.), amphipod tubes on surface	Initially adjusted from original site to allow for depth, original site revisited during higher tide and sampled; Second video at 10:20 -10:25 (start X,Y from first video while end X,Y from second video).	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5.1	ECR-B-480-A-cable landing	2021-11-01	234267.33	4578110.20	16:14	234201.62	4577974.08	16:24	Fine sand habitat, occasional eelgrass and macralgae detritus, amphipod tubes, area of heavy shell hash, slipper shells (*Crepidula* spp.), large gastropod shell (*Busycotypus canaliculatus*), small crab, juvenile Cunner (fish)	N/A	234280.97	4578055.01	> 7 cm	N/A	dark grayish green 5GY 4/3	Fine-medium sand	None	Amphipod tubes	Soft substrate, shell fragments, bivalve siphon; grab collected on 2021-10-31	14:11:00
5.1	ECR-B-482	2021-09-11	233811.24	4573615.45	0:26	233823.79	4573615.01	0:35	Sand with shells and shell fragments, some macroalgal blades (flat), numerous clam valves, hermit crabs (Paguroidea), sea robin (*Prionotus* sp.)	N/A	233860.54	4573617.93	> 7 cm	None	dark gray 10YR 4/1	Coarse sand and shell	None	None	None	0:44:42
5.1	ECR-B-484	2021-09-11	234658.77	4575357.36	9:05	234673.08	4575358.14	9:10	Sand substrate with few shells, burrows, macroalgae, Sabellid worm tubes, hermit crabs (Paguroidea)	N/A	234672.83	4575371.52	> 7 cm	200	dark gray 10YR 4/1	Fine sand	None	None	None	9:20:25
5.1	ECR-B-486	2021-11-01	235608.21	4576938.62	13:19	235704.81	4576959.71	13:29	Coarse to medium sand with high percentage of shell hash and shell fragments, detrital algae, several Ctenophora, large whelk shell, slipper shells (*Crepidula* spp.)	N/A	235638.22	4576935.46	> 7 cm	N/A	reddish brown 5YR 5/3	Coarse-fine sand	None	Coarse-fine sand	Soft substrate with multiple shell fragments and shell hash; grab collected on 2021-10-31	11:50:00
5.1	ECR-B-488	2021-10-31	235950.43	4577953.90	9:07	236034.33	4578034.96	9:20	Coarse to fine sand with shell hash, areas of eelgrass, detritus, hermit crabs (Paguroidea), large number of gastropod shells.	Initially adjusted from original site to allow for depth; original site revisited during higher tide and sampled.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5.1	ECR-B-488-cable landing	2021-11-01	236001.84	4577996.24	15:27	236050.49	4577847.13	15:38	Medium to fine sand substrate, shell hash, macroalgae, eelgrass, detritus, slipper shells (*Crepidula* spp.), shell fragments, bioturbation as mounds, tracks	N/A	235999.41	4577998.99	> 7 cm	30 - 35	reddish brown 5YR 5/3	Coarse-fine sand	None	Sand	Soft substrate with shells and terrestrial detritus (stick); grab collected on 2021-10-31	10:05:00
5	ECR-C-1432	2021-09-10	233383.84	4572923.75	22:19	233402.77	4572963.56	22:35	Shell hash, pebble, cobble substrate, razor clams, boulders with northern star coral (*Astrangia* sp.), branching bryozoans, gray sponge growing on cobble and slipper shells (*Crepidula* spp.), eel seagrass detritus, Turbellaria tubes, white/yellow sponge growing on boulders, black sea bass (*Centropristis striata*), hermit crabs (Paguroidea), juvenile scup (*Stenotomus chrysops*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-C-1433	2021-09-10	233169.30	4573148.19	23:12	233233.92	4573151.60	23:22	Shell hash, pebble, cobble substate, medium to coarse sand, hydrozoans and bryozoans attached to slipper shells (*Crepidula* spp.), multiple portly spider crabs, squid (Loliginidae), sand dollars, Turbellaria tubes, hermit crabs (Paguroidea), scup (*Stenotomus chrysops*), squid	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-C-1434	2021-09-11	233273.05	4574242.52	4:07	233240.49	4574241.77	4:21	Buried to emrgent boulders and sand with shells, orange encrusting sponge on rock, hermit crabs (Paguroidea), sea robin (*Prionotus* sp.), black sea bass (*Centropristis striata*), small northern star coral (*Astrangia* sp.), distinct transition to sand and shell substrate toward end of transect	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-C-1435	2021-09-11	233332.42	4575393.39	8:13	233330.87	4575360.33	8:24	Sand substrate with abundant small flattened and rounded rocks, shells and shell hash, hermit crabs (Paguroidea), edge of feature indicates decreased abundance of rocks with more sand and shell substrate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-C-1436	2021-11-01	233390.85	4576897.81	11:17	233438.30	4576884.89	11:27	Medium to fine sand, small sand waves, occasional clumps of macroalgae, many bivalve siphons, hermit crabs (Paguroidea)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	ECR-C-1437	2021-11-01	234002.42	4578236.62	10:39	233993.06	4578227.22	10:47	Fine to medium sand, large areas of slipper shells (*Crepidula fornicata*), eelgrass detritus with shell hash	N/A	233995.44	4578276.56	> 7 cm	50	dark gray 5YR 4/1	Fine-medium sand	None	Fine-medium sand and mud with bivalve siphon and slipper shells (*Crepidula fornicata*)	Soft substrate with shell fragments and macroalgae; grab collected on 2021-10-31	15:16:00
5.1	ECR-C-1438	2021-11-01	235951.12	4577685.56	12:49	236075.13	4577636.87	12:59	Turbid water column, fine to medium sand, region of numerous boulders with macroalgae, back to fine medium sand, bioturbation as tracks, unknown fish at 7:08, abundant macroalgae, back into a boulder area then back into sand bottom	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5.1	ECR-C-1439	2021-11-01	235288.29	4576791.54	13:35	235513.49	4576758.88	13:45	Coarse sand with a high percentage of shell hash, abundant slipper shells (*Crepidula fornicata*) , large shell fragments, juvenile scup (*Stenotomus chrysops*), detrital algae, razor shells, macroalgae	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-B-422	2021-09-06	242510.79	4563810.44	8:02	242741.85	4563568.97	8:44	Long transect (~310 m), fine to medium sand, sand dollars, hermit crabs (Paguroidea), Turbellaria worms, shell fragments, small gastropods, scup (*Stenotomus chrysops*)	N/A	242718.37	4563597.29	> 7 cm	15-20	brown 10YR 4/3	Fine to medium sand	None	Smooth sand ripples	None	9:08:13
6	ECR-B-424	2021-09-06	244258.07	4562301.22	14:41	244221.16	4562299.62	14:48	Fine to medium sand with ripple marks, hermit crab (Paguroidea), small ghost shrimp holes, polychaete tubes, sea robin (*Prionotus* sp.)	N/A	244238.82	4562303.71	> 7 cm	None	yellowish brown 10YR 5/4	Fine sand	None	None	None	15:00:20

Segment	Station	Date	Drop Camera							Transect Placement Notes	Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations		X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
6	ECR-B-426	2021-09-06	245893.92	4561163.55	16:54	245855.56	4561146.96	17:02	Fine sand with long sand waves and small ripple waves, polychaete tubes, hermit crabs (Paguroidea), bioturbation as tracks, depressions	N/A	245876.88	4561158.43	> 7 cm	30	brown 10YR 5/3	Fine sand	None	None	None	17:13:39
6	ECR-B-428	2021-09-06	247577.79	4560163.86	19:48	247615.40	4560180.14	19:56	Fine sand and ripple waves, small shells, scup (Stenotomus chrysops), sea robin (*Prionotus* sp.), squid (Loliginidae), hermit crabs (Paguroidea), bioturbation as tracks, depressions	N/A	247598.79	4560172.43	> 7 cm	40	brown 10YR 5/3	Fine sand	None	None	None	20:08:20
6	ECR-B-430	2021-09-06	249451.63	4559471.53	22:17	249488.04	4559459.37	22:23	Fine sand, small ripple marks, small sparse shell fragments, hermit crabs (Paguroidea), squid (Loliginidae), scup (*Stenotomus chrysops*), a few aggregations of slipper shells (*Crepidula fornicata*), bioturbation as tracks, depressions	Ran tow from west to east	249466.78	4559469.90	> 7 cm	None	light yellowish brown 10YR 6/4	Fine sand <500 micron	None	None	None	22:36:33
6	ECR-B-432	2021-09-07	251438.71	4558979.98	1:59	251391.14	4558999.36	2:08	Shell hash, medium to fine sand, juvenile and mature scup (*Stenotomus chrysops*), slipper shells (*Crepidula fornicata*), spider crab (*Libinia* sp.), hermit crab (Paguroidea), shell hash increased towards the center of the station	N/A	251416.98	4558989.82	> 7 cm	20	yellowish brown 10YR 5/6	Fine sand	None	None	None	2:22:28
6	ECR-B-434	2021-09-07	253471.60	4558771.98	5:23	253164.03	4558780.77	5:30	Shell hash and fine to medium sand, abundant slipper shells (*Crepidula* spp.) covered with hydrozoans/bryozoans, large fish (?sea bass *Centropristis striata*), flounder, scup (*Stenotomus chrysops*) and northern sea robin (*Prionotus carolinus*)	N/A	253175.64	4558779.32	> 7 cm	20-30	grayish brown 10YR 5/2	Fine to medium sand	None	Sand ripples in video	Coordinates from second grab	6:30:25
6	ECR-B-436	2021-09-07	255363.78	4558821.83	9:08	255427.98	4558818.12	9:19	Fine to medium sand with ripples, sand at peak, shell hash in trough, hermit crabs (Paguroidea)	N/A	255382.70	4558819.83	> 7 cm	40	grayish brown 10YR 5/2	Shell hash, fine to medium sand	None	Sand and shell hash	Location of grab adjusted to avoid large sand wave	9:35:17
6	ECR-B-438	2021-09-07	257411.04	4558856.84	13:09	257372.39	4558855.20	13:16	Fine sand with ripple marks, shell fragments, few cobbles (5-10 cm) at 13:10:45, polychaete tubes, hermit crabs (Paguroidea), scup (*Stenotomus chrysops*), slipper shells (*Crepidula* spp.)	N/A	257387.75	4558843.12	> 7 cm	None	light yellowish brown 10YR 6/4	Fine sand, <500 micron	None	Slipper shells in grab	Coordinates from third grab	13:47:49
6	ECR-B-440	2021-09-07	259285.81	4558904.75	22:46	259318.97	4558883.29	22:54	Medium sand bottom with small ripple marks, many juvenile sculpins/sea robins (*Prionotus* sp.), black seabass (*Centropristis striata*), hermit crabs (Paguroidea), small spider crab, squid	N/A	259326.93	4558874.96	> 7 cm	None	yellowish brown 10YR 5/4	Medium sand, >500 micron	None	None	None	23:04:17
6	ECR-B-442	2021-09-07	261305.02	4558941.72	18:15	261256.73	4558934.11	18:28	Fine sand and ripples, boulders at 18:19 at east edge of circle, northern star corals (*Astrangia* sp.), and hydroids, bryozoans and spone, very poor visibility, towed backwards with slight roll with swell, squid (Loliginidae), scup (*Stenotomus chrysops*), large sand wave in middle of station circle	Fishing gear too close to original location, moved station North	261266.99	4558936.77	> 7 cm	None	yellow 10YR 7/6	Medium sand, >500 micron	None	None	None	18:37:58
6	ECR-B-444	2021-09-08	262889.02	4558510.57	2:14	262849.03	4558527.01	2:22	Cable with slipper shell (*Crepidula* spp.) bed, dead bivalve shells, juvenile scup (*Stenotomus chrysops*), cobble and shell hash with attached hydrozoans and bryozoans, barnacles, whelk, black seabass (*Centropristis striata*), possible gray sponge	N/A	262869.51	4558521.71	> 7 cm	None	yellowish brown 10YR 5/4	Gravel and slipper shells (*Crepidula* spp.)	None	Slipper shells (*Crepidula* spp.) with gravel/pebbles	None	2:36:06
6	ECR-B-446	2021-09-08	264743.65	4557723.23	4:30	264564.87	4557796.11	4:56	Large cobble, smaller boulders, and shell hash, barnacles, hydrozoans and bryozoans, slipper shells (*Crepidula* spp.), scup (*Stenotomus chrysops*), algae detritus, northern star coral (*Astrangia* sp.) on large cobble at 04:34:23, transitions from cobble area to dense slipper shell (*Crepidula* spp.) bed toward end, large scup (*S. chrysops*) at 04:42:40	N/A	264703.99	4557733.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no grab collected due to substrate type (rock caught in grab closure); coordinates from second grab	N/A
6	ECR-C-1412	2021-09-06	249223.88	4559539.77	21:53	249264.03	4559536.97	22:00	Fine sand, ripple waves, small shell fragments, crest of sand wave at 21:58:50, squid (Loliginidae), porgies, hermit crabs (Paguroidea)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1413	2021-09-07	251596.57	4558916.48	1:28	251540.39	4558940.18	1:39	Hard bottom with sand veneer and hydrozoan growth on the surface, mixed with medium to fine sand, juvenile sea robins (*Prionotus* sp.) (10-20 mm), transition into boulder area, shell hash deposits around bouders, boulders covered in white and orange sponges, *Astrangia* star coral, hydroids, and bryozoans, no anemones observed, large spider crab (*Libinia emarginata*), orange bryozoan (?*Schizoporella unicornis*) , scup (*Stenotomus chrysops*), sea robin (*Prionotus* spp.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1414	2021-09-07	252008.50	4558837.47	3:33	251950.99	4558853.47	3:43	Buried hard bottom with hydrozoan or bryozoan growth, transitions into medium to fine sand and boulder/cobble area, striped sea robin (*Prionotus evolans*), flounder (*Paralichthys dentatus*), scup (*Stenotomus chrysops*), sea robin (*Prionotus* spp.), black sea bass (*Centropristis striata*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1415	2021-09-07	252533.64	4558742.40	4:48	252492.76	4558754.60	4:56	Medium to fine sand, ripples and shell hash deposited in the sand troughs, potential boulder hard bottom area with sand veneer covering boulders, hydrozoans/bryozoans epifauna, squid feeding on sand bottom, small hermit crabs (Paguroidea), northern sea robin (*Prionotus carolinus* , scup (*Stenotomus chrysops*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1416 ERC-C-1417	2021-09-07	255179.70	4558848.08	8:32	255240.21	4558836.10	8:45	Medium to fine sand ripples, sand at top of ripple, shell hash in trough, hermit crabs (Paguroidea), potential hard bottom with sand veneer, hydroids/bryozoans, boulder with orange anemones, transitions back into sand flats, scup (*Stenotomus chrysops*)	Combined stations ERC-C-1416 and ERC-C-1417	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1418	2021-09-07	255606.29	4558855.52	11:01	255643.18	4558863.33	11:07	Fine to medium sand and shell hash, sand at top of ripple with shell hash in trough, hermit crabs (Paguroidea), juvenile scup (*Stenotomus chrysops*), crested over 50 cm high sand wave at 11:04:45, visibility reduced, algal detritus moving through with current	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1419	2021-09-07	258303.32	4558898.24	14:55	258249.72	4558900.74	15:35	First tow: fine sand with ripple waves, hermit crabs (Paguroidea), boulders at 15:03:54 and 15:05:05, orange encrusting sponge, few northern star corals (*Astrangia* sp.), bryozoans (?*Bugula*), Atlantic purple sea urchins (*Arbacia punctulata*); Second Tow: boulders on southwest edge of circle, orange anemones, no corals; Third tow: boulders at western edge of circle, clusters of northern star coral (*Astrangia* sp.) corals on side of boulder, orange anemones, bryozoans, scup (*Stenotomus chrysops*)	Video to groundtruth boulders, conducted three tows, first two from east to west through station, two shorter tows to pick up features on southwest side of circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
6	ECR-C-1420	2021-09-07	260733.64	4558881.54	20:56	260800.28	4558844.71	21:42	Bottom between three boulder features was fine to medium sand with ripple marks and many juvenile sea robins (*Prionotus* sp.) and scup (*Stenotomus chrysops*), small flounder, three ghost shrimp (21:12:25; 21:13; 21:22:10), sea robin at 21:08; First boulder feature: northern star coral (*Astrangia* sp.), bryozoans, orange encrusting sponges, good closeup video at 21:06; Second boulder feature: large boulder, sea bass, cobbles at base of boulder, high orange anemone cover, northern star coral (*Astrangia* sp.) with polyps retracted, urchin (*Arbacia* sp.); Third boulder feature: small half-buried boulder with bryozoan (*Bugula* sp.) cover, larger boulder with orange anemones, northern star coral (*Astrangia* sp.)with polyps retracted, orange sponge, bryoazoans, black sea bass (*Centropristis striata*)	Video to confirm boulder features, towed into 2 kn current from southeast to northwest, observed three distinct groups of boulders	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1421	2021-09-07	261113.01	4558730.38	20:12	261163.72	4558698.79	20:23	Fine sand and small ripple marks, few small shell fragments, signatures in question were half-buried rocks and boulders (0.3 - 1.0 m diameter), anemones, bryozoans, northern star coral (Astrangia sp.), yellow ?Cliona sponges, areas away from boulders had hermit crabs (Paguroidea), polychaete tubes, scup (*Stenotomus chrysops*), sea robins (*Prionotus* sp.), and black sea bass (*Centropristis striata*)	Video to confirm bottom features, possibly boulders, towed into 3 kn current at 123° heading	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	ECR-C-1422	2021-09-14	no data	no data	21:34	261872.71	4558710.98	22:16	First attempt: Medium to coarse sand, high turbidity, shell hash along small portion of transect, clusters of slipper shells (*Crepidula* spp.), Turbellaria worm tubes, juvenile scup (*Stenotomus chrysops*), sea robin (*Prionotus* sp.), algal detritus, hydroids growing on slipper shells; Second attempt: medium to coarse sand, high turbidity, northeast section of transect cobble and pepple-sized rocks with slipper shells (*Crepidula* spp.), sea urchins, northern star corals (Astrangia sp.), Turbellaria tubes above substrate, squid; Third attempt: slipper shells with pebbles and pea rock, large cobble, abundant hermit crabs (Paguroidea), juvenile scup (*Stenotomus chrysops*), transitioned to medium to fine sand with shells, hydroids, mermaid's purse (egg case) at 21:41:38, spider crab, sea grass detritus, dense bed of slipper shells (*Crepidula* spp.), sea robins (*Prionotus* sp.), ?flat worm at 21:52:04, shrimp, skate at 21:55:40, dead northern star coral (*Astrangia* sp.) on shell, living northern star coral on slipper shells, sand dollars at 22:05:51, possible clam vent at 22:09:33, black sea bass (*Centropristis striata*), and sculpin (Cottidae?)	Conducted three attempts: Video collected on 2021-09-08 (00:33-00:46); start and end coordinates are 261875.69, 4558712.97 and 261942.73, 4558757.99, on 2021-09-11 (13:51-14:26); start and end coordinates are 262043.8,4558825.7 and 261962.68, 4558772.88, and on 2021-09-14; poor visibility and only 100 m of the 200 m transect could be completed in first attempt; towed halfway during second attempt and visibility went to zero; third attempt was 200 m transect, times and coordinates provided in this table	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-B-448	2021-09-11	266552.22	4556950.89	17:21	266519.40	4556965.27	17:34	Shell hash, coarse sand, pebble, pea rock, dense slipper shell (*Crepidula* spp.) beds, shells and pea rock/pebbles in the trough areas between slipper shell crests	Video collected on the same drop for Station ECR-C-1424	266521.18	4556974.99	> 7 cm	25-30	light olive brown 2.5Y 5/3	Dense slipper shells (*Crepidula* spp.), medium sand	Hydrogen sulfide	Coarse to medium sand	None	18:30:08
7	ECR-B-450	2021-09-12	269948.76	4553665.48	4:34	269989.47	4553452.05	5:09	Sand with pebbles, shells, and shell fragments, multiple striped sea robin (*Prionotus evolans*) feeding in the sled wake,butterfish (*Peprilus triacanthus*), scup (*Peprilus triacanthus*) and Tautog (*Tautoga onitis*), high density of gravel with rock in bands, sand/shell transitioning to gravel/sand	Conducted long tow from station to nearby ledge	269959.88	4553613.04	> 7 cm	None	brown 10YR 5/3	Gravel, shell, coarse sand	None	None	None	5:40:00
7	ECR-B-452	2021-09-12	270465.15	4551709.73	8:14	270445.44	4551697.38	8:22	Flat sand substrate with shells and shell fragments, pea-gravel, hermit crabs (Paguroidea)	N/A	270448.20	4551689.32	> 7 cm	None	light yellowish brown 10YR 6/4	Coarse sand	None	None	None	8:30:00
7	ECR-B-454	2021-09-14	271330.85	4549911.40	12:25	271349.64	4549936.14	12:30	Medium to fine sand, poor visibility, shell fragments, hermit crab (Paguroidea), seagrass detritus	Video collected on 2021-09-14, sediment grab collected on 2021-09-12; collected video for stations ECR-B-454 and ECR-C-1426 on same drop	271343.52	4549930.86	> 7 cm	60	black 10YR 2/1	Fine silt and sand	Faint organic	None	None	10:38:58
7	ECR-B-502	2021-09-14	273018.23	4547455.49	7:23	273016.99	4547423.30	7:30	Flat sand with shell fragments, hermit crabs (Paguroidea), squid (Loliginidae), few scallops (*Placopecten magellanicus*), skate (Rajidae),inshore lizardfish (*Synodus foetens*), flounder, (Paralichthyidae), sea robin (*Prionotus* sp.)	Video collected on 2021-09-14, sediment grab collected on 2021-09-13 following weather event (conditions still too rough for video deployment at the time)	273019.76	4547438.86	> 7 cm	None	dark gray 10YR 4/1	Fine sand	Mild organic	None	High turbidity, poor quality video; grab collected on 2021-09-13	2:55:00
7	ECR-B-504	2021-09-14	274185.99	4545778.45	5:26	274030.96	4545774.94	5:56	Flat sand with low density of shells and shell fragments, hermit crabs (Paguroidea), scup (*Stentotomus chrysops*), skate (Rajidae),inshore lizardfish (*Synodus foetens*), flounder, (Paralichthyidae), sea robin (*Prionotus* sp.), butterfish (*Peprilus triacanthus*), scallop (*Placopecten magellanicus*), squid	Video collected on 2021-09-14, sediment grab collected on 2021-09-13 following weather event (conditions still too rough for video deployment at the time)	274131.28	4545783.75	> 7 cm	None	dark gray 10YR 4/1	Sand	None	None	High turbidity, poor quality video; grab collected on 2021-09-13	4:04:47
7	ECR-B-506	2021-09-14	275252.26	4544138.06	3:30	275249.68	4544122.49	3:39	Flat sand with shells and shell fragments, few scallops, sea stars (*Asterias* sp.), skates (Rajidae), lizardfish (*Synodus* sp.), many small squid (Loliginidae), shrimp, high density of zooplankton, sea robin (*Prionotus* sp.), butterfish (*Peprilus triacanthus*), scup (*Stenotomus chrsyops*), little skate (*Leucoraja erinacea*)	Video collected on 2021-09-14, sediment grab collected on 2021-09-13 following weather event (conditions still too rough for video deployment at the time)	275248.50	4544116.43	> 7 cm	None	dark gray 10YR 4/1	Sand	None	None	Grab collected on 2021-09-13	5:05:39
7	ECR-B-508	2021-09-14	276564.98	4542652.74	1:10	276549.94	4542643.42	1:14	Fine to medium sand, flat, low densities of sand dollars (possibly *Mellita* sp.) and sea stars (*Asterias* sp.), scallops, low density of shells and shell fragments, black seabass (*Centropristis striata*)	Video collected on 2021-09-14, sediment grab collected on 2021-09-13 following weather event (conditions still too rough for video deployment at the time)	276552.04	4542641.66	> 7 cm	None	dark gray 10YR 4/1	Sand	None	None	High turbidity, poor quality video; grab collected on 2021-09-13	6:18:00
7	ECR-B-510	2021-09-13	278513.91	4542329.33	21:05	278504.57	4542286.27	21:16	Medium to fine sand, shell hash and shell fragments, multiple butterfish (*Peprilus triacanthus*), skate (Rajidae), multiple sand dollars (possibly *Mellita* sp.) throughout the station, squid (Loliginidae), large red hake (*Urophycis chuss*) at 21:12:30, little skate (*Leucoraja erinacea*)	N/A	278518.57	4542311.72	> 7 cm	None	dark gray 10YR 4/1	Sand	None	None	None	7:10:00
7	ECR-B-512	2021-09-13	280504.00	4542098.43	17:03	280474.96	4542062.62	17:11	Medium to fine sand with shell fragments, high abundance of sand dollars (*Mellita* sp.), schools of squid	N/A	280500.86	4542084.88	> 7 cm	None	dark gray 10YR 4/1	Sand	None	None	None	8:17:00
7	ECR-B-514	2021-09-13	282534.58	4541816.27	10:02	282433.37	4541849.68	10:38	Sand with abundant sand dollars (possibly *Mellita* sp.), skate (Rajidae), hermit crabs (Paguroidea), transitions to large number of clam shell fragments, then back to sand and sand dollars at 10:24, bioturbation as tracks and depressions	N/A	282490.88	4541842.11	> 7 cm	None	yellowish brown 10YR 5/6	Fine gravel and sand	None	None	None	9:19:00
7	ECR-C-1423	2021-09-11	265927.81	4557248.97	16:32	265911.79	4557277.90	16:40	Shell hash with medium to coarse sand, slipper shells (*Crepidula* spp.), transition from sand to heavier shell hash composition and dense slipper shells, clam shells, kelp and seagrass detritus, hermit crabs (Paguroidea), transitioned back to pebble and pea rock sized gravel at end of transect	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
7	ECR-C-1424	2021-09-11	266588.76	4556930.16	17:04	266550.89	4556950.63	17:19	Coarse sand with waves, hermit crab (Paguroidea), hydrozoan detritus, shell hash, pebble/pea rock mixed in with substrate, slipper shells (*Crepidula* spp.), shells and pebbles in trough areas of the sand waves, few scup (*Stenotomus chrysops*)	Video collected on the same drop for Station ECR-B-448	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1425	2021-09-14	270602.86	4551370.68	15:37	270696.92	4551303.70	16:31	Fine sand, small number of shell fragments, small hermit crabs (Paguroidea), gastropod (?*Anachis* dove snail), polychaete tubes	Poor visibility, seven stationary drops recorded, all stations similar	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1426	2021-09-14	271355.57	4549932.06	12:36	271362.74	4549960.66	13:08	Medium to fine sand, poor visibility, few shell fragments, hermit crabs (Paguroidea), possible polychaetes	Video to groundtruth for potential cobble habitat (not observed), vessel sitting in trough (beam sea) with camera bouncing up and down, changed to conducting five stationary recordings, all areas were the same bottom type; conducted on same video drop as Station ECR-B-454	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1429	2021-09-11	268312.95	4556064.80	21:24	268278.83	4556036.45	21:35	Slipper shell (*Crepidula* spp.) bed, cobble pebbles, pea rock, shell hash, hydrozoans/bryozoans growing on shells, scup (*Stenotomus chrysops*), sea robin (*Prionotus* sp.), rocks and cobble covered with barnacles	Full benthic suite	268300.15	4556048.48	> 7 cm	25	light olive brown 2.5Y 5/3	Slipper shells (*Crepidula* spp.), with fine to medium sand	Hydrogen sulfide	Dense bed of slipper shells (*Crepidula* spp.)	None	21:50:00
7	ECR-C-1430	2021-09-11	269032.88	4555377.06	23:06	269017.41	4555339.22	23:21	Pea rock and pebble substrate with shell hash, poor visibility, juvenile scup (*Stenotomus chrysops*), hermit crabs (Paguroidea), uniform substrate throughout	Full benthic suite, sediment grab collected on 2021-10-12	269028.38	4555363.35	> 7 cm	None	olive brown 2.5Y 4/4	Rocks, pebbles, coarse sand	None	None	Coordinates from second grab	0:35:00
7	ECR-C-1431	2021-09-12	269606.31	4554572.26	2:55	269583.60	4554535.28	3:06	Boulders with northern star coral (*Astrangia* sp.), hydrozoans, bryozoans, scup (*Stenotomus chrysops*)	Full benthic suite	269582.98	4554558.96	N/A	N/A	N/A	N/A	N/A	N/A	Two attempts made, no grab collected due to presence of rocks; coordinates from second grab	3:25:00
7	ECR-C-1518	2021-09-13	279271.90	4542232.55	19:52	279155.28	4542242.60	20:15	Fine to medium sand that transitioned into medium sand and shell hash, areas of sand ripples, bioturbation as tracks, skate (Rajidae), sea robin (*Prionotus* spp.), , inshore lizardfish (*Synodus foetens*), scallop (*Placopecten magellanicus*), juvenile scup (*Stenotomus chrysops*), multiple sea stars	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1519	2021-09-13	277414.14	4542524.32	23:25	277372.82	4542493.13	23:42	Medim to fine sand with low abundance of shell fragments, bioturbation as tracks, multiple sea stars, juvenile scup (*Stenotomus chrysops*), sand dollars, clearnosed skate (*Raja eglanteria*), sea robin (*Prionotus* sp.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1520	2021-09-14	276946.63	4542521.20	0:27	276909.83	4542497.43	0:48	Medium to fine sand with shells and shell fragments, low abundance of sand dollars (possibly *Mellita* sp.), numerous sea stars (*Asterias* sp.), skates (Rajidae), lizardfish (*Synodus* sp.), scallop (*Placopecten magellanicus*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7	ECR-C-1521	2021-09-14	272178.54	4548674.92	9:00	272104.65	4548783.54	9:22	Flat sand with low density of shell fragments, bioturbation as burrow, depressions and tracks, hermit crabs (Paguroidea), lizardfish (*Synodus* sp.), lobster (*Homarus americanus*), area of interest was fine silt and sand only	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-B-516	2021-09-13	284083.56	4540679.10	11:39	283918.63	4540861.58	12:20	First attempt: flat soft substrate, pockmarks and mounds, heavy snow, hermit crabs (Paguroidea), scallops (*Placopecten magellanicus*), ended transect early due to USBL and increasing sea conditions; Second attempt: sand substrate with hermit crabs (Paguroidea), few scallops (*P. magellanicus*), squid (Loliginidae), little skate (*Leucoraja erinacea*). Turbellaria tube at 12:15:01, sand dollars (potentially *Melita* spp.), hake (*Urophycis* spp.), lizardfish (*Synodus* spp.)	Two video attempts, First attempt: video transect cut short on 2021-08-21 (06:48-06:55), start and end coordinates are 283910.09,4540860.31 and 283501.28, 4540930.64; Second attempt was 250 m transect to capture low resolution/relief transition area, times and coordinates provided in this table	283954.71	4540827.34	> 7 cm	30	pale brown 10YR 6/3	Fine muddy sand	None	None	Soft substrate	7:31:00
8	ECR-B-518 ECR-C-1514	2021-08-21	285520.43	4539122.36	0:32	285392.07	4539254.78	0:52	Flat soft substrate, heavy snow, sea stars, scallops (*Placopecten magellanicus*), shell fragments, flatfish, polychaete and amphipod tubes, some undulation in seafloor, mounds, hermit crab (Paguroidea), pennatulids, several little skate (*Leucoraja erinacea*)	Collected video at Station ECR-C-1514 on this drop	285425.53	4539221.00	> 7 cm	None	yellowish brown 10YR 5/4	Coarse sand	None	None	Soft substrate	1:06:04
8	ECR-B-520	2021-08-20	286782.56	4537786.41	20:49	286782.99	4537715.49	20:57	Flat soft substrate, heavy snow, many sea stars, intact shells, bioturbation as mounds, depressions, and tracks, hermit crabs (Paguroidea), little skate (*Leucoraja erinacea*)	N/A	286780.40	4537754.16	> 7 cm	65	light brownish gray 10YR 6/2	Sandy mud	None	Shell fragments	Soft substrate, sea stars	21:10:20
8	ECR-B-522	2021-08-20	288121.43	4536309.69	17:24	288161.62	4536240.60	17:33	Flat soft substrate, heavy snow, many seastars, bioturbation as mounds, depressions, and tracks, shell hash, intact shells, moon snail?, large hermit crab (Paguroidea), scallops (*Placopecten magellanicus*), skate (Rajidae)	N/A	288132.82	4536282.38	> 7 cm	70	grayish brown 10YR 5/2	Silty mud	None	None	Soft substrate, sea stars	18:36:31
8	ECR-B-524	2021-08-20	289469.27	4534835.08	15:01	289529.16	4534768.57	15:12	Scallops (*Placopecten magellanicus*), many sea stars, soft substrate with occasional shell and fragments, heavy snow, bioturbation as depressions, tracks and mounds, pennatulids, Jonah crab (*Cancer borealis*), detritus, skate (Rajidae), squid	N/A	289487.32	4534808.82	> 7 cm	70	grayish brown 10YR 5/2	Mud and organic debris	None	None	Soft substrate, sea stars	15:26:39
8	ECR-B-526	2021-08-20	290757.13	4533528.11	11:30	290814.16	4533476.82	11:38	Soft substrate, bioturbation as pockmarks, mounds, depression, and tracks, shells and shell fragments, sea stars, heavy snow, red hake (*Urophycis chuss*), some undulation in seafloor, hermit crabs (Paguroidea), scallops (*Placopecten magellanicus)* , pennatulids, tufted polychaetes	N/A	290775.29	4533503.79	> 7 cm	None	yellowish brown 10YR 5/4	Silty sand	None	Razor clam shell	Soft substrate, sea star	12:41:59
8	ECR-B-528	2021-08-20	292367.29	4532034.29	8:33	292315.06	4531964.15	8:42	Undulating seafloor, heavy snow, sea stars, pennatulids, shell fragments, scallops (*Placopecten magellanicus*), lizardfish (*Synodus* spp.), polychaete and amphipod tubes,skate (Rajidae), flatfish (Paralichthydae)	N/A	292346.61	4532002.91	> 7 cm	60	yellowish brown 10YR 5/4	Muddy coarse sand	None	Polychaete tubes	Soft substrate; coordinates from second grab	9:16:30
8	ECR-B-530	2021-08-19	293800.69	4530653.97	11:22	293774.05	4530572.78	11:31	Flat soft sand substrate, red hake (*Urophycis chuss*), heavy snow, Jonah crab (*Cancer borealis*), sea stars, scallops (*Placopecten magellanicus*), bioturbation as pockmarks, depressions, and tracks, hermit crab (Paguroidea), polychaete and amphipod tubes	N/A	293787.48	4530623.46	> 7 cm	70	brown 10YR 5/3	Sandy mud with gravel	None	Polychaete and amphipod tubes	Soft substrate	11:45:53
8	ECR-B-532	2021-08-19	295194.92	4529315.08	9:05	295202.86	4529233.10	9:14	First video transect at station: flat soft substrate, bioturbation as pockmarks, mounds, depressions, and tracks, polychaete and amphipod tubes,few scallops (*Placopecten magellanicus*), heavy snow, pockmarks, shrimp, shell, fragments, pennatulids, lizardfish (*Synodus* spp.) tubed polychaetes, sea star, jellyfish in column, small Jonah crab (*Cancer borealis)* Second video transect at SSS signature: seafloor with pockmarks and mounds throughout the "wavy" area, scallops, sea star, shrimp, sand dollars, small benthic fish, pennatulids, entire seafloor bumpy and pockmarks at the beginning, shell fragments, hermit crab (Paguroidea), "undulating" wavy seafloor starts at 08:40:20 and transitions to flat soft seafloor at 08:41:25 with many scallops	Two video transects collected at Station ECR-B-532 to pick up the station and a "wavy" SSS signature. Transect over SSS signature was collected 08:32 - 08:43 and labeled ECR-B-532_02. Start and end coordinates for 532_02 are 295304.55, 4529331.79 and 295337.67, 4529230.84	295198.90	4529283.81	> 7 cm	50	brown 10YR 5/3	Sandy mud with organic debris	None	None	Soft substrate, scallop	9:26:40

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
8	ECR-B-534	2021-08-19	296705.76	4527836.89	3:27	296643.75	4527888.89	3:36	Flat soft substrate, bioturbation as pockmarks, mounds, depressions, and tracks, heavy snow, many invertebrates in water column, polychaete and amphipod tubes,sea stars, scallop (*Placopecten magellanicus*), squid (Loliginidae), shell fragments, Jonah crabs (*Cancer borealis*), conver eel (possibly *Conger oceanicus*), hermit crab (Paguroidea), tufted polychaetes	N/A	296682.33	4527860.70	> 7 cm	30	light yellowish brown 10YR 6/4	Muddy sand with shell	None	None	Soft substrate	4:10:58
8	ECR-B-536	2021-08-19	298149.74	4526452.63	1:15	298093.43	4526506.59	1:24	Flat soft substrate, bioturbation as pockmarks, mounds, depressions, and tracks, heavy snow, many invertebrates in water column, polychaete and amphipod tubes,eel (Congridae) scallops (*Placopecten magellanicus*), gastropod egg case, pennatulids, tufted polychaetes	N/A	298126.06	4526476.36	> 7 cm	40	pale brown 10YR 6/3	Muddy sand	Fishy	None	Soft substrate	1:37:30
8	ECR-B-538	2021-08-18	299569.57	4525209.37	21:22	299566.32	4525059.03	21:39	Flat soft substrate, areas of ripples, many invertebrates in water column, heavy snow, many sea stars, lots of shells and shell fragments, bioturbation as mounds and tracks, pennatulids, hermit crab (Paguroidea), egg collar, shrimp, sea scallop (*Placopecten magellanicus*), hydrozoans, Jonah crab (*Cancer borealis*), subtle mounds at 02:27:30, liitle skate (*Leucoraja erinacea*), , summer flounder (*Paralichthys dentatus*), spotted hake (*Urophycis regia*), juvenile hakes (*Urophycis* spp.), red hake (*Urophycis chuss*), small crabs (*Cancer* spp.),	N/A	299572.16	4525099.04	> 7 cm	None	brown 10YR 5/3	Sand	None	None	Soft substrate, polychaete and amphipod tubes	21:53:24
8	ECR-B-540 ECR-C-1503	2021-08-18	301190.92	4523562.48	17:30	301186.64	4523410.81	17:47	Flat soft substrate, heavy snow, polychaete and amphipod tubes,shell hash, red hake (*Urophycis* chuss), hermit crabs (Paguroidea), bioturbation as depressions and mounds, egg collar, monkfish (*Lophius ameroicanus;* Summer flounder (*Paralichthys dentatus*); spotted hake (*Urophycis regia*): red hake (*Urophycis chuss*); potential rockling (*Enchelyopus cimbrius*), swimming scallop, ended mounded area at 17:35:08, many shells, many scallops (*Placopecten magellanicus*), sand dollars, pennatulids, eel (Congridae), hermit crab (Paguroidea), hydrozoans, flatter seafloor with many depression, tracks, mounds	Included Station ECR-C-1503 on same drop	301188.15	4523523.84	> 7 cm	None	light brownish gray 10YR 6/2	Sand with some silt/mud	None	None	Soft substrate, sand dollars, hydrozoans	18:42:43
8	ECR-B-542 ECR-A-1502	2021-08-18	302352.35	4522473.46	15:04	302476.41	4522318.79	15:26	Flat soft substrate, skate, bioturbation as depressions and tracks, shell hash and fragments of full shells, heavy snow, many scallops (*Placopecten magellanicus*), many sand dollars, sea stars, egg collars, tufted polychaetes, 15:08:40 begins mounds (aligns with SSS), hake, hydrozoans; pennatulids, polychaete and amphipod tubes,sand dollars, red hake (*Urophycis chuss*), little skate (*Leucoraja erinacea*), flatter seafloor flattened out at 15:24:25	Included Station ECR-A-1502 on same drop	302419.16	4522383.40	> 7 cm	None	light brownish gray 10YR 6/2	Muddy sand	None	Some shell fragments	Soft substrate, polychaete and amphipod tubes	15:39:50
8	ECR-B-544	2021-08-18	303855.14	4521036.02	12:29	303880.74	4520972.31	12:37	Flat soft substrate, heavy snow, many sea stars, flatfish, red hake (*Urophycis chuss*), polychaete and amphipod tubes,small unknown fish, shells, small shrimp, pennatulids, Jonah crab (*Cancer borealis*), red hake (*Urophycis chuss*); Summer flounder (*Paralichthys dentatus*); hake juveniles (Phycidae); unidentified flatfish, lizardfish (*Synodus* sp.)	N/A	303866.03	4521001.08	> 7 cm	None	brown 10YR 5/3	Mud with some gravel	None	None	Soft substrate, polychaete and amphipod tubes	12:54:20
8	ECR-B-546	2021-08-18	305370.66	4519690.42	10:11	305282.87	4519573.49	10:26	Flat soft substrate, heavy snow, sea stars, shell fragments, shrimp, hermit crab (Paguroidea), some depressions, Summer flounder (*Paralichthys dentatus*), polychaete and amphipod tubes,pennatulid,small benthic fish, hydrozoans, red hake (*Urophycis chuss*), lizardfish (*Synodus* spp.)	Extended video transect NE to pick up light colored SSS signature; no visible change observed	305313.03	4519617.40	> 7 cm	42	grayish brown 10YR 5/2	Muddy sand	None	Polychaete and amphipod tubes	Soft substrate	10:38:13
8	ECR-B-548	2021-08-18	306782.33	4518316.66	6:57	306746.78	4518149.83	7:16	Undulating seafloor in "wavy" SSS features, sand dollars, sea stars, small benthic fish, skate, shell fragments, heavy snow, scallop (*Placopecten magellanicu* s), Jonah crab (*Cancer borealis*), shrimp, cerianthids, Summer flounder (*Paralichthys dentatus*); red hake (*Urophycis chuss*); lizardfish (*Synodus* sp.), fourspot flounder (*Paralichthys oblongus*); little skate (*Leucoraja erinacea*)	Ran video transect NE to SW to pick up SSS transition due to current; "wavy" SSS signature with undulations of soft sediment, shell fragments, and many sand dollars	306757.72	4518236.37	> 7 cm	45	yellowish brown 10YR 5/4	Coarse sand with mud	None	sand dollars, sea star	Soft substrate, sand dollars	7:32:00
8	ECR-B-602	2021-08-18	308216.50	4516929.49	4:13	308203.87	4516829.65	4:24	Flat soft substrate, many invertebrates in water column, heavy snow, butterfish (*Peprilus triacanthus*), sea stars, pennatulids, hermit crabs (Paguroidea), large gastropod, flatfish, cerianthid, burrows, shell fragments, scallops (*Placopecten magellanicus*), skate (Rajidae)	Current would not allow extension of transect to west "wavy" SSS feature; ran transect N to S to pick up light, mottled area	308205.05	4516855.86	> 7 cm	45	brown 10YR 5/3	Muddy sand with clay and small stones	None	None	Soft substrate	4:35:30
8	ECR-B-604	2021-08-18	309887.79	4515708.45	0:27	309663.47	4515633.97	0:52	Flat soft substrate, many invertebrates in water column, heavy snow, abundant sea stars, shrimp, flounder (Paralichthydae), some depressions, tufted polychaetes, skate egg cases, Jonah crab (*Cancer borealis*), scallops, pennatulids, red hake (*Urophycis chuss*), shell fragments, hydrozoans and bryozoans attached to shell fragments	Extended video transect SW to pick up light and sand wave signatures in SSS data; no visible change in substrate at light colored area; noticeable waves in substrate at "wavy" signature, similar to station ECR-B-618; no visible change in substrate composition	309834.00	4515695.16	> 7 cm	62	pale brown 10YR 6/3	Muddy sand with clay	None	None	Soft substrate	1:09:32
8	ECR-B-606	2021-08-17	311484.26	4514628.46	20:30	311455.80	4514379.83	20:58	Soft substrate, many invertebrates in water column, heavy snow, many sea stars, polychaete and amphipod tubes,depressions, shell fragments, skate egg cases, pennatulids, tufted polychaetes, shrimp, scallop (*Placopecten magellanicus*), eel-like fish (>6), flounder (Paralichthyidae), small unknown fish, flat fish, begin gentle undulations of seafloor at 20:46:34 that match SSS signature change, unknown fish (20:47:34), hermit crab (Paguroidea), prominent sand waves flattened out by end of transect (starts at 20:48:30)	N/A	311470.75	4514547.74	> 7 cm	110	light brownish gray 10YR 6/2	Muddy sand	None	None	Soft substrate, sea stars, polychaete and amphipod tubes, hydrozoans	21:28:00
8	ECR-B-608	2021-08-17	313143.42	4513474.38	16:13	313088.19	4513347.63	16:29	Flat (initially) soft substrate, many sea stars, shell hash, heavy snow, polychaete and amphipod tubes,bioturbation as depressions and tracks, flat fish, unknown small fish, egg cases, scattered depressions, Atlantic sea scallop (*Placopecten magellanicus*), large gastropod (16:17:20), pennatulids,, Jonah crab (*Cancer borealis)* , seafloor flattens out toward end of transect	N/A	313111.94	4513403.38	> 7 cm	None	light brownish gray 10YR 6/2	Muddy sand	None	None	Soft substrate, shell hash, pennatulids	16:45:39
8	ECR-B-610	2021-08-17	314733.99	4512286.17	13:25	314823.89	4512120.87	13:46	soft substrate, gentle erratic waves, more consistent before transition to flatter seafloor (transition: 13:43:15), many sea stars, heavy snow, bioturbation as depressions, lots of shell hash and dead bivalves, small unknown fish, flat fish, Jonah crab (*Cancer borealis*), Atlantic sea scallop (*Placopecten magellanicus*), squid (Loliginidae), red hake (*Urophycis chuss*), flatter sand areas had tufted polychaetes, pennatulids	N/A	314747.51	4512256.76	> 7 cm	None	brown 10YR 5/3	Sand with some mud	None	Clam	Soft substrate, polychaete and amphipod tubes	14:01:15
8	ECR-B-612	2021-08-17	316359.75	4511126.97	10:22	316422.64	4511087.10	10:31	Flat soft substrate, heavy snow, Cerianthid, flounder (Paralichthyidae), pock marks, burrows, hydrozoans, hydroids, small benthic fish, red hake (*Urophycis chuss*) in burrow, hermit crab (Paguroidea)	N/A	316386.85	4511107.44	> 7 cm	30	light brownish gray 10YR 6/2	Muddy clay with sand	None	None	Soft substrate	10:44:45

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
8	ECR-B-614	2021-08-17	318007.53	4510000.89	8:05	318080.92	4509954.77	8:15	Flat soft substrate, flat fish, Cerianthid, sea stars, fish in burrow, Jonah crab, shell fragments, burrows	N/A	318038.80	4509980.98	> 7 cm	33	pale brown 10YR 6/3	Muddy sand with clay and shell fragments	None	Polychaete tubes	Soft substrate	8:27:41
8	ECR-B-616	2021-08-17	319768.71	4508944.42	5:29	319833.61	4508904.93	5:37	Flat soft substrate, many invertebrates in water column, small benthic fish, heavy snow, polychaete and amphipod tubes,eel, large shells	N/A	319794.91	4508923.38	> 7 cm	44	pale brown 10YR 6/3	Muddy sand with clay	None	Shells, polychaete tubes	Soft substrate, sea star	6:15:26
8	ECR-B-618	2021-08-17	321298.13	4508018.81	2:49	321547.90	4507860.27	3:25	Flat soft substrate at start and end of transect, some waves at western SSS feature, Jonah crab (*Cancer borealis*), scallop (*Placopecten magellanicus*), heavy snow, fish, eels (Congridae), shrimp, lobster (*Homarus americanus*)	Extended video transect west and east to pick up SSS signatures; west signature was visually wavy (~30 cm high), more so than surrounding seafloor; substrate composition appreared the same as surrounding area, several scallops observed along transect, no visual difference at eastern lighter shaded SSS feature	321462.34	4507914.86	> 7 cm	92	pale brown 10YR 6/3	Muddy sand	None	None	Soft substrate, sea star	3:44:40
8	ECR-B-620	2021-08-17	323004.49	4506869.75	0:17	323202.43	4506879.85	0:38	many invertebrates in water column, flat soft substrate, heavy snow, sea stars, polychaete and amphipod tubes,Jonah crab (*Cancer borealis*), flounder, red hake (*Urophycis chuss*) in burrow (00:24:10)	Extended video transect west to pick up transition between light and dark SSS signatures; no transition was visually obvious in video; all soft substrate with burrows and pockmarks throughout	323172.38	4506879.98	> 7 cm	45	pale brown 10YR 6/3	Sandy mud with clay	None	Polychaete and amphipod tubes	Soft flat bottom, sea stars	0:51:51
8	ECR-B-622	2021-08-16	324627.12	4505705.82	20:43	324865.77	4505682.31	21:12	Flat soft substrate, many invertebrates in water column, many sea stars, bioturbation as tracks, many depressions in later part of transect, flounder (Paralichthyidae), polychaete and amphipod tubes, red hake (*Urophycis chuss*), small shrimp	N/A	324757.18	4505690.29	> 7 cm	110	grayish brown 10YR 5/2	Muddy clay with sand	None	Polychaete and amphipod tubes, sea star	Soft substrate, sea star, polychaete and amphipod tubes	21:37:27
8	ECR-B-624	2021-08-16	326540.41	4504847.72	18:28	326595.66	4504814.81	18:36	Flat soft substrate, sea stars, heavy snow, flounder (Paralichthyidae), polychaete and amphipod tubes,cerianthid, pennatulid, small unidentified fish, red hake (*Urophycis chuss*), Jonah crab (*Cancer borealis*), depressions, bioturbation as burrows, flat fish	N/A	326567.03	4504832.23	> 7 cm	50	brown 10YR 5/3	Muddy clay with sand	None	sea stars	Soft substrate, sea star, polychaete and amphipod tubes	18:51:11
8	ECR-B-626	2021-08-16	328158.70	4503879.04	14:54	328367.15	4503748.36	15:21	Flat, soft substrate, heavy snow, flat fish, many sea stars, Jonah crab *(Cancer borealis*), cerianthid, polychaete and amphipod tubes,area of depressions, black and white video	N/A	328250.55	4503819.37	> 7 cm	65	brown 10YR 5/3	Muddy clay with sand	None	None	Soft substrate, sea stars, polychaete and amphipod tubes	15:54:47
8	ECR-B-628	2021-08-16	329998.64	4502961.92	12:30	330065.12	4502942.41	12:39	Flat, soft substrate, heavy snow, sea stars, polychaete and amphipod tubes,many invertebrates in water column, Jonah crab, flat fish	N/A	330030.32	4502951.50	> 7 cm	70	brown 10YR 5/3	Muddy clay with sand	None	Polychaete and amphipod tubes, sea star	Soft substrate, sea star, polychaete and amphipod tubes, tracks	12:54:38
8	ECR-B-630	2021-08-16	331844.59	4502490.58	9:32	332032.26	4502486.78	9:53	Flat soft substrate, heavy snow,Jonah crab (*Cancer borealis*), flat fish, flounder (Paralichthyidae), pennatulid, some depressions and pock marks, shrimp, unidentified fish @ 09:51:35	Ran video transect W to E and extended west to pick up trawl scars observed in SSS data; no changes in bottom were observed and scars were not seen.	331973.51	4502485.73	> 7 cm	42	pale brown 10YR 6/3	Sandy mud with clay	None	None	Soft substrate	10:09:50
8	ECR-B-632	2021-08-16	333862.48	4502423.89	7:20	333933.12	4502422.16	7:28	Flat soft substrate, heavy snow, polychaete and amphipod tubes, Jonah crab (*Cancer borealis*), sea stars, flounder, (Paralichthyidae), burrows and depressions	N/A	333895.09	4502420.08	> 7 cm	48	pale brown 10YR 6/3	Muddy clay with sand	None	sea stars	Soft substrate	7:42:08
8	ECR-B-634	2021-08-16	335800.33	4502352.75	4:11	336027.89	4502348.25	4:36	Flat soft substrate, heavy snow, many sea stars, Jonah crab (*Cancer borealis*), pennatulids, red hake (*Urophycis chuss*), eels, skate (Rajidae), Cerianthids	Extended video transect west to pick up transistion between light and dark SSS signature; dark area similar in composition to light area, but with more depressions and pockmarks in seafloor; all soft substrate throughout	335971.77	4502348.86	> 7 cm	45	brown 10YR 5/3	Muddy clay with sand	None	None	Soft substrate	4:56:52
8	ECR-B-636	2021-08-16	337768.91	4502288.23	1:05	338007.48	4502282.62	1:32	Flat soft substrate, heavy snow, many invertebrates in water column, sea stars, many pennatulids, Jonah crab (*Cancer borealis*), possible octopus, pock marks and burrows	Collected extra video west of station to pick up light SSS signature; no obvious visual change in substrate throughout	337970.34	4502281.55	> 7 cm	35	pale brown 10YR 6/3	Mud with clay	None	Polychaete and amphipod tubes	Soft substrate, sea pen (Octocorallia)	1:43:45
8	ECR-B-638	2021-08-15	339938.05	4502208.01	21:13	340005.82	4502214.81	21:22	Flat soft substrate, many invertebrates in water column, heavy snow, many sea stars, polychaete and amphipod tubes,pennatulids, Jonah crab (*Cancer borealis*), unknown crab, flounder (Paralichthyidae), conger eel (Congridae), area of significant burrows, many mounds may explain SSS features	N/A	339968.78	4502211.07	> 7 cm	90	grayish brown 10YR 5/2	Muddy clay, organic debris	None	None	Soft substrate	21:37:47
8	ECR-B-640	2021-08-15	341920.75	4502147.92	18:24	341979.19	4502142.38	18:31	Flat soft substrate, heavy snow, many sea stars, bioturbation as tracks and burrows, polychaete and amphipod tubes,depressions, Jonah crab (*Cancer borealis*), pennatulids	N/A	341950.38	4502143.35	> 7 cm	50	grayish brown 10YR 5/2	Muddy clay, organic debris	None	Brittle stars	Soft substrate, polychaete and amphipod tubes, sea star	18:44:00
8	ECR-B-642	2021-08-15	343938.98	4502068.65	15:32	343995.42	4502087.33	15:39	Soft substrate, heavy snow, many sea stars, bioturbation, polychaete and amphipod tubes,skate (Rajidae), depressions, Jonah crab (*Cancer borealis*), polychaete and amphipod tubes,many pennatulids	N/A	343968.35	4502074.79	> 7 cm	40	grayish brown 10YR 5/2	Muddy clay, organic debris	None	None	Soft substrate, polychaete and amphipod tubes, sea star	15:53:26
8	ECR-B-644	2021-08-15	345940.32	4501990.02	12:30	345986.60	4502027.88	12:39	Soft substrate, heavy snow, sea stars, Jonah crab (*Cancer borealis*), black and white video only	N/A	345967.40	4502004.85	> 7 cm	65	grayish brown 10YR 5/2	Muddy clay, organic debris	None	Polychaete and amphipod tubes, sea stars	Soft substrate	12:53:54
8	ECR-B-646	2021-08-15	348023.48	4501937.47	9:18	347843.35	4501941.29	9:37	Soft substrate, heavy snow, sea stars, polychaete and amphipod tubes,flounder (Paralichthyidae), small fish, bioturbation as burrows	Transect was extended west of circle to pick up darker SSS signature; no visual changes in substrate composition was observed in video.	347967.04	4501937.75	> 7 cm	30	grayish brown 10YR 5/2	Muddy clay	None	Polychaete and amphipod tubes, sea stars, brittle stars, shrimp	Soft substrate	10:00:57
8	ECR-B-648	2021-08-15	349979.89	4501863.13	6:17	349896.39	4501865.36	6:26	Soft substrate, heavy snow, Jonah crab, Ctenophora, flounder?	N/A	349944.01	4501870.30	> 7 cm	35	grayish brown 10YR 5/2	Muddy clay	None	Brittle stars, polychaete and amphipod tubes	Soft substrate; coordinates from second grab	6:53:29
8	ECR-B-650	2021-08-15	351990.91	4501828.05	2:58	351936.04	4501757.78	3:08	Soft substrate, heavy snow, many sea stars, polychaete and amphipod tubes,Jonah crab (*Cancer borealis*), unknown fish in burrows, butterfish (*Peprilus triacanthus*)	N/A	351969.13	4501804.50	> 7 cm	40	grayish brown 10YR 5/2	Muddy clay	None	None	Soft substrate	3:23:16
8	ECR-B-652	2021-08-14	353928.18	4501724.13	23:19	353996.68	4501746.02	23:28	Soft substrate, heavy snow, many sea stars, polychaete and amphipod tubes,many invertebrates in water column, Jonah crab (*Cancer borealis*), conger eel (Congridae), red hake (*Urophycis chuss*)	N/A	353961.52	4501731.66	> 7 cm	None	grayish brown 10YR 5/2	Muddy clay	None	None	Soft substrate	23:41:46
8	ECR-B-654	2021-08-14	355954.65	4501629.12	20:32	355963.48	4501688.51	20:40	Soft substrate, many invertebrates in water column, Jonah crab (*Cancer borealis*), sea star, heavy snow and particles, hydrozoans, unknown fish	N/A	355962.73	4501661.46	> 7 cm	70	brown 10YR 5/3	Muddy clay; organic with debris	None	Polychaete and amphipod tubes	Soft substrate, sea stars, polychaete and amphipod tubes	20:53:02
8	ECR-B-656	2021-08-14	357997.83	4501596.35	16:50	357933.95	4501588.34	16:58	Soft substrate, sea stars, polychaete and amphipod tubes,red shrimp, heavy snow and particles in water column, flat fish, Jonah crab (*Cancer borealis*),	N/A	357965.57	4501595.38	> 7 cm	25	brown 10YR 5/3	Muddy clay; organic with debris	None	Polychaete and amphipod tubes	Soft substrate, sea stars, polychaete and amphipod tubes	17:14:13
8	ECR-B-658	2021-08-14	359992.54	4501542.38	14:06	359939.20	4501512.34	14:15	Soft substrate, many sea stars, Jonah crab (*Cancer borealis*), polychaete and amphipod tubes,small red shrimp, vegetation, minor depressions	N/A	359964.66	4501528.32	> 7 cm	30	grayish brown 10YR 5/2	Muddy clay; organic with debris	None	Polychaete and amphipod tubes	Soft substrate, sea stars, shrimp, polychaete and amphipod tubes	14:35:31
8	ECR-A-1501	2021-08-18	306045.03	4518958.33	8:47	306033.41	4518859.37	8:58	Flat soft substrate, bioturbation as pockmarks, mounds, depressions and tracks, skate (Rajidae), Cerianthid, some depressions, small benthic fish, skate egg case, heavy snow, shrimp, tufted polychaetes, sea stars, hermit crab (Paguroidea), pennatulids,, red hake (*Urophycis chuss*), flatfish, hydrozoans,, sand dollars	Oriented video transect N to S due to current; set up to cover "wavy" SSS signature.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-A-1504	2021-08-18	300257.68	4524367.64	19:57	300254.10	4524258.82	20:09	Soft substrate, skate (Rajidae), hermit crab (Paguroidea), many sea stars, heavy snow, shells and shell fragments, pennatulids, unknown small fish, bioturbation as depressions, tracks, and burrows, flatter bottom at 20:03:00, hydrozoans, skate egg case, egg collar, tufted polychaetes, pair of squid (Loliginidae), Jonah crab (*Cancer borealis*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Segment	Station	Date	Drop Camera								Benthic Grab								Grab Mounted Camera	
			Start X	Start Y	Time Start	End X	End Y	Time Stop	Habitat Notes / Observations	Transect Placement Notes	X	Y	Grab Penetration > or = 7cm?	aRPD depth (mm)	Color (Munsell chart)	Texture	Odor	Surficial Features	Notes / Observations	Bottom Touchdown Time
8	ECR-C-1505	2021-08-18	298868.72	4525763.35	23:12	298821.48	4525806.62	23:20	Flat soft substrate, many sea stars, sea scallops, heavy snow, bioturbation as mounds and depressions, lizardfish (*Synodus* spp.) shrimp, spotted hake (*Urophycis regia*), tufted polychaetes, polychaete and amphipod tubes, many invertebrates in water column	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1506	2021-08-19	298565.78	4526056.52	0:34	298477.11	4526140.50	0:48	Flat sand bottom, some pock marks, flounder (Paralichthyidae), hermit crab (Paguroidea), Jonah crab (*Cancer borealis*), burrows, sea stars, skate (Rajidae), heavy snow, large shell fragments, mounds	Oriented SE to NW to pick up SSS transition; waves in SSS signature with noticeable undulations in seafloor and higher shell hash; no visible change in substrate composition other than shell hash	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1507	2021-08-19	295478.86	4529008.13	6:34	295603.06	4528886.99	6:53	Seafloor soft and undulating in the "wavy" SSS area, sea stars, sand dollars, pennatulids, shell fragments, many scallops (*Placopecten magellanicus*), bioturbation as tracks, squid (Loliginidae), flattens out at 06:41:00, red hake (*Urophycis chuss*), small benthic fish, Jonah crab (*Cancer borealis*), heavy snow, more scallops in the "wavy" area, more "wavy" bottom and scallops towards the end of the transect as well	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-A-1508	2021-08-20	293092.37	4531312.92	6:49	293037.66	4531250.96	6:58	Flat soft substrate, bioturbation as pockmarks, mounds, and tracks, scallops (*Placopecten magellanicus*), sea stars, Jonah crab *(Cancer borealis*), mermaid's purse egg case, heavy snow, some mounds, hydrozoans, skate (Rajidae), hermit crabs (Paguroidea), red hake (*Urophycis chuss*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1509	2021-08-20	290910.35	4533379.37	12:05	290967.06	4533321.98	12:14	Undulating soft bottom, heavy snow, seastars, shell fragments, scallops (*Placopecten magellanicus*), penntulids, hydrozaons,, hermit crab (Paguroidea); transitions to flat soft substrate as seen in SSS data	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1510	2021-08-20	290757.13	4533528.11	11:48	290888.83	4533381.01	11:57	Soft substrate, heavy snow, seastars, shell hash, scallop, Polychaete and amphipod tubes,red hake (*Urophycis chuss*), skate (Rajidae), Jonah crab (*Cancer borealis*)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1511	2021-08-20	289342.67	4534948.48	14:37	289408.65	4534874.93	14:48	Flat soft substrate, many sea stars, heavy snow, shell fragments and hash, pennatulids, piece of wood debris, intact shells, scallop (*Placopecten magellanicus*), skate egg case, gastropod egg collar, mounds, depressions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1512	2021-08-20	286501.95	4538059.91	22:11	286544.79	4538006.01	22:19	Soft substrate, lots of shells and shell fragments, sea stars, heavy snow, shell hash, hermit crabs (Paguroidea), many invertebrates in water column, scallop (*Placopecten magellanicus*), small skate (Rajidae), Cerianthid, skate egg case, conger eel (Congridae)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-A-1513	2021-08-21	285576.76	4539041.34	0:17	285533.60	4539096.71	0:25	Soft substrate, start of transect with some mounds and pockmarks, Jonah crab (*Cancer borealis*), sea stars, heavy marine snow, polychaete and amphipod tubes, shell fragments,conger eel (Congridae), little skates (*Leucoraja erinacea*), began "wavy" substrate at 00:22:00, hermit crabs (Paguroidea), scallop (*Placopecten magellanicus*)	Ran transect southeast to northwest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-A-1515	2021-08-21	284804.42	4539815.26	2:19	284821.19	4539896.22	2:28	Flat soft substrate with mounds, tracks and pockmarks, sea stars, shell fragments, heavy snow, flatfish (Paralichthydae), hermit crab (Paguroidea), skate (Rajadae), scallops (*Placopecten magellanicus*)	Shared video camera drop with Station ECR-A-1516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1516	2021-08-21	284827.95	4539899.58	2:36	284840.48	4539964.96	2:44	Soft substrate with waves and mounds, pockmarks, shell fragments, sea stars, heavy marine snow, flat fish, hermit crabs (Paguroidea), skates (Rajidae), scallops (*Placeopecten magellanicus*)	Full benthic suite; shared video camera drop with Station ECR-A-1515	284830.84	4539916.56	> 7 cm	80	reddish brown 5YR 5/4	Coarse sand with shell hash	None	None	Soft substrate	3:02:24
8	ECR-C-1517	2021-09-13	282521.07	4541853.38	10:53	282488.34	4541863.43	11:04	Sand with high abundance of sand dollars (*Mellita* sp.), some shell fragments, hermit crab (Paguroidea), pock marks, shallow sand waves, school of very small squid (Loliginidae), area of clam shells, sand dollar tests and fragments at 10:59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1601	2021-08-15	339915.75	4502248.16	22:43	340024.37	4502255.82	22:57	Flat soft substrate, many invertebrates in water column, heavy snow, many seastars, polychaete and amphipod tubes,pennatulids, bioturbation as depressions, Jonah crab (*Cancer borealis*), flat fish, red hake (*Urophycis chuss*), Cerianthid, urchin, conger eel (Congridae)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1602	2021-08-17	312510.03	4513908.24	18:45	312496.48	4513724.16	19:06	Flat soft substrate, heavy snow, many seastars, lots of shells, eel, shrimp, bioturbation as track and burrows, Jonah crab, egg collar, tufted polychaetes, pennatulids, scallops (*Placopecten magellanicus*), skate (Rajidae), red hake (*Urophycis chuss*), flat fish, conger eel (Congridae)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-C-1603	2021-08-17	311193.59	4514733.44	22:52	311133.35	4514774.70	23:01	Flat soft substrate, bioturbation as burrows, and tracks. Seastars, some shell fragments and hash, some hydroids, many invertebrates in water column, intact shells, polychaete and amphipod tubes, Jonah crab (*Cancer borealis*), scallops (*Placopecten magellanicus*), penatulids, sea stars drop off latter portion of transect.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	ECR-A-1604	2021-08-18	308962.88	4516455.09	3:20	308902.99	4516306.96	3:37	Flat soft substrate, many invertebrates in water column, sea stars, flatfish, butterfish (*Peprilus triacanthus*), shrimp, pennatulids, hermit crab (Paguroidea), tufted polychaetes, scallop (*Placopecten magellanicus*), eel (Congridae), flounder (Paralichthyidae), more shell fragments in undulated area, red hake (*Urophycis chuss*), burrows, Jonah crab (*Cancer borealis*)	Ran transect SSW to cross target and pick up SSS "wavy" area. Substrate was similar to past signature observations with undulations in the seafloor and little visual change in sediment composition; slightly higher shell hash	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

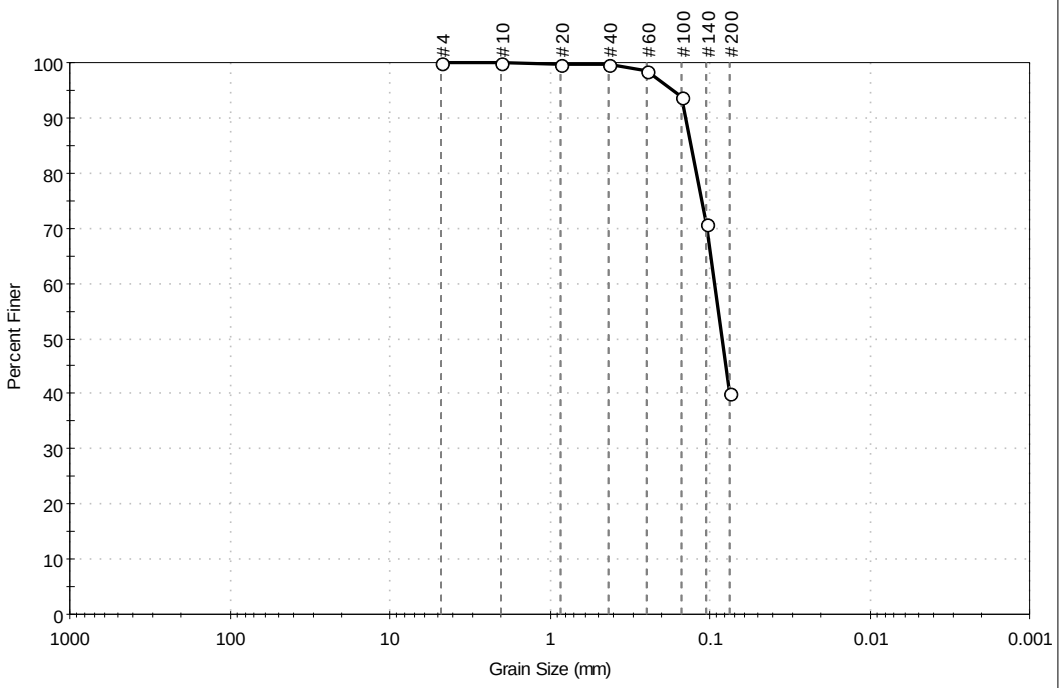
ATTACHMENT C BENTHIC SEDIMENT SAMPLING

ANALYSIS RESULTS - LABORATORY

REPORTS

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-476	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639473		
Test Comment:	---				
Visual Description:	Moist, very dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	60.0	40.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	94		
#140	0.11	71		
#200	0.075	40		

Coefficients

D_{85} = 0.1314 mm	D_{30} = N/A
D_{60} = 0.0938 mm	D_{15} = N/A
D_{50} = 0.0839 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

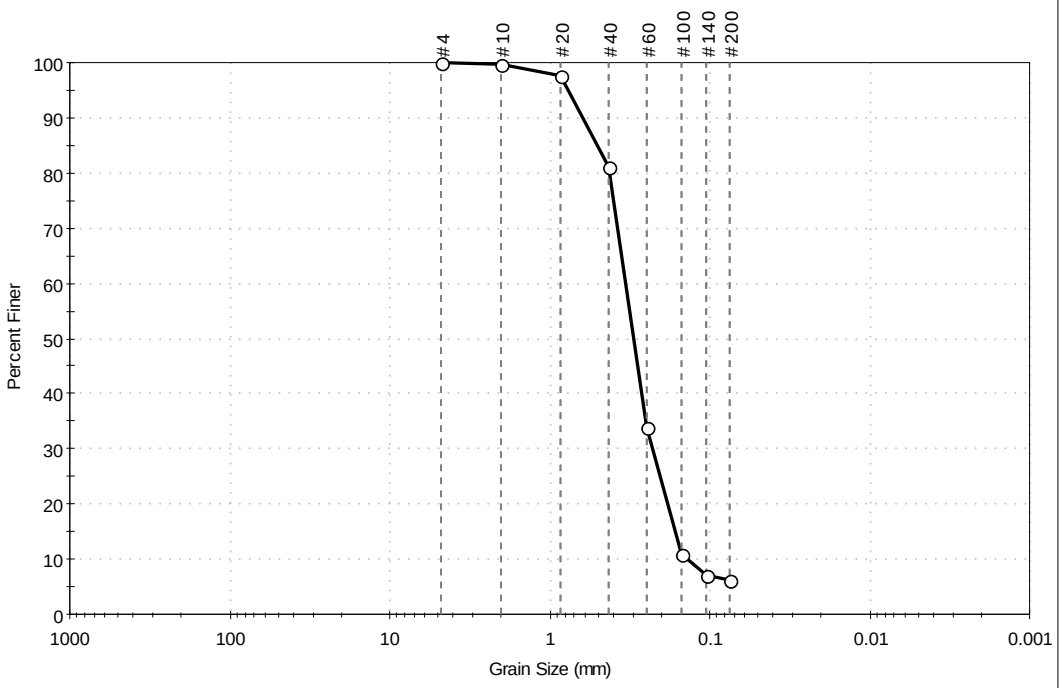
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

printed 11/8/2021 11:38:26 AM

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-480-A	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639474		
Test Comment:	---				
Visual Description:	Moist, very dark gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	93.7	6.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	98		
#40	0.42	81		
#60	0.25	34		
#100	0.15	11		
#140	0.11	7		
#200	0.075	6.3		

Coefficients

D_{85} = 0.5007 mm	D_{30} = 0.2286 mm
D_{60} = 0.3351 mm	D_{15} = 0.1639 mm
D_{50} = 0.2993 mm	D_{10} = 0.1372 mm
C_u = 2.442	C_c = 1.137

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (1))

Sample / Test Description

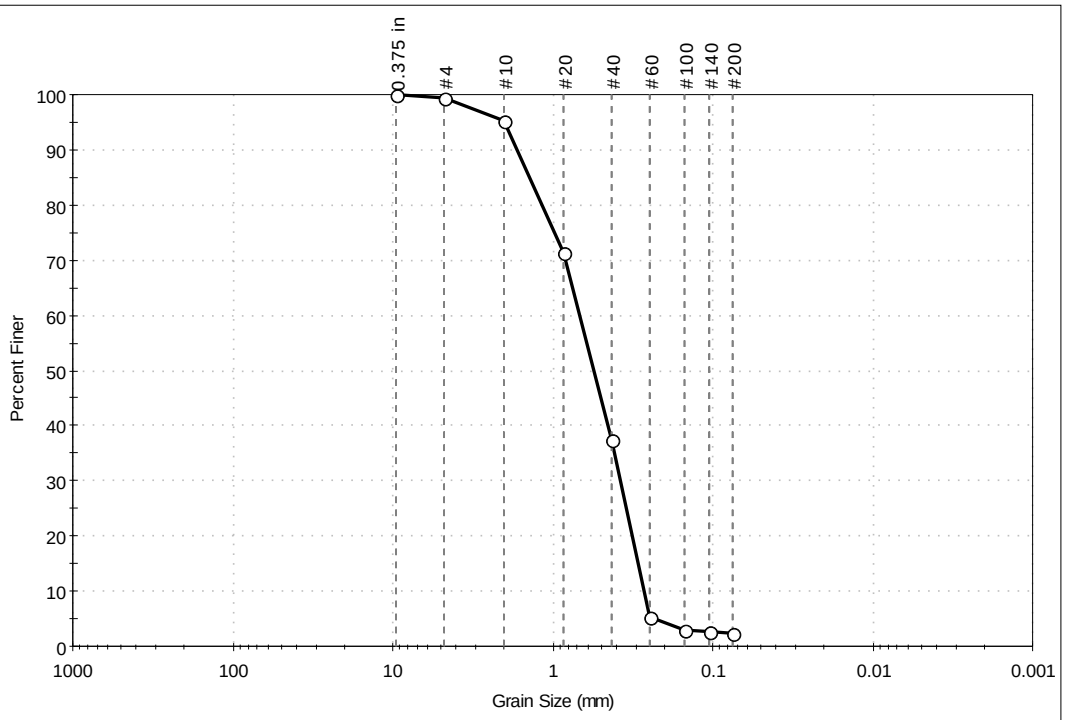
Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

printed 11/8/2021 11:38:28 AM

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-486	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639475		
Test Comment:	---				
Visual Description:	Moist, dark olive brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.6	97.2	2.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	95		
#20	0.85	71		
#40	0.42	37		
#60	0.25	5		
#100	0.15	3		
#140	0.11	3		
#200	0.075	2.2		

Coefficients

D_{85} = 1.3865 mm	D_{30} = 0.3762 mm
D_{60} = 0.6752 mm	D_{15} = 0.2939 mm
D_{50} = 0.5501 mm	D_{10} = 0.2707 mm
C_u = 2.494	C_c = 0.774

Classification

ASTM Poorly graded SAND (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

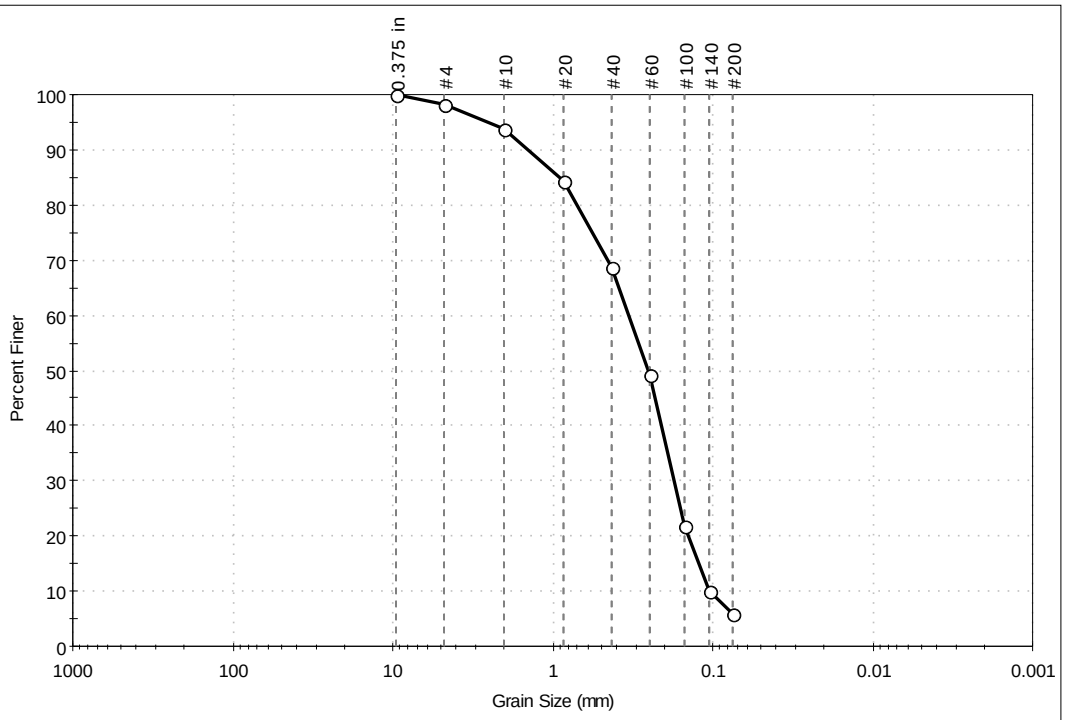
Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-488	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639477		
Test Comment:	---				
Visual Description:	Moist, very dark gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	1.8	92.3	5.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	94		
#20	0.85	84		
#40	0.42	69		
#60	0.25	49		
#100	0.15	22		
#140	0.11	10		
#200	0.075	5.9		

Coefficients

D_{85} = 0.8907 mm	D_{30} = 0.1745 mm
D_{60} = 0.3353 mm	D_{15} = 0.1224 mm
D_{50} = 0.2548 mm	D_{10} = 0.1051 mm
C_u = 3.190	C_c = 0.864

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (1))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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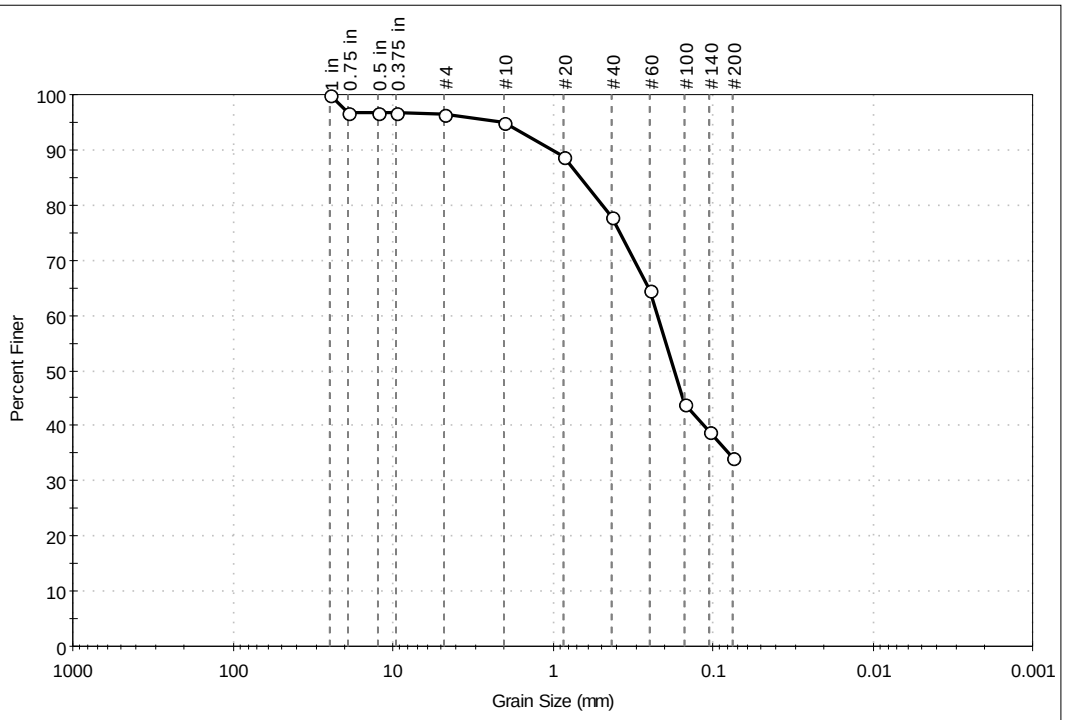
GeoTesting EXPRESS

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-C-1437	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639476		

Test Comment: ---
Visual Description: Moist, very dark gray silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	3.6	62.1	34.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	97		
0.5 in	12.50	97		
0.375 in	9.50	97		
#4	4.75	96		
#10	2.00	95		
#20	0.85	89		
#40	0.42	78		
#60	0.25	64		
#100	0.15	44		
#140	0.11	39		
#200	0.075	34		

Coefficients

D_{85} = 0.6730 mm D_{30} = N/A
D_{60} = 0.2235 mm D_{15} = N/A
D_{50} = 0.1741 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

printed 11/8/2021 11:38:34 AM

ANALYTICAL REPORT

Lab Number:	L2146075
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	09/29/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2146075-01	3664|2021|ECR-B|602|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146075-02	3664|2021|ECR-B|604|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146075-03	3664|2021|ECR-B|606|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-04	3664|2021|ECR-B|608|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-05	3664|2021|ECR-B|610|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-06	3664|2021|ECR-B|612|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-07	3664|2021|ECR-B|614|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-08	3664|2021|ECR-B|616|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-09	3664|2021|ECR-B|618|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-10	3664|2021|ECR-B|620|SED|01	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-11	3664|2021|ECR-B|620|SED|02	SEDIMENT	OFFSHORE MA / NY	08/17/21 00:00	08/26/21
L2146075-12	3664|2021|ECR-B|622|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-13	3664|2021|ECR-B|624|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-14	3664|2021|ECR-B|626|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-15	3664|2021|ECR-B|628|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-16	3664|2021|ECR-B|630|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-17	3664|2021|ECR-B|632|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-18	3664|2021|ECR-B|634|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-19	3664|2021|ECR-B|636|SED|01	SEDIMENT	OFFSHORE MA / NY	08/16/21 00:00	08/26/21
L2146075-20	3664|2021|ECR-B|638|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-21	3664|2021|ECR-B|640|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-22	3664|2021|ECR-B|640|SED|02	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-23	3664|2021|ECR-B|642|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-24	3664|2021|ECR-B|644|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2146075-25	3664|2021|ECR-B|646|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-26	3664|2021|ECR-B|648|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-27	3664|2021|ECR-B|650|SED|01	SEDIMENT	OFFSHORE MA / NY	08/15/21 00:00	08/26/21
L2146075-28	3664|2021|ECR-B|652|SED|01	SEDIMENT	OFFSHORE MA / NY	08/14/21 00:00	08/26/21
L2146075-29	3664|2021|ECR-B|654|SED|01	SEDIMENT	OFFSHORE MA / NY	08/14/21 00:00	08/26/21
L2146075-30	3664|2021|ECR-B|656|SED|01	SEDIMENT	OFFSHORE MA / NY	08/14/21 00:00	08/26/21
L2146075-31	3664|2021|ECR-B|658|SED|01	SEDIMENT	OFFSHORE MA / NY	08/14/21 00:00	08/26/21

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The samples were received at the laboratory below the required temperature range. The samples were transported to the laboratory in a cooler with ice and were not received frozen.

Grain Size

The WG1548338-1 Laboratory Duplicate RPDs for granule (40%) and silt (34%), performed on L2146075-08, are above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

The WG1548338-2 Laboratory Duplicate RPD for granule (57%), performed on L2146075-26, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

Total Organic Carbon

L2146075-01 through -31: The sample was frozen upon receipt in order to arrest the holding time.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 09/29/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-01
Client ID: 3664|2021|ECR-B|602|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.578		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.437		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.508		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.800		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	3.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	21.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	33.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	23.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	6.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	8.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-02
Client ID: 3664|2021|ECR-B|604|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.544		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.505		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.524		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	2.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	5.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	18.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	29.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	23.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	6.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	10.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-03
Client ID: 3664|2021|ECR-B|606|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.486		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.438		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.462		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	15.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	40.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	21.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	6.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	10.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-04
Client ID: 3664|2021|ECR-B|608|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.087		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.077		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.082		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	6.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	40.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	44.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	3.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	3.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-05
Client ID: 3664|2021|ECR-B|610|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.058		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.059		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.059		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	4.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	64.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	27.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	2.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-06
Client ID: 3664|2021|ECR-B|612|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.630		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.561		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.596		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	6.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	21.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	42.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	9.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	14.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	3.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-07
Client ID: 3664|2021|ECR-B|614|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.346		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.357		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.352		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	4.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	25.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	46.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	8.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	11.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.80		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-08
Client ID: 3664|2021|ECR-B|616|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.383		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.417		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.400		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	11.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	39.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	31.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	5.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	7.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-09
Client ID: 3664|2021|ECR-B|618|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.414		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.374		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.394		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	13.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	50.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	16.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	4.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	11.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-10
Client ID: 3664|2021|ECR-B|620|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.615		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.552		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.584		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	8.70		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	17.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	35.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	13.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	17.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	4.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-11
Client ID: 3664|2021|ECR-B|620|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/17/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.706		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.541		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.624		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	6.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	16.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	36.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	13.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	20.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	5.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-12
Client ID: 3664|2021|ECR-B|622|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.662		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.733		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.698		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	8.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	22.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	39.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	10.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	15.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	3.80		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-13
Client ID: 3664|2021|ECR-B|624|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.977		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.809		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.893		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	8.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	17.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	23.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	11.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	28.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	8.70		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-14
Client ID: 3664|2021|ECR-B|626|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.846		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.757		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.802		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	0.900		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	7.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	18.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	22.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	10.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	31.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	9.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-15
Client ID: 3664|2021|ECR-B|628|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.03		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.998		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	1.02		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	8.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	9.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	12.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	13.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	40.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	14.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-16
Client ID: 3664|2021|ECR-B|630|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.759		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.864		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.812		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.600		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	10.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	17.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	12.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	13.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	34.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	11.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-17
Client ID: 3664|2021|ECR-B|632|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.06		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	1.03		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	1.04		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	7.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	12.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	13.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	14.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	39.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	9.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-18
Client ID: 3664|2021|ECR-B|634|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.697		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	0.800		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	0.748		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	8.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	21.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	15.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	11.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	33.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	8.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-19
Client ID: 3664|2021|ECR-B|636|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/16/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.22		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	1.21		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	1.22		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	3.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	4.80		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	9.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	18.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	46.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	15.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-20
Client ID: 3664|2021|ECR-B|638|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.48		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	1.45		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	1.46		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.900		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	4.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	4.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	5.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	17.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	51.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	12.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-21
Client ID: 3664|2021|ECR-B|640|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.39		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.36		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.38		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.80		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	5.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	7.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	5.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	6.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	20.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	45.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	9.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-22
Client ID: 3664|2021|ECR-B|640|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.41		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.32		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.37		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.900		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	3.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	4.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	3.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	4.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	17.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	54.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	12.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-23
Client ID: 3664|2021|ECR-B|642|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.62		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.54		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.58		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	5.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.80		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	13.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	7.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	7.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	21.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	33.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	8.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-24
Client ID: 3664|2021|ECR-B|644|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.14		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.16		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.15		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	2.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	2.60		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	4.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	19.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	56.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	13.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-25
Client ID: 3664|2021|ECR-B|646|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.777		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.916		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	0.846		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	10.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	20.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	11.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	43.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	7.70		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-26
Client ID: 3664|2021|ECR-B|648|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.962		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.08		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.02		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	2.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	2.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	3.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	12.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	63.4		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	14.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-27
Client ID: 3664|2021|ECR-B|650|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/15/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.747		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.922		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	0.834		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	0.400		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	6.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	15.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	11.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	15.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	42.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	8.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-28
Client ID: 3664|2021|ECR-B|652|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/14/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.967		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.980		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	0.974		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	3.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	8.70		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	16.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	32.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	29.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	6.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-29
Client ID: 3664|2021|ECR-B|654|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/14/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.932		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.980		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	0.956		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	3.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	7.00		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	13.7		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	15.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	42.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	14.6		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-30
Client ID: 3664|2021|ECR-B|656|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/14/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.17		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.09		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	1.13		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	2.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	6.70		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	13.5		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	11.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	34.1		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	24.0		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	5.50		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146075
Report Date: 09/29/21

SAMPLE RESULTS

Lab ID: L2146075-31
Client ID: 3664|2021|ECR-B|658|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/14/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.846		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.913		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	0.880		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	1.30		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Coarse Sand	1.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Coarse Sand	6.90		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Medium Sand	19.9		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Fine Sand	16.2		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
% Very Fine Sand	31.3		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	17.8		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	4.20		%	0.100	NA	1	-	09/20/21 10:22	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
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Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-20 Batch: WG1544680-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	09/13/21 10:16	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 21-31 Batch: WG1544692-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	09/13/21 10:27	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: BEACON WIND

Project Number: 3664

Lab Number: L2146075

Report Date: 09/29/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-20 Batch: WG1544680-2								
Total Organic Carbon (Rep1)	123		-		75-125	-		25
Total Organic Carbon (Rep2)	104		-		75-125	-		25
Total Organic Carbon (Average)	114		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 21-31 Batch: WG1544692-2								
Total Organic Carbon (Rep1)	112		-		75-125	-		25
Total Organic Carbon (Rep2)	102		-		75-125	-		25
Total Organic Carbon (Average)	107		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1544680-4 WG1544680-5 QC Sample: L2146075-11 Client ID: 3664|2021|ECR-B|620|SED|02												
Total Organic Carbon (Rep1)	0.706	1.08	1.80	101		1.71	83		75-125	5		25
Total Organic Carbon (Rep2)	0.541	1.01	1.75	119		1.75	104		75-125	0		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 21-31 QC Batch ID: WG1544692-4 QC Sample: L2146572-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	2.20	1.07	3.85	**154**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	2.40	0.844	3.88	**175**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 21-31 QC Batch ID: WG1544692-5 QC Sample: L2146075-21 Client ID: 3664|2021|ECR-B|640|SED|01												
Total Organic Carbon (Rep1)	1.39	1.19	2.73	112		-	-		75-125	-		25
Total Organic Carbon (Rep2)	1.36	1.22	2.60	101		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1544680-3 QC Sample: L2146075-11 Client ID: 3664|2021|ECR-B|620|SED|02						
Total Organic Carbon (Rep1)	0.706	0.571	%	21		25
Total Organic Carbon (Rep2)	0.541	0.592	%	9		25
Total Organic Carbon (Average)	0.624	0.582	%	7		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 21-31 QC Batch ID: WG1544692-3 QC Sample: L2146572-01 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	2.20	2.46	%	11		25
Total Organic Carbon (Rep2)	2.40	2.68	%	11		25
Total Organic Carbon (Average)	2.30	2.57	%	11		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-31 QC Batch ID: WG1548338-1 QC Sample: L2146075-08 Client ID: 3664|2021|ECR-B|616|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	ND	%	NC		20
Granule (2.0-4.0 mm)	0.300	0.200	%	**40**	Q	20
% Very Coarse Sand	1.40	1.40	%	0		20
% Coarse Sand	11.5	10.4	%	10		20
% Medium Sand	39.8	37.5	%	6		20
% Fine Sand	31.2	31.4	%	1		20
% Very Fine Sand	5.90	6.00	%	2		20
Silt - (3.9-62.5 um)	7.30	10.3	%	**34**	Q	20
Clay - (<3.9 um)	2.60	2.80	%	7		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-31 QC Batch ID: WG1548338-2 QC Sample: L2146075-26 Client ID: 3664|2021|ECR-B|648|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	ND	%	NC		20
Granule (2.0-4.0 mm)	0.500	0.900	%	**57**	Q	20
% Very Coarse Sand	ND	1.20	%	NC		20
% Coarse Sand	2.40	2.90	%	19		20
% Medium Sand	2.90	3.20	%	10		20
% Fine Sand	3.00	3.00	%	0		20
% Very Fine Sand	12.9	13.0	%	1		20
Silt - (3.9-62.5 um)	63.4	62.7	%	1		20
Clay - (<3.9 um)	14.9	13.1	%	13		20

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146075-01A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-01B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-02A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-02B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-03A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-03B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-04A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146075-04B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146075-05A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146075-05B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-06A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146075-06B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-07A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-07B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-08A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2146075-08B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-09A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146075-09B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146075-10A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146075-10B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-11A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-11B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-12A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146075-12B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-13A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-13B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-14A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146075-14B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:09292113:04

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146075-15A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-15B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-16A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146075-16B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-17A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-17B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-18A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-18B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-19A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-19B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:09292113:04

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146075-20A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-20B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-21A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-21B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-22A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-22B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-23A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-23B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-24A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-24B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:09292113:04

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146075-25A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2146075-25B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-26A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146075-26B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-27A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-27B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-28A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-28B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-29A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146075-29B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:09292113:04

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146075
Report Date: 09/29/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146075-30A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146075-30B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146075-31A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146075-31B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2146075
Project Number:	3664	**Report Date:**	09/29/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

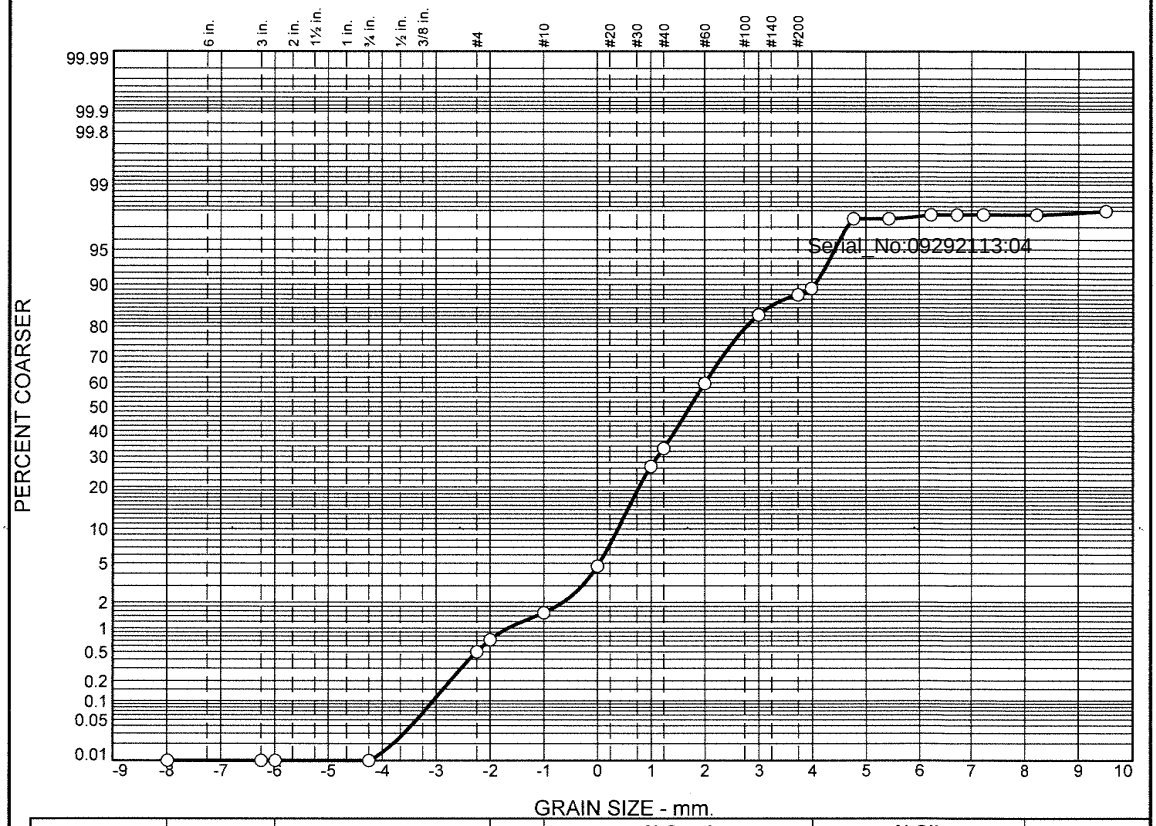
We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Serial_No:09292113:04

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	0.8	3.2	21.8	33.1	23.6	6.2	8.2	0.1	0.1	0.0	2.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6589	0.3656	0.3011	0.1989	0.1102	0.0601	1.80	6.09

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|602|SED|01 **Sample No.:** L2146075-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|602|SED|01

Sample Number: L2146075-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 69.61
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
69.61	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.35	0.00	99.5
		#5	0.15	0.00	99.3
		#10	0.56	0.00	98.5
		#18	2.22	0.00	95.3
		#35	15.17	0.00	73.5
		#40	4.59	0.00	66.9
		#60	18.47	0.00	40.4
		#120	16.39	0.00	16.8
		#200	3.32	0.00	12.1
		#230	0.90	0.00	10.8

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.8
Weight of hydrometer sample =40.11
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0366	2.4
5.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0231	2.4
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	2.2
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	2.2
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	2.2
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	2.2
1440.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0014	2.0

Fractional Components

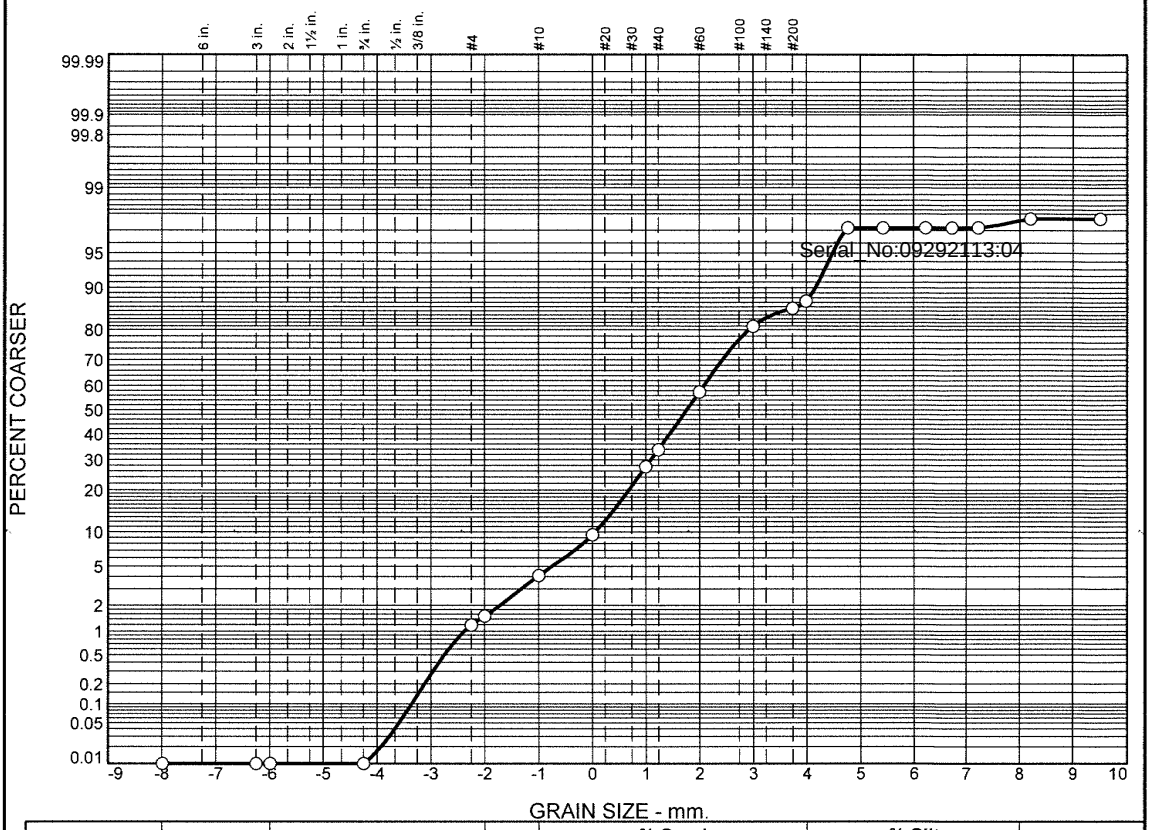
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	0.8	3.2	21.8	33.1	23.6	6.2	87.9	8.2	0.1	0.1	0.0	8.4	2.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0467	0.0601	0.1102	0.1458	0.1989	0.2482	0.3011	0.3656	0.5823	0.6589	0.7660	0.9779

Fineness Modulus	C_u	C_c
1.53	6.09	1.80

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.5	2.6	5.4	18.0	29.9	23.5	6.5	9.8	0.0	0.0	0.4	2.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7452	0.3667	0.2938	0.1857	0.0847	0.0557	1.69	6.58

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|604|SED|01 **Sample No.:** I2146075-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|604|SED|01

Sample Number: I2146075-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 70.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
70.90	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.84	0.00	98.8
		#5	0.23	0.00	98.5
		#10	1.82	0.00	95.9
		#18	3.82	0.00	90.5
		#35	12.78	0.00	72.5
		#40	4.46	0.00	66.2
		#60	16.76	0.00	42.6
		#120	16.68	0.00	19.1
		#200	3.35	0.00	14.3
		#230	1.13	0.00	12.7

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.7
Weight of hydrometer sample =37.51
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	2.8
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	2.8
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	2.8
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	2.8
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	2.8
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	2.3
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	2.3

Fractional Components

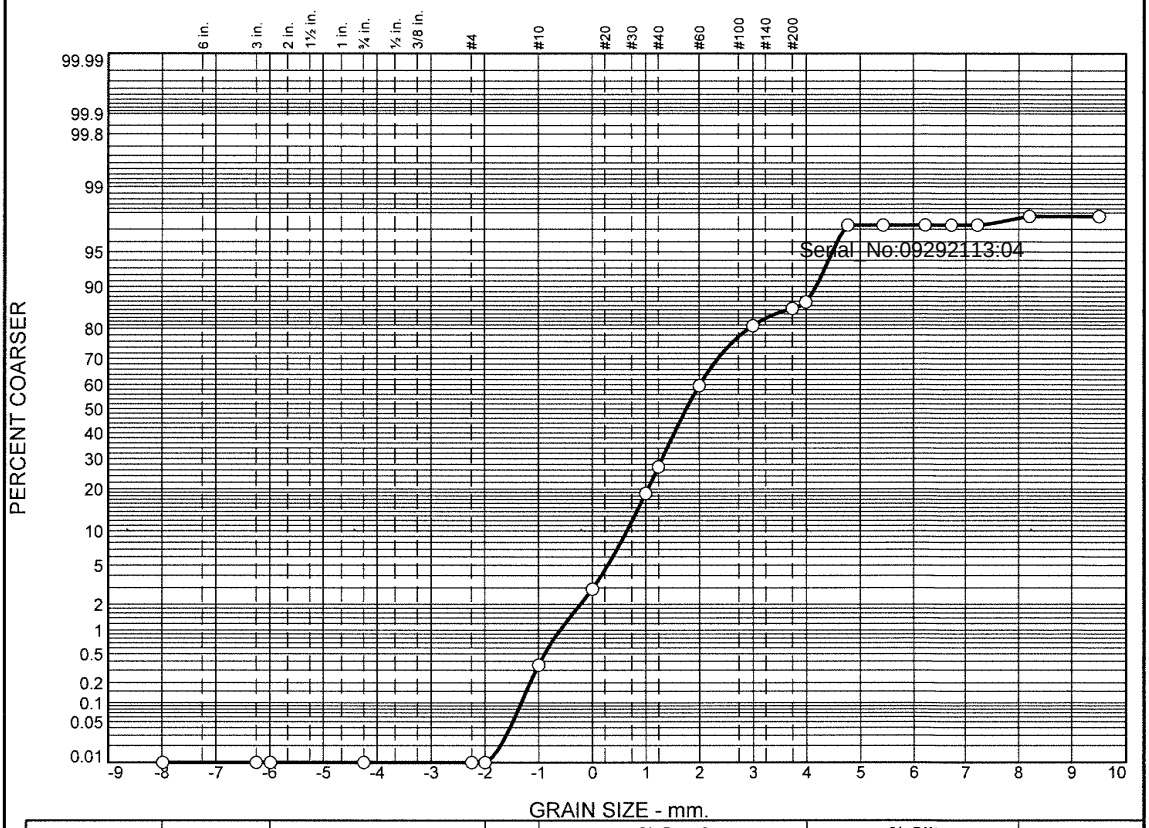
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.5	2.6	5.4	18.0	29.9	23.5	6.5	83.3	9.8	0.0	0.0	0.4	10.2	2.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0447	0.0557	0.0847	0.1315	0.1857	0.2361	0.2938	0.3667	0.6220	0.7452	0.9632	1.6851

Fineness Modulus	C_u	C_c
1.59	6.58	1.69

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	2.5	15.8	40.8	21.3	6.2	10.3	0.0	0.0	0.4	2.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5467	0.3447	0.2948	0.1967	0.0798	0.0551	2.04	6.26

Material Description	USCS	AASHTO
○ 3664|2021|ECR-B|606|SED|01		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|606|SED|01 **Sample No.:** L2146075-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|606|SED|01
Sample Number: L2146075-03
Material Description: 3664|2021|ECR-B|606|SED|01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 81.98
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:09292113:04

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
81.98	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.29	0.00	99.6
		#18	2.10	0.00	97.1
		#35	12.96	0.00	81.3
		#40	6.83	0.00	72.9
		#60	26.61	0.00	40.5
		#120	17.45	0.00	19.2
		#200	3.70	0.00	14.7
		#230	1.25	0.00	13.2

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.2
Weight of hydrometer sample =40.13
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	2.7
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	2.7
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	2.7
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	2.7
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	2.7
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	2.2
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	2.2

Fractional Components

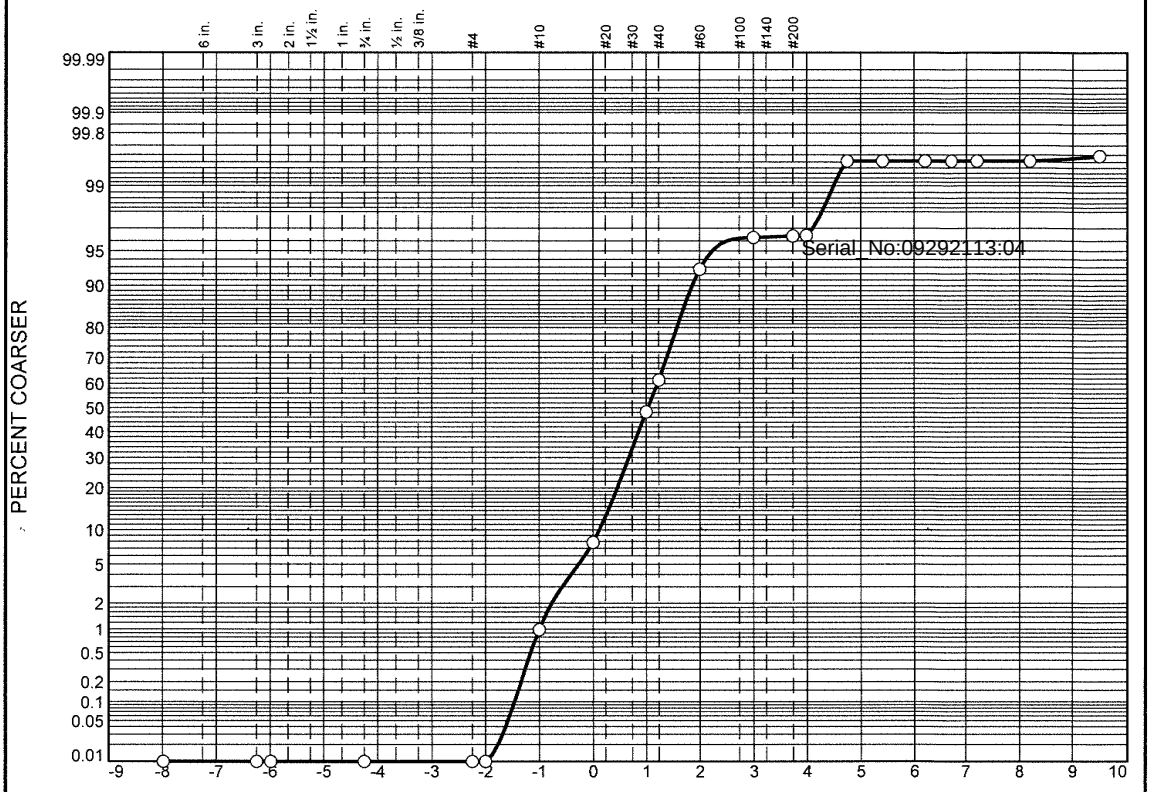
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	2.5	15.8	40.8	21.3	6.2	86.6	10.3	0.0	0.0	0.4	10.7	2.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0447	0.0551	0.0798	0.1317	0.1967	0.2477	0.2948	0.3447	0.4864	0.5467	0.6375	0.8186

Fineness Modulus	C_u	C_c
1.40	6.26	2.04

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.0	6.9	40.3	44.5	3.6	0.2	3.0	0.0	0.0	0.0	0.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8032	0.5525	0.4891	0.3833	0.3089	0.2754	0.97	2.01

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|608|SED|01 **Sample No.:** L2146075-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|608|SED|01
Sample Number: L2146075-04
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 72.86
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:09292113:04

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
72.86	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.72	0.00	99.0
		#18	5.02	0.00	92.1
		#35	29.39	0.00	51.8
		#40	9.59	0.00	38.6
		#60	22.81	0.00	7.3
		#120	2.62	0.00	3.7
		#200	0.10	0.00	3.6
		#230	0.03	0.00	3.5

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 3.5
Weight of hydrometer sample =42.92
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0035	1.0037	0.0134	3.5	15.4	0.0372	0.5
5.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0235	0.5
15.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0136	0.5
30.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0096	0.5
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	0.5
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	0.5
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	0.4

Fractional Components

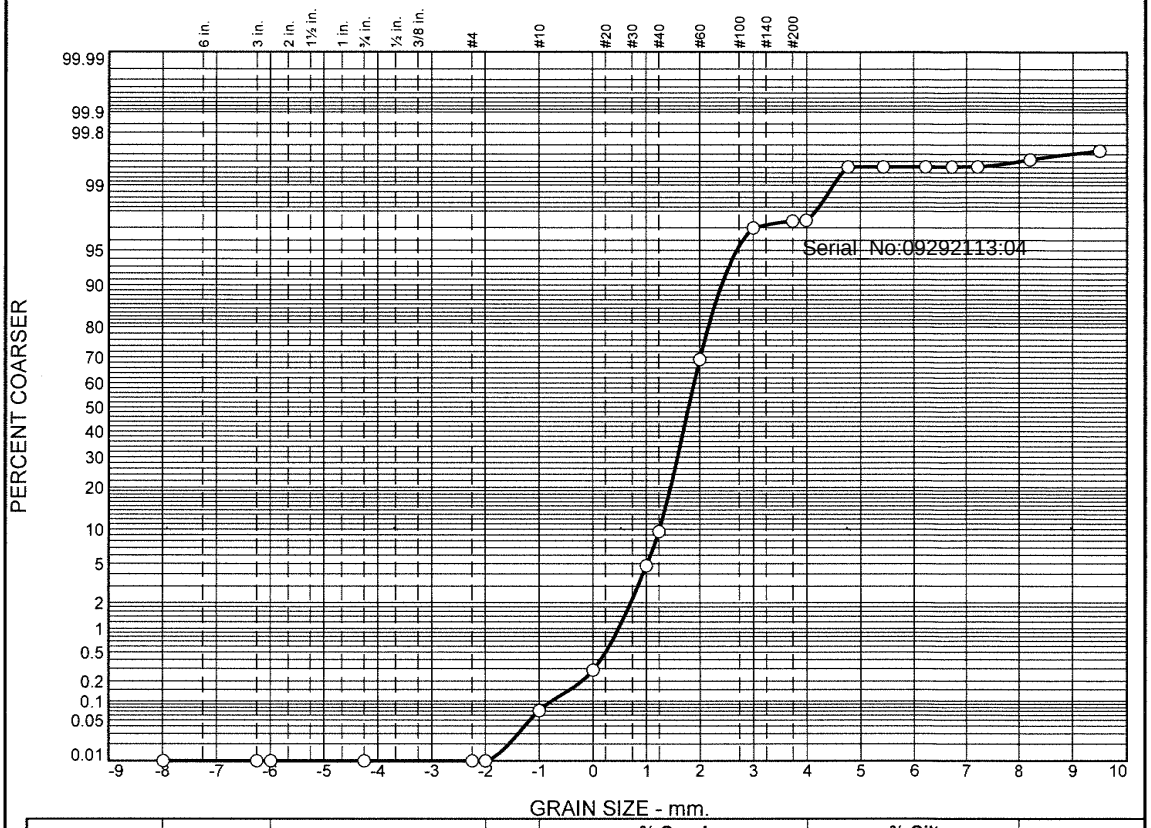
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.0	6.9	40.3	44.5	3.6	0.2	95.5	3.0	0.0	0.0	0.0	3.0	0.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.2125	0.2754	0.3089	0.3357	0.3833	0.4322	0.4891	0.5525	0.7286	0.8032	0.9195	1.2009

Fineness Modulus	C_u	C_c
2.22	2.01	0.97

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.2	4.5	64.3	27.9	0.5	1.9	0.0	0.0	0.1	0.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3867	0.3088	0.2883	0.2481	0.2084	0.1882	1.06	1.64

	Material Description	USCS	AASHTO
○		SP	

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|610|SED|01 **Sample No.:** L2146075-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|610|SED|01
Sample Number: L2146075-05
USCS Classification: SP

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 56.16
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:09292113:04

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
56.16	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.04	0.00	99.9
		#18	0.12	0.00	99.7
		#35	2.53	0.00	95.2
		#40	2.68	0.00	90.4
		#60	33.46	0.00	30.9
		#120	15.64	0.00	3.0
		#200	0.26	0.00	2.5
		#230	0.03	0.00	2.5

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 2.5
Weight of hydrometer sample =35.13
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	0.6
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	0.6
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	0.6
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	0.6
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	0.6
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	0.5
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	0.4

Fractional Components

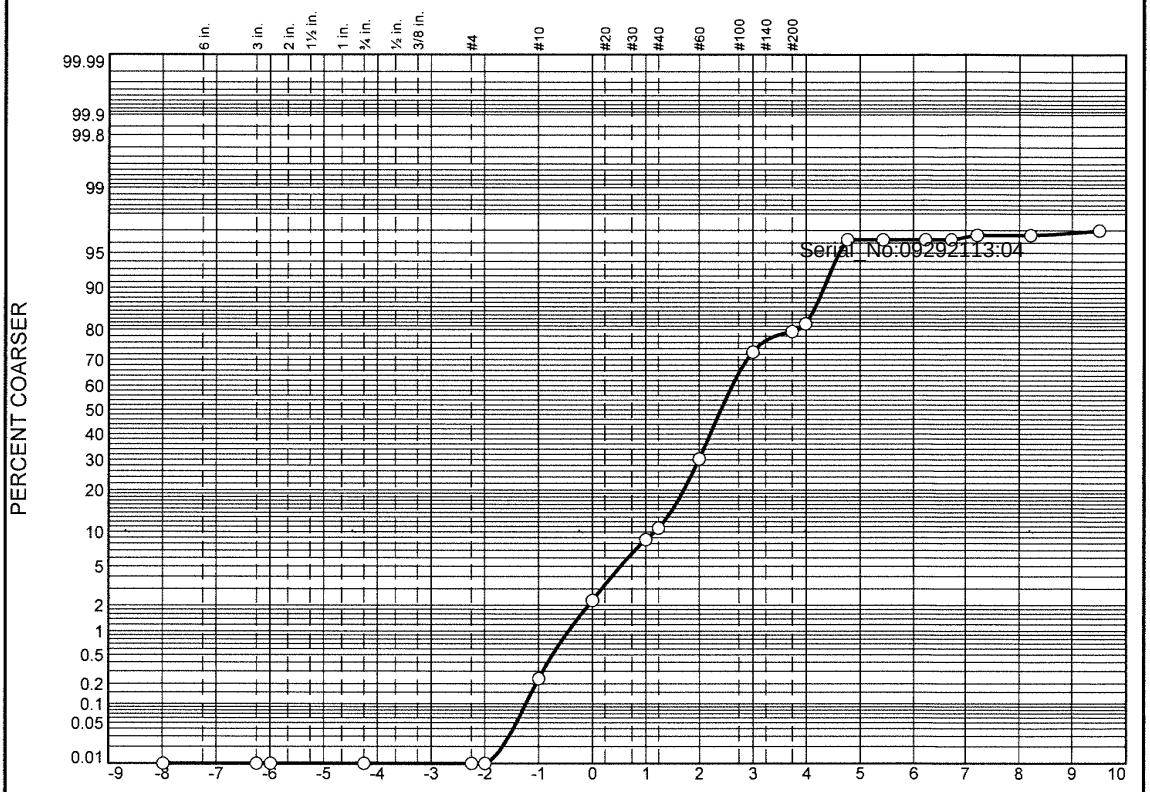
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.2	4.5	64.3	27.9	0.5	97.4	1.9	0.0	0.0	0.1	2.0	0.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1546	0.1882	0.2084	0.2238	0.2481	0.2687	0.2883	0.3088	0.3642	0.3867	0.4209	0.4948

Fineness Modulus	C_u	C_c
1.42	1.64	1.06

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	2.1	6.3	21.7	42.5	9.1	14.4	0.0	0.2	0.1	3.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3505	0.2164	0.1886	0.1349	0.0567	0.0495	1.70	4.37

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|612|SED|01 **Sample No.:** L2146075-06

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|612|SED|01

Sample Number: L2146075-06

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 80.19
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
80.19	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.19	0.00	99.8
		#18	1.62	0.00	97.7
		#35	5.12	0.00	91.4
		#40	1.66	0.00	89.3
		#60	15.69	0.00	69.7
		#120	34.11	0.00	27.2
		#200	5.33	0.00	20.5
		#230	1.77	0.00	18.3

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 18.3
Weight of hydrometer sample =40.80
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	3.7
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	3.7
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	3.7
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	3.7
60.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0067	3.4
240.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0034	3.4
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	3.0

Fractional Components

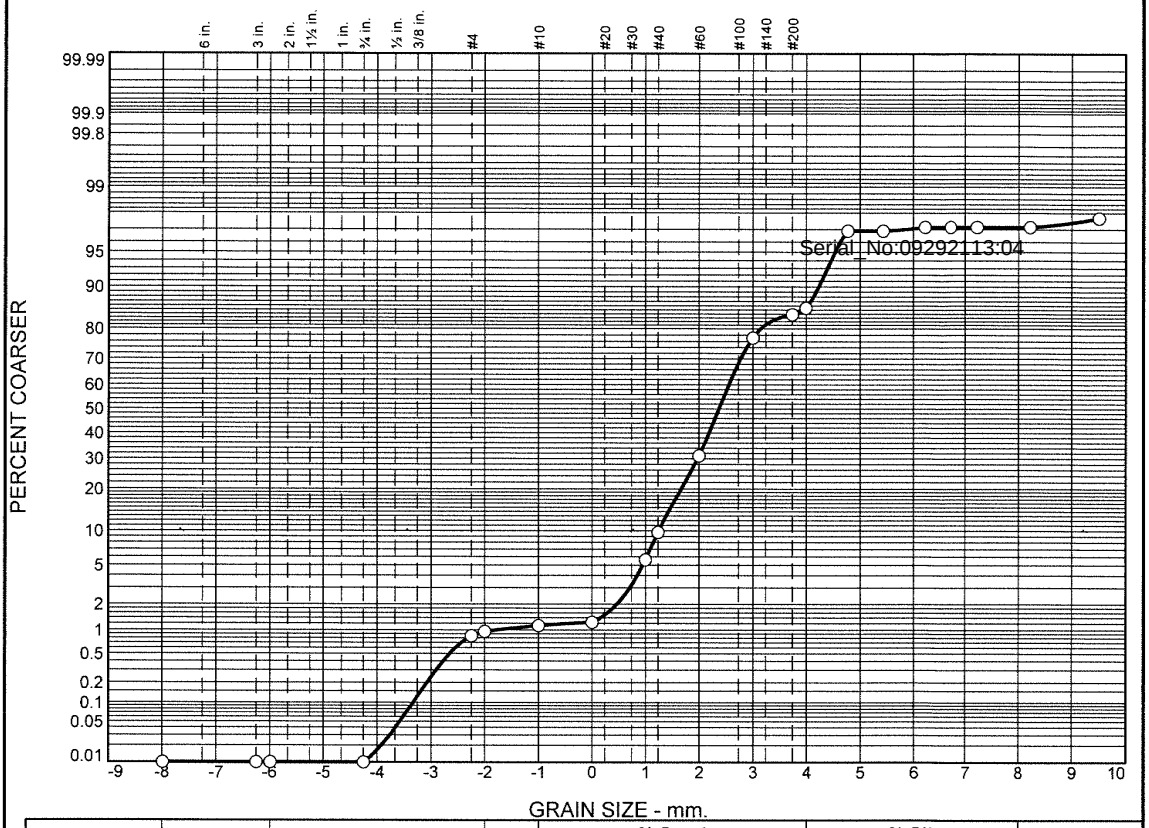
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	2.1	6.3	21.7	42.5	9.1	81.7	14.4	0.0	0.2	0.1	14.7	3.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0408	0.0495	0.0567	0.0698	0.1349	0.1629	0.1886	0.2164	0.3046	0.3505	0.4465	0.6972

Fineness Modulus	C_u	C_c
0.94	4.37	1.70

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.0	0.1	0.1	4.4	25.5	46.0	8.5	11.3	0.2	0.1		2.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3595	0.2194	0.1931	0.1461	0.0649	0.0531	1.83	4.14

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|614|SED|01 **Sample No.:** L2146075-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|614|SED|01

Sample Number: L2146075-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 88.74
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
88.74	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.75	0.00	99.2
		#5	0.10	0.00	99.0
		#10	0.15	0.00	98.9
		#18	0.10	0.00	98.8
		#35	3.90	0.00	94.4
		#40	3.61	0.00	90.3
		#60	18.98	0.00	68.9
		#120	40.87	0.00	22.9
		#200	5.94	0.00	16.2
		#230	1.46	0.00	14.5

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.5
Weight of hydrometer sample =42.53
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0366	3.1
5.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0231	3.1
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	2.8
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	2.8
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	2.8
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	2.8
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	2.3

Fractional Components

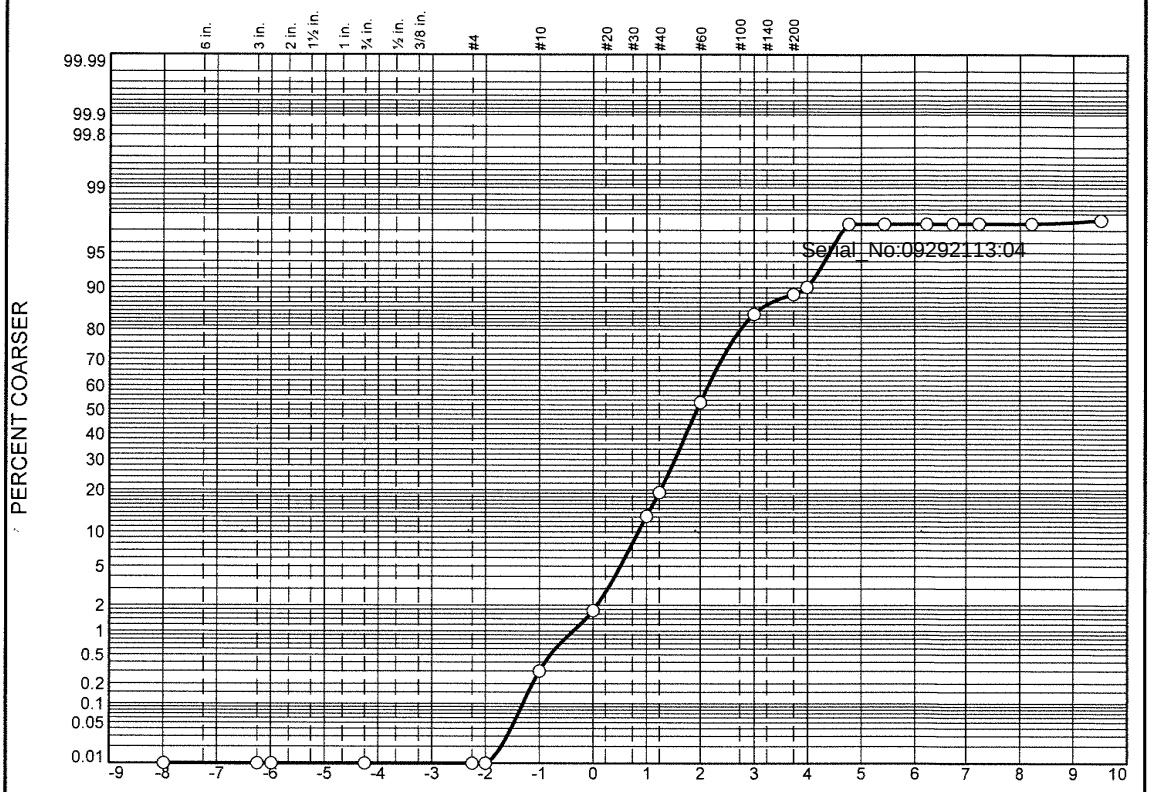
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.0	0.1	0.1	4.4	25.5	46.0	8.5	84.5	11.3	0.2	0.1		11.6	2.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0432	0.0531	0.0649	0.1127	0.1461	0.1699	0.1931	0.2194	0.3137	0.3595	0.4207	0.5181

Fineness Modulus	C_u	C_c
0.97	4.14	1.83

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	1.4	11.5	39.8	31.2	6.0	7.2	0.0	0.0	0.0	2.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4735	0.2996	0.2609	0.1900	0.1191	0.0633	1.91	4.74

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|616|SED|01 **Sample No.:** L2146075-08

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|616|SED|01

Sample Number: L2146075-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.38
Tare Wt. = 0.00

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.28	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.10	0.00	99.7
		#18	0.48	0.00	98.3
		#35	3.80	0.00	86.8
		#40	2.01	0.00	80.8
		#60	11.26	0.00	47.0
		#120	10.37	0.00	15.8
		#200	1.50	0.00	11.3
		#230	0.45	0.00	9.9

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.9
Weight of hydrometer sample =35.27
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0366	2.6
5.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0231	2.6
15.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0134	2.6
30.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0094	2.6
60.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0067	2.6
240.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0033	2.6
1440.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0014	2.3

Fractional Components

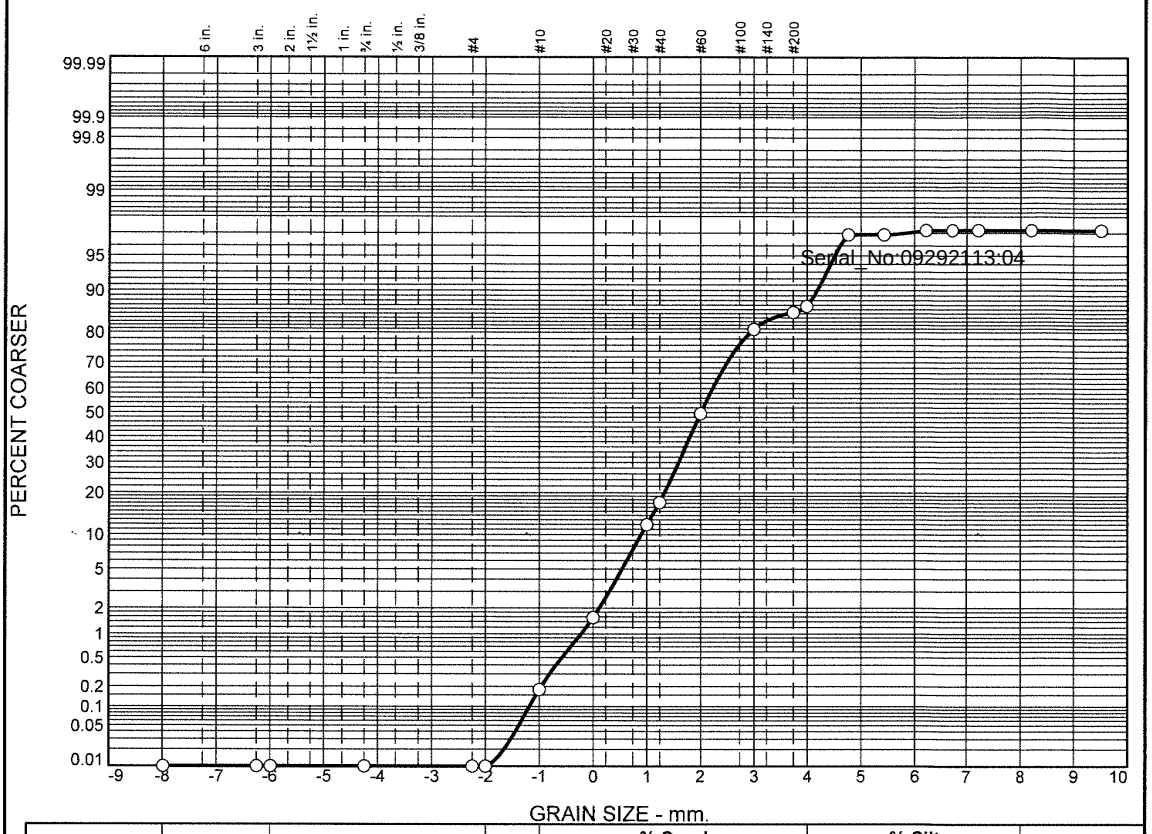
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	1.4	11.5	39.8	31.2	6.0	89.9	7.2	0.0	0.0	0.0	7.2	2.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0471	0.0633	0.1191	0.1487	0.1900	0.2256	0.2609	0.2996	0.4174	0.4735	0.5555	0.7016

Fineness Modulus	C_u	C_c
1.29	4.74	1.91

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	1.4	10.4	37.5	31.4	6.0	10.0	0.2	0.1	0.0	2.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4526	0.2860	0.2482	0.1763	0.0814	0.0546	1.99	5.24

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|616|SED|01 **Sample No.:** WG1548338-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|616|SED|01

Sample Number: WG1548338-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.37
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.37	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.06	0.00	99.8
		#18	0.46	0.00	98.4
		#35	3.47	0.00	88.0
		#40	1.77	0.00	82.7
		#60	10.76	0.00	50.5
		#120	10.46	0.00	19.1
		#200	1.50	0.00	14.7
		#230	0.48	0.00	13.2

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.2
Weight of hydrometer sample =35.22
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	3.1
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	3.1
15.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0135	2.8
30.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0095	2.8
60.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0067	2.8
240.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0034	2.8
1440.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0014	2.8

Fractional Components

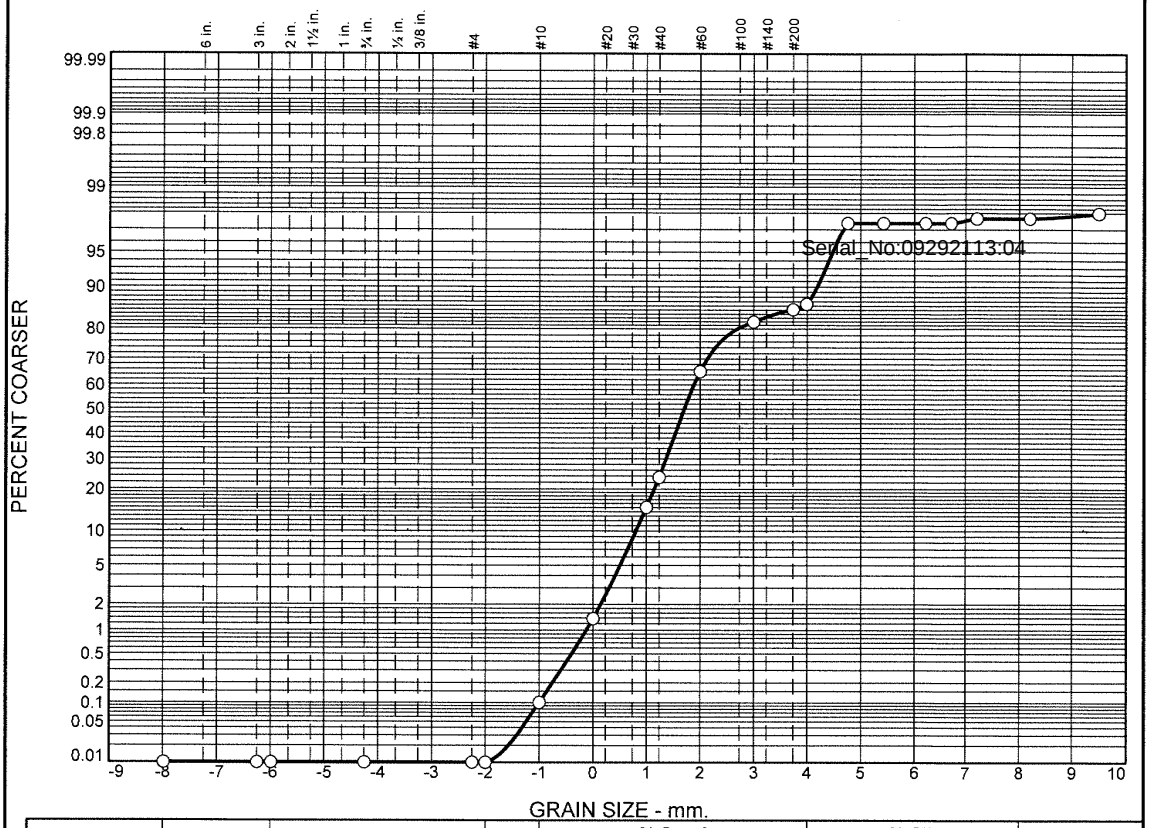
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	1.4	10.4	37.5	31.4	6.0	86.7	10.0	0.2	0.1	0.0	10.3	2.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0437	0.0546	0.0814	0.1303	0.1763	0.2129	0.2482	0.2860	0.3983	0.4526	0.5377	0.6877

Fineness Modulus	C_u	C_c
1.21	5.24	1.99

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	1.3	13.7	50.1	16.8	4.6	10.8	0.0	0.2	0.1	2.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5009	0.3438	0.3066	0.2282	0.0783	0.0546	2.77	6.29

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|618|SED|01 **Sample No.:** L2146075-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|618|SED|01

Sample Number: L2146075-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 39.45
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
39.45	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.04	0.00	99.9
		#18	0.50	0.00	98.6
		#35	5.41	0.00	84.9
		#40	3.37	0.00	76.4
		#60	16.42	0.00	34.8
		#120	6.59	0.00	18.0
		#200	1.26	0.00	14.9
		#230	0.51	0.00	13.6

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.6
Weight of hydrometer sample =39.53
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0369	2.6
5.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0233	2.6
15.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0135	2.6
30.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0095	2.6
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	2.3
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	2.3
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	2.0

Fractional Components

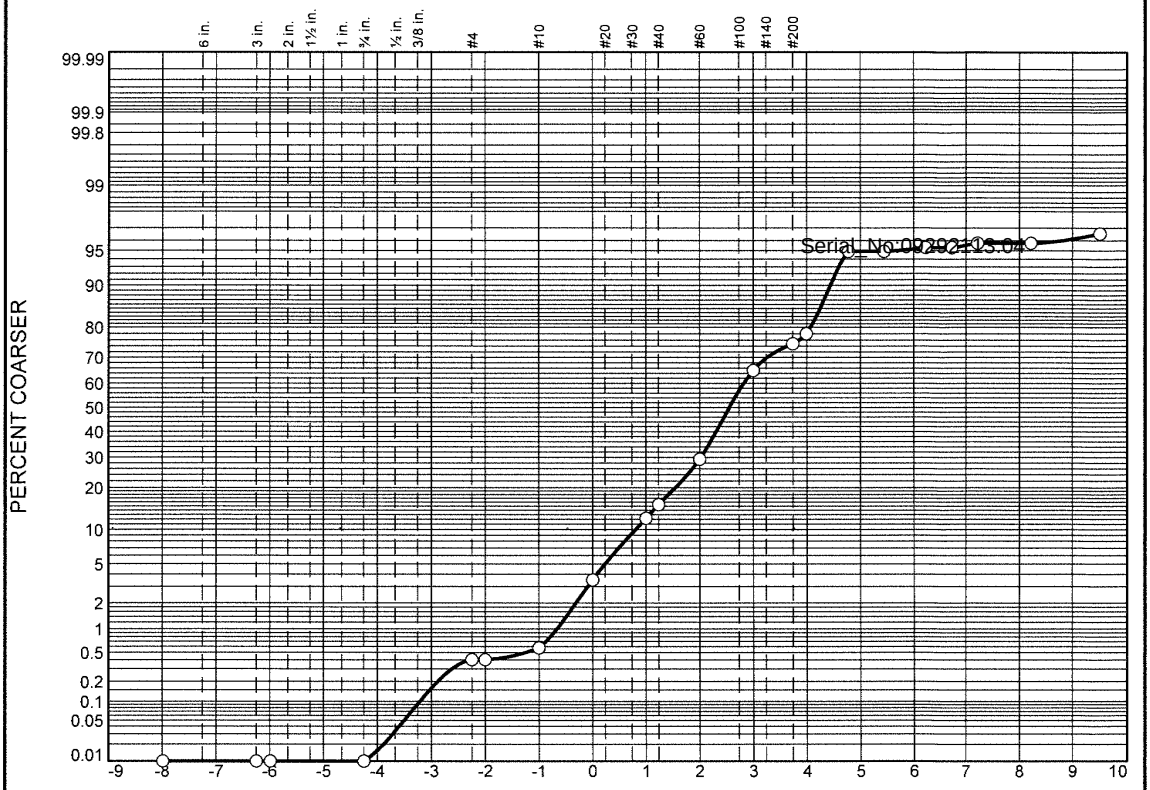
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	1.3	13.7	50.1	16.8	4.6	86.5	10.8	0.0	0.2	0.1	11.1	2.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0450	0.0546	0.0783	0.1531	0.2282	0.2706	0.3066	0.3438	0.4520	0.5009	0.5723	0.7027

Fineness Modulus	C_u	C_c
1.42	6.29	2.77

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.2	2.9	8.7	17.2	35.7	13.2	16.6	0.3	0.4	0.1	4.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4334	0.2018	0.1699	0.1045	0.0526	0.0461	1.17	4.37

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|620|SED|01 **Sample No.:** L2146075-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|620|SED|01

Sample Number: L2146075-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 74.50
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
74.50	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.30	0.00	99.6
		#5	0.00	0.00	99.6
		#10	0.13	0.00	99.4
		#18	2.19	0.00	96.5
		#35	6.49	0.00	87.8
		#40	2.36	0.00	84.6
		#60	10.43	0.00	70.6
		#120	26.59	0.00	34.9
		#200	7.25	0.00	25.2
		#230	2.38	0.00	22.0

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 22.0
Weight of hydrometer sample =42.78
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	5.1
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	5.1
15.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0134	4.7
30.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0094	4.7
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	4.3
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	4.3
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	3.4

Fractional Components

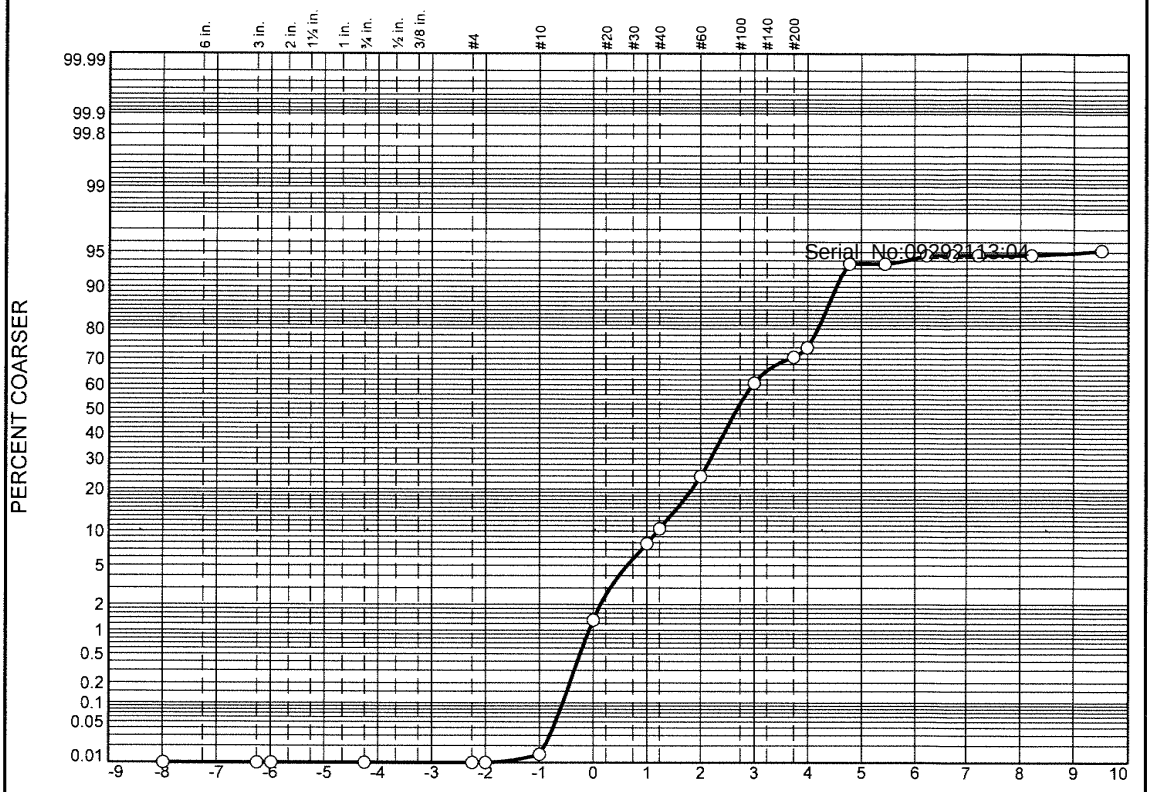
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	0.2	2.9	8.7	17.2	35.7	13.2	77.7	16.6	0.3	0.4	0.1	17.4	4.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0196	0.0461	0.0526	0.0594	0.1045	0.1411	0.1699	0.2018	0.3416	0.4334	0.5714	0.8522

Fineness Modulus	C_u	C_c
0.93	4.37	1.17

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.0	1.3	6.6	16.0	36.8	13.6	19.3	0.7	0.4		5.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3356	0.1841	0.1557	0.0798	0.0492	0.0432	0.80	4.26

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|620|SED|02 **Sample No.:** L2146075-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|620|SED|02

Sample Number: L2146075-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 71.45
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
71.45	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.01	0.00	100.0
		#18	0.94	0.00	98.7
		#35	4.66	0.00	92.1
		#40	1.82	0.00	89.6
		#60	9.66	0.00	76.1
		#120	26.26	0.00	39.3
		#200	7.18	0.00	29.3
		#230	2.34	0.00	26.0

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 26.0
Weight of hydrometer sample =40.32
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	6.4
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	6.4
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	5.3
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	5.3
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	5.3
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	5.3
1440.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0014	4.8

Alpha Analytical

Fractional Components

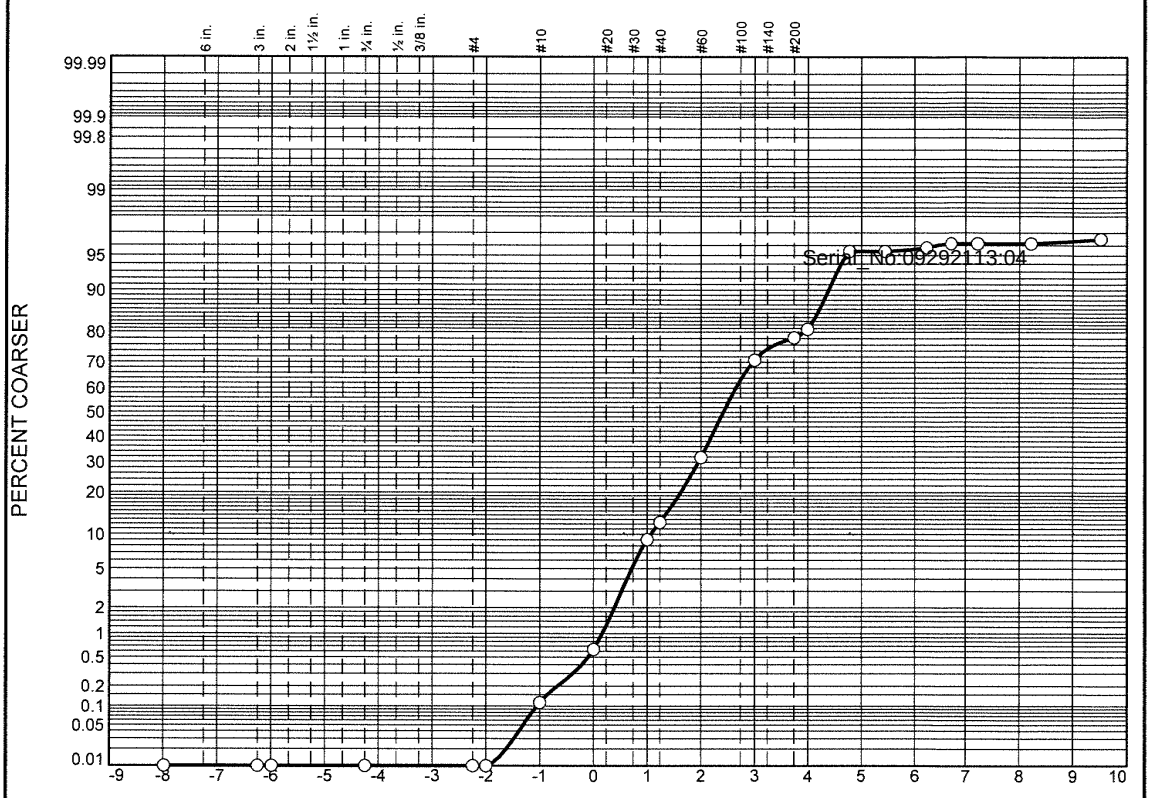
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.0	1.3	6.6	16.0	36.8	13.6	74.3	19.3	0.7	0.4		20.4	5.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0018	0.0432	0.0492	0.0547	0.0798	0.1272	0.1557	0.1841	0.2786	0.3356	0.4350	0.6452

Fineness Modulus	C_u	C_c
0.76	4.26	0.80

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.5	8.4	22.8	39.0	10.2	14.4	0.2	0.6		3.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3804	0.2180	0.1871	0.1280	0.0553	0.0479	1.57	4.55

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|622|SED|01 **Sample No.:** L2146075-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|622|SED|01

Sample Number: L2146075-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 61.59
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
61.59	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.07	0.00	99.9
		#18	0.32	0.00	99.4
		#35	5.18	0.00	91.0
		#40	2.03	0.00	87.7
		#60	11.96	0.00	68.2
		#120	24.04	0.00	29.2
		#200	4.60	0.00	21.7
		#230	1.57	0.00	19.2

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 19.2
Weight of hydrometer sample =41.35
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	4.6
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	4.6
15.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0134	4.2
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	3.8
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	3.8
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	3.8
1440.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0014	3.5

Fractional Components

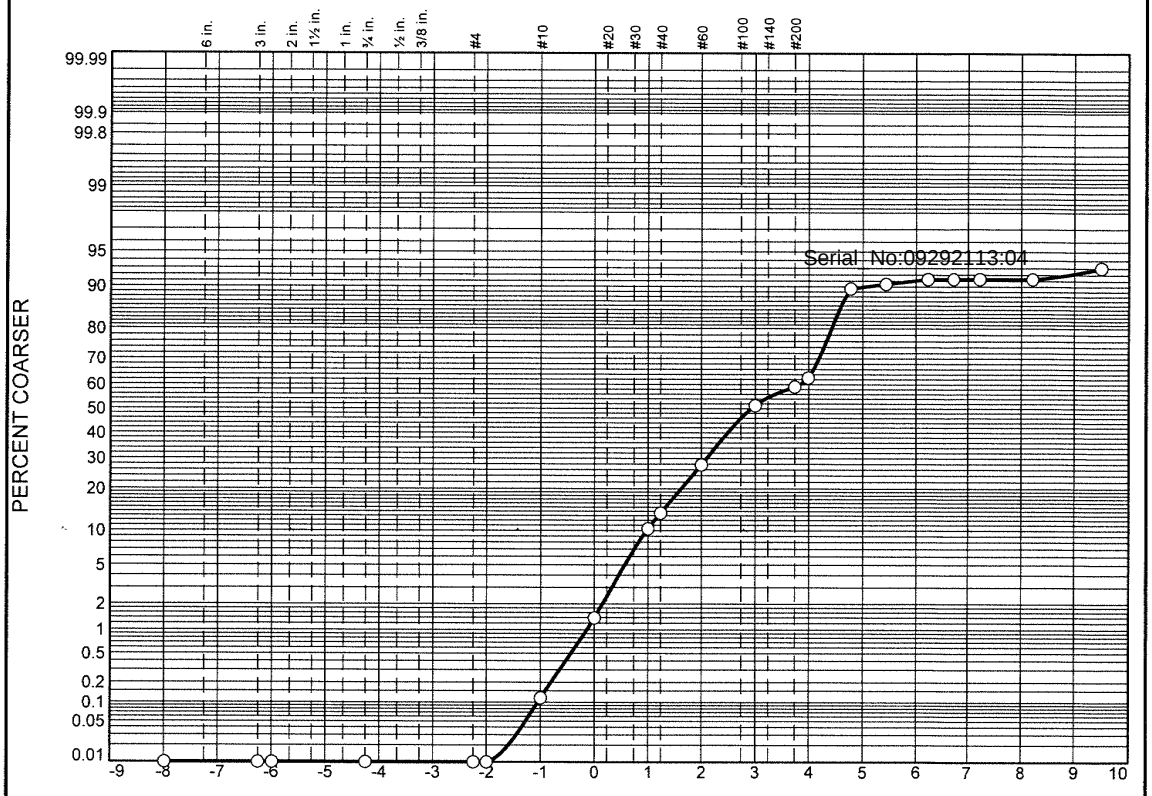
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.5	8.4	22.8	39.0	10.2	80.9	14.4	0.2	0.6		15.2	3.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0380	0.0479	0.0553	0.0654	0.1280	0.1591	0.1871	0.2180	0.3240	0.3804	0.4770	0.6103

Fineness Modulus	C_u	C_c
0.92	4.55	1.57

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	1.3	8.9	17.4	23.6	11.6	27.0	1.2	0.2		8.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3983	0.1779	0.1313	0.0547	0.0422	0.0294	0.57	6.05

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|624|SED|01 **Sample No.:** L2146075-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|624|SED|01

Sample Number: L2146075-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 68.58
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.58	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.08	0.00	99.9
		#18	0.87	0.00	98.6
		#35	6.14	0.00	89.7
		#40	2.24	0.00	86.4
		#60	9.65	0.00	72.3
		#120	16.17	0.00	48.7
		#200	5.33	0.00	41.0
		#230	2.47	0.00	37.4

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 37.4
Weight of hydrometer sample =35.44
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	10.4
5.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0231	9.6
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	8.7
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	8.7
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	8.7
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	8.7
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	7.0

Alpha Analytical

Fractional Components

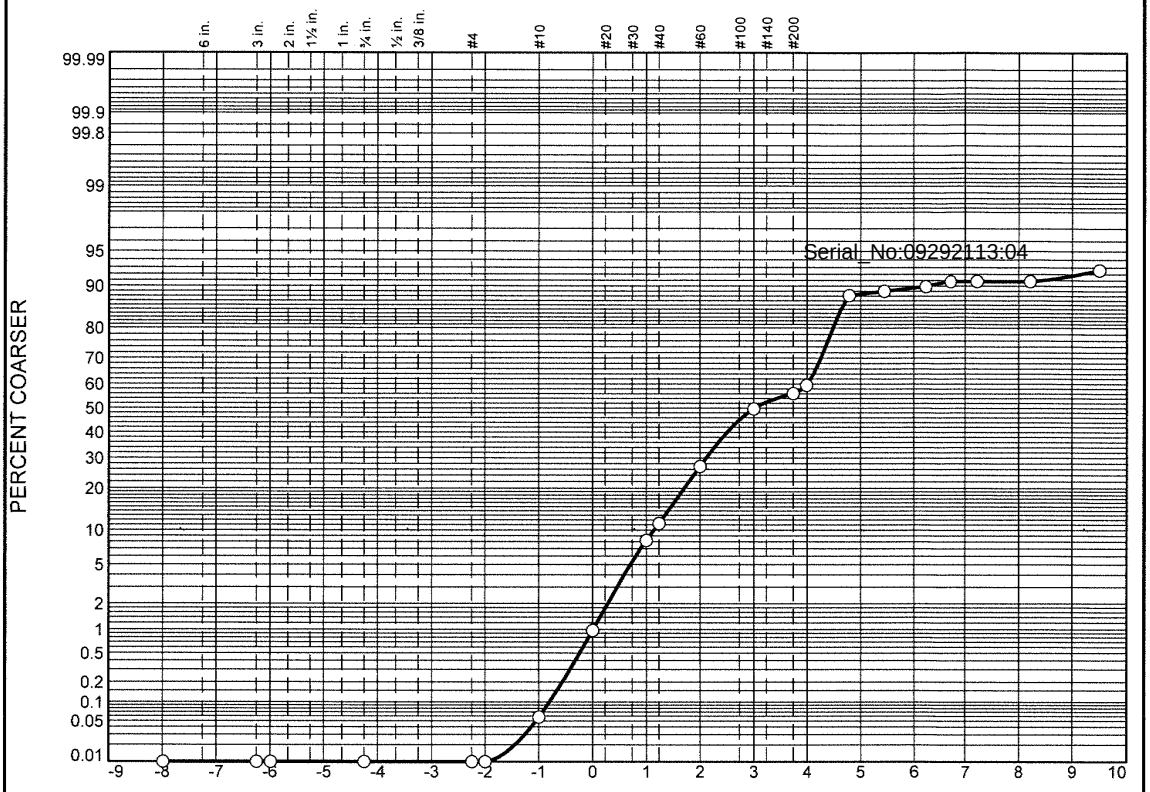
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	1.3	8.9	17.4	23.6	11.6	62.8	27.0	1.2	0.2		28.4	8.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0294	0.0422	0.0466	0.0547	0.0698	0.1313	0.1779	0.3239	0.3983	0.5086	0.6747

Fineness Modulus	C_u	C_c
0.76	6.05	0.57

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.9	7.2	18.8	22.7	10.1	28.6	1.3	1.1		9.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.3629	0.1757	0.1231	0.0522	0.0402	0.0130	1.20	13.56

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|626|SED|01 **Sample No.:** L2146075-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|626|SED|01

Sample Number: L2146075-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 51.58
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
51.58	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.03	0.00	99.9
		#18	0.47	0.00	99.0
		#35	3.74	0.00	91.8
		#40	1.57	0.00	88.7
		#60	8.13	0.00	73.0
		#120	11.69	0.00	50.3
		#200	3.30	0.00	43.9
		#230	1.75	0.00	40.5

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 40.5
Weight of hydrometer sample =36.39
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0362	11.9
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	11.0
15.00	21.3	1.0055	1.0057	0.0134	5.5	14.8	0.0134	10.1
30.00	21.3	1.0050	1.0052	0.0134	5.0	15.0	0.0095	9.2
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	9.2
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	9.2
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	7.4

Alpha Analytical

Fractional Components

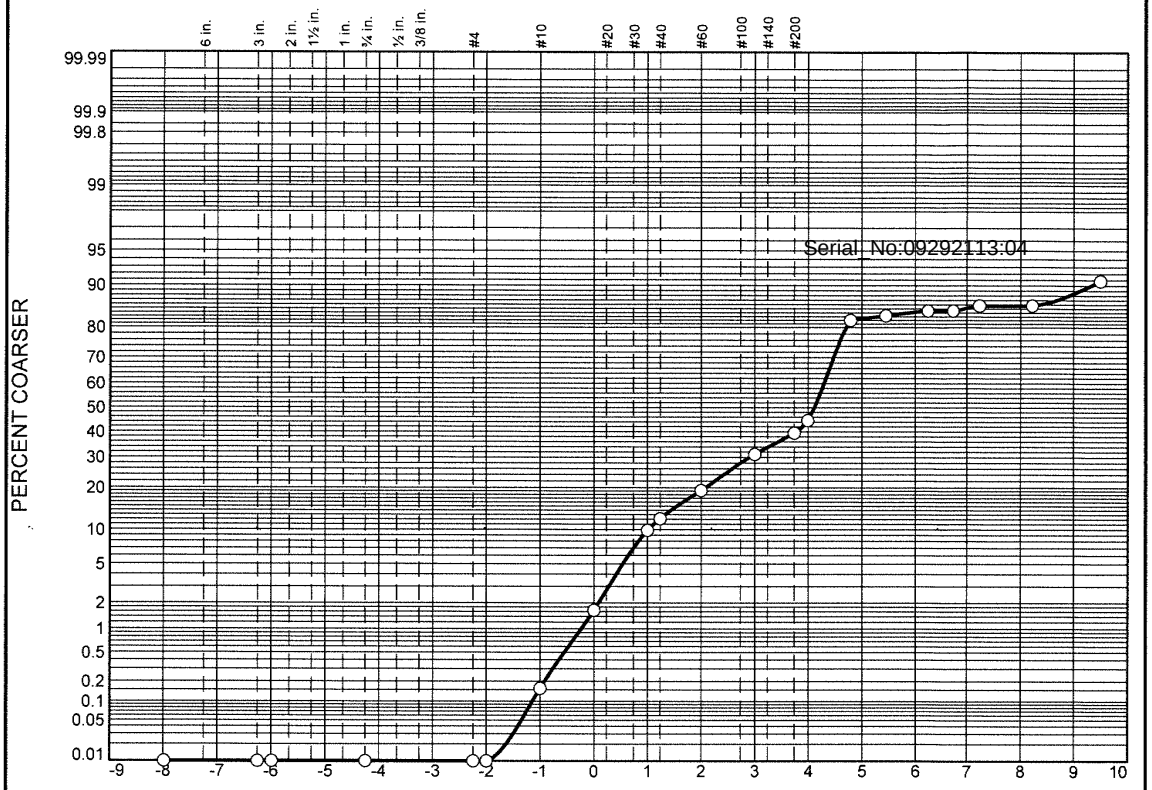
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.9	7.2	18.8	22.7	10.1	59.7	28.6	1.3	1.1		31.0	9.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0130	0.0402	0.0446	0.0522	0.0622	0.1231	0.1757	0.3062	0.3629	0.4530	0.6141

Fineness Modulus	C_u	C_c
0.72	13.56	1.20

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	1.4	8.2	9.3	12.0	13.9	37.5	1.7	1.0	0.6	14.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3408	0.0731	0.0576	0.0450	0.0082	0.0016	17.72	46.71

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|628|SED|01 **Sample No.:** L2146075-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|628|SED|01

Sample Number: L2146075-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 57.69
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
57.69	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.09	0.00	99.8
		#18	0.86	0.00	98.4
		#35	4.72	0.00	90.2
		#40	1.33	0.00	87.9
		#60	4.03	0.00	80.9
		#120	6.94	0.00	68.9
		#200	4.81	0.00	60.5
		#230	2.96	0.00	55.4

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 55.4
Weight of hydrometer sample =35.39
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0070	1.0071	0.0134	7.0	14.4	0.0361	18.0
5.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0229	16.7
15.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0133	15.5
30.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0094	15.5
60.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0067	14.2
240.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0033	14.2
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	9.2

Alpha Analytical

Fractional Components

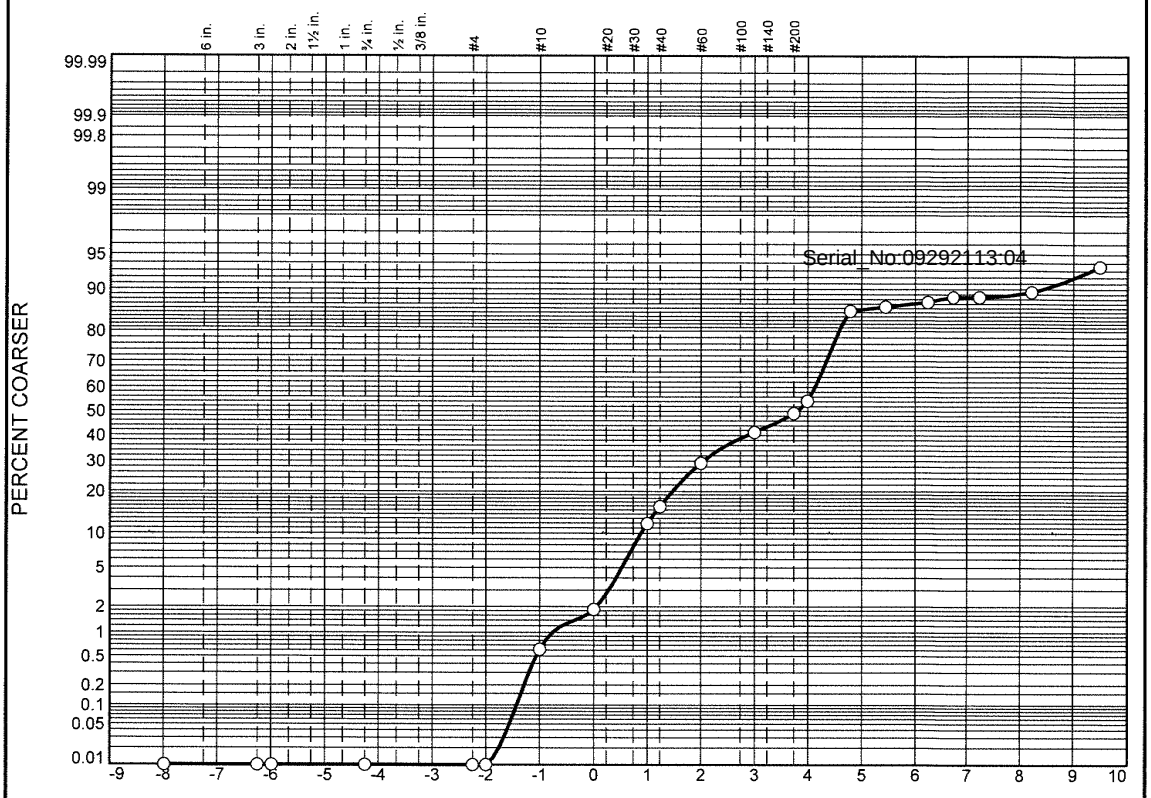
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	1.4	8.2	9.3	12.0	13.9	44.8	37.5	1.7	1.0	0.6	40.8	14.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0016	0.0082	0.0382	0.0450	0.0508	0.0576	0.0731	0.2359	0.3408	0.4944	0.6878

Fineness Modulus	C_u	C_c
0.53	46.71	17.72

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.6	1.3	10.0	17.4	12.0	13.3	31.1	1.4	1.3	0.7	10.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4392	0.1372	0.0719	0.0492	0.0366	0.0029	6.08	47.27

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|630|SED|01 **Sample No.:** L2146075-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|630|SED|01

Sample Number: L2146075-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 70.33
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
70.33	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.43	0.00	99.4
		#18	0.88	0.00	98.1
		#35	7.06	0.00	88.1
		#40	2.74	0.00	84.2
		#60	9.48	0.00	70.7
		#120	8.43	0.00	58.7
		#200	5.52	0.00	50.9
		#230	3.62	0.00	45.7

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 45.7
Weight of hydrometer sample =35.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0070	1.0071	0.0134	7.0	14.4	0.0361	14.7
5.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0229	13.6
15.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0133	12.6
30.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0094	11.6
60.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0067	11.6
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	10.6
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	6.5

Fractional Components

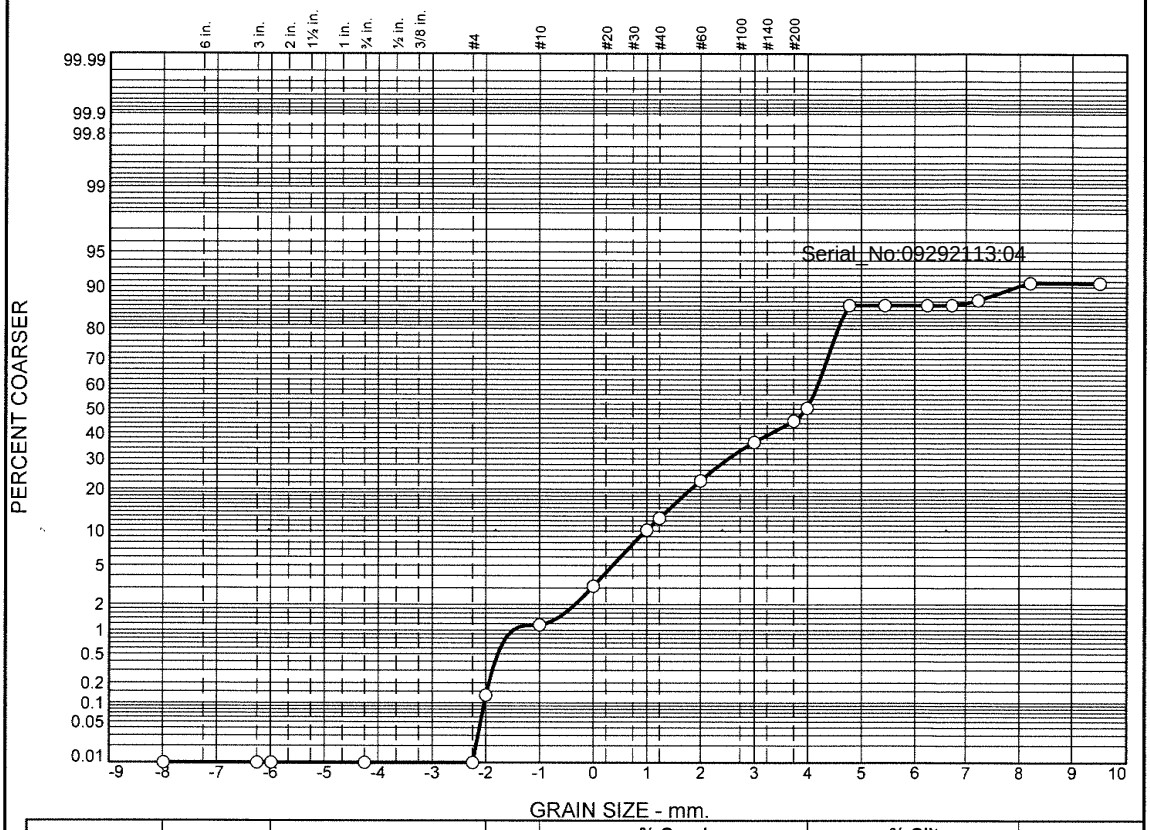
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.6	1.3	10.0	17.4	12.0	13.3	54.0	31.1	1.4	1.3	0.7	34.5	10.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0029	0.0366	0.0418	0.0492	0.0568	0.0719	0.1372	0.3601	0.4392	0.5411	0.6949

Fineness Modulus	C_u	C_c
0.73	47.27	6.08

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	1.1	1.9	7.1	12.4	13.7	14.5	35.4	0.0	0.4	3.6	9.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3666	0.1001	0.0635	0.0486	0.0379	0.0040	5.83	24.73

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|632|SED|01 **Sample No.:** L2146075-17

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|632|SED|01

Sample Number: L2146075-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 53.54
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
53.54	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.07	0.00	99.9
		#10	0.55	0.00	98.8
		#18	1.05	0.00	96.9
		#35	3.77	0.00	89.8
		#40	1.27	0.00	87.5
		#60	5.37	0.00	77.4
		#120	7.37	0.00	63.7
		#200	4.67	0.00	54.9
		#230	2.85	0.00	49.6

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 49.6
Weight of hydrometer sample =35.47
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	13.8
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	13.8
15.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0133	13.8
30.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0094	13.8
60.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0067	12.7
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	9.3
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	9.3

Alpha Analytical

Fractional Components

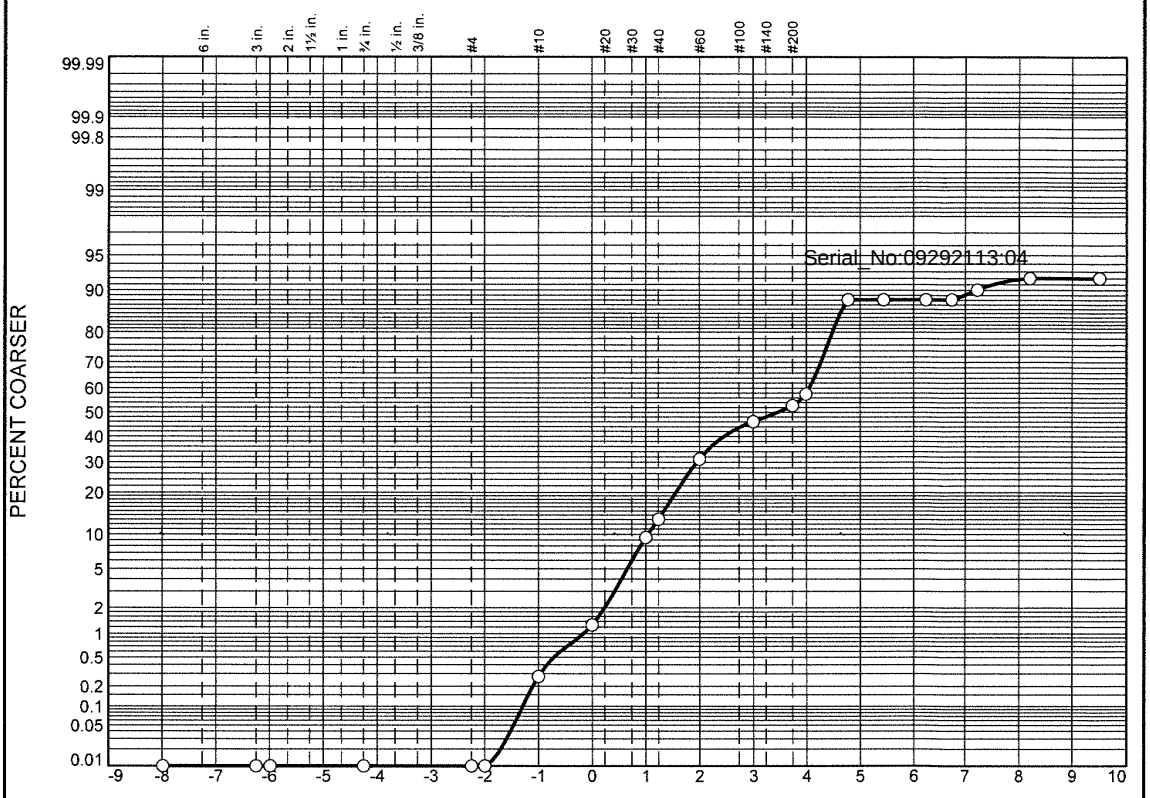
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	1.1	1.9	7.1	12.4	13.7	14.5	49.6	35.4	0.0	0.4	3.6	39.4	9.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0040	0.0379	0.0422	0.0486	0.0547	0.0635	0.1001	0.2828	0.3666	0.5058	0.7783

Fineness Modulus	C_u	C_c
0.63	24.73	5.83

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	1.0	8.1	21.7	15.0	11.9	30.1	0.0	1.0	2.7	8.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3955	0.1820	0.0903	0.0519	0.0404	0.0068	2.18	26.91

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|634|SED|01 **Sample No.:** L2146075-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|634|SED|01

Sample Number: L2146075-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 61.96
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
61.96	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.17	0.00	99.7
		#18	0.62	0.00	98.7
		#35	5.04	0.00	90.6
		#40	2.26	0.00	86.9
		#60	11.20	0.00	68.9
		#120	9.27	0.00	53.9
		#200	4.14	0.00	47.2
		#230	2.99	0.00	42.4

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 42.4
Weight of hydrometer sample =35.24
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	11.9
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	11.9
15.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0133	11.9
30.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0094	11.9
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	10.0
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	8.0
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	8.0

Fractional Components

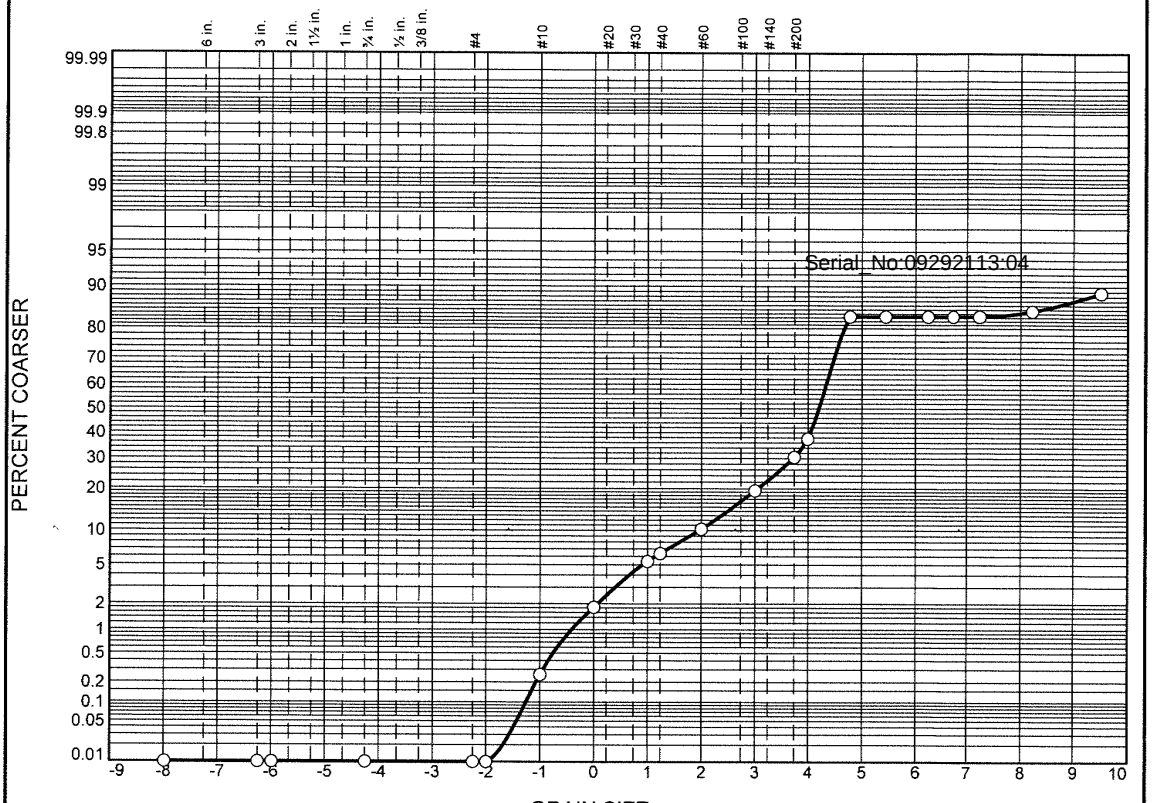
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	1.0	8.1	21.7	15.0	11.9	57.7	30.1	0.0	1.0	2.7	33.8	8.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0068	0.0404	0.0447	0.0519	0.0601	0.0903	0.1820	0.3386	0.3955	0.4861	0.6351

Fineness Modulus	C_u	C_c
0.75	26.91	2.18

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	1.5	3.6	4.8	9.1	18.6	45.4	0.0	0.0	0.9	15.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.1653	0.0607	0.0543	0.0448	0.0030			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|636|SED|01 **Sample No.:** L2146075-19

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|636|SED|01

Sample Number: L2146075-19

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 58.76
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
58.76	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.15	0.00	99.7
		#18	0.92	0.00	98.2
		#35	2.10	0.00	94.6
		#40	0.57	0.00	93.6
		#60	2.27	0.00	89.8
		#120	5.36	0.00	80.7
		#200	6.51	0.00	69.6
		#230	4.12	0.00	62.6

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 62.6
Weight of hydrometer sample =36.97
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	16.7
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	16.7
15.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0133	16.7
30.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0094	16.7
60.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0066	16.7
240.00	21.3	1.0055	1.0056	0.0134	5.5	14.8	0.0033	15.4
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	11.3

Alpha Analytical

Fractional Components

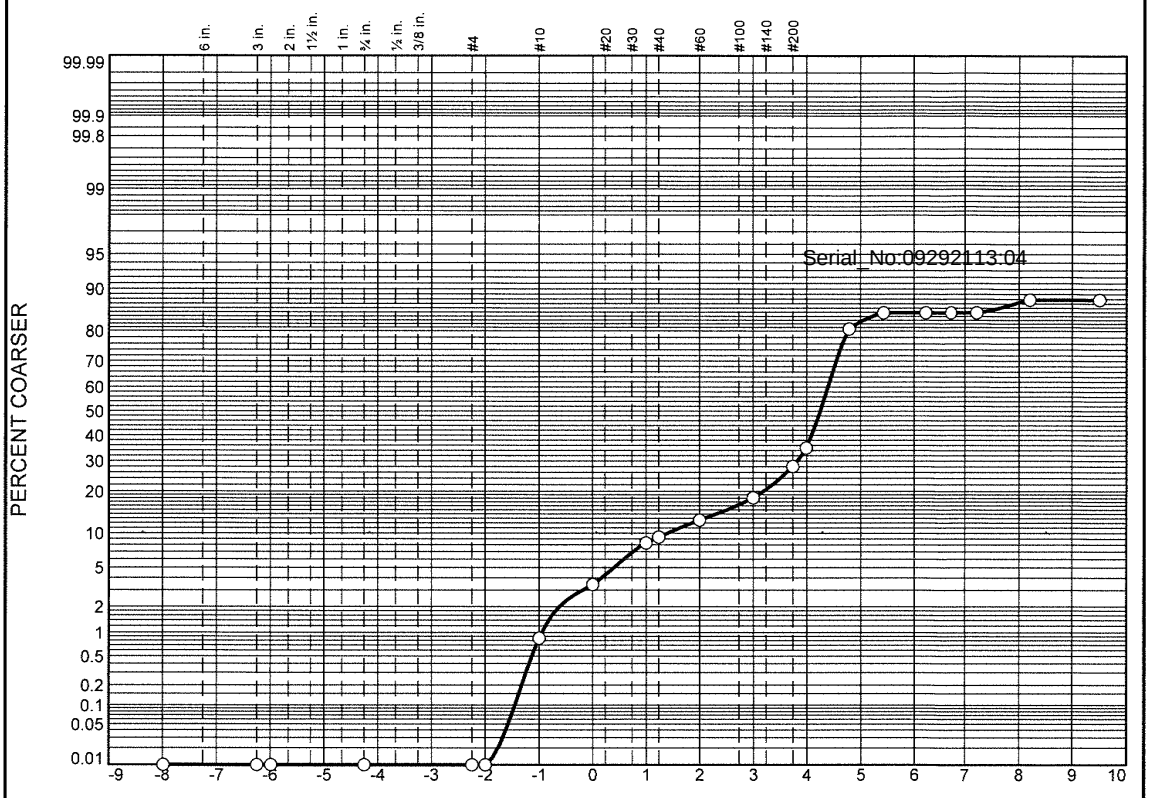
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	1.5	3.6	4.8	9.1	18.6	37.6	45.4	0.0	0.0	0.9	46.3	15.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0030	0.0392	0.0448	0.0495	0.0543	0.0607	0.1204	0.1653	0.2564	0.5338

Fineness Modulus
0.31

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.9	2.5	4.9	4.3	5.6	17.3	47.1	2.3	0.0	2.4	12.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1746	0.0586	0.0525	0.0428	0.0065			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|638|SED|01 **Sample No.:** L2146075-20

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|638|SED|01

Sample Number: L2146075-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 43.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
43.42	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.37	0.00	99.1
		#18	1.12	0.00	96.6
		#35	2.12	0.00	91.7
		#40	0.43	0.00	90.7
		#60	1.44	0.00	87.4
		#120	2.41	0.00	81.8
		#200	4.31	0.00	71.9
		#230	2.99	0.00	65.0

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 65.0
Weight of hydrometer sample =35.69
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0362	19.5
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	15.1
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	15.1
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	15.1
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	15.1
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	12.1
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	12.1

Fractional Components

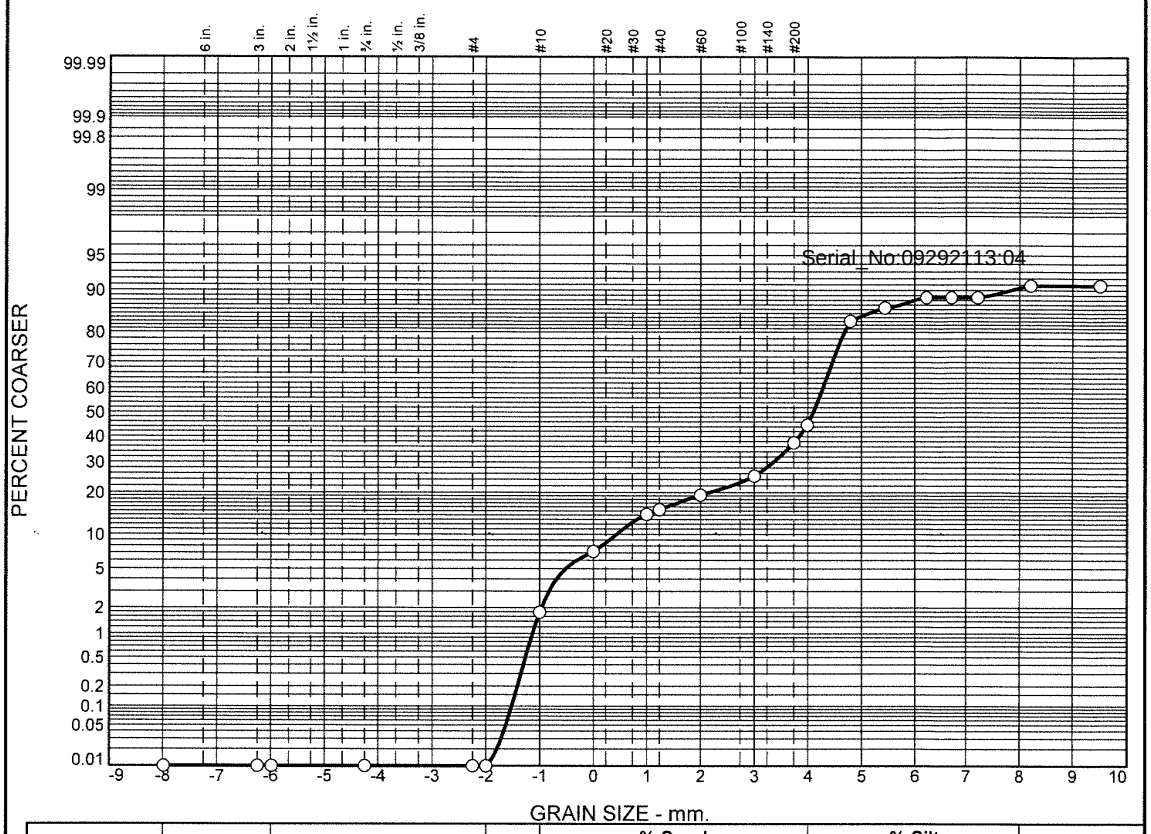
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.9	2.5	4.9	4.3	5.6	17.3	34.6	47.1	2.3	0.0	2.4	51.8	12.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0065	0.0367	0.0428	0.0476	0.0525	0.0586	0.1095	0.1746	0.3779	0.7572

Fineness Modulus
0.38

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.8	5.4	7.0	5.0	6.0	20.0	39.1	3.7	0.6	1.8	9.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4479	0.0697	0.0582	0.0456	0.0285	0.0044	6.83	16.00

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|640|SED|01 **Sample No.:** L2146075-21

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|640|SED|01

Sample Number: L2146075-21

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 40.10
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
40.10	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.71	0.00	98.2
		#18	2.17	0.00	92.8
		#35	2.82	0.00	85.8
		#40	0.45	0.00	84.7
		#60	1.56	0.00	80.8
		#120	2.39	0.00	74.8
		#200	4.91	0.00	62.6
		#230	2.93	0.00	55.3

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 55.3
Weight of hydrometer sample =40.10
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0075	1.0076	0.0134	7.5	14.3	0.0359	16.9
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	13.6
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	11.4
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	11.4
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	11.4
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	9.2
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	9.2

Fractional Components

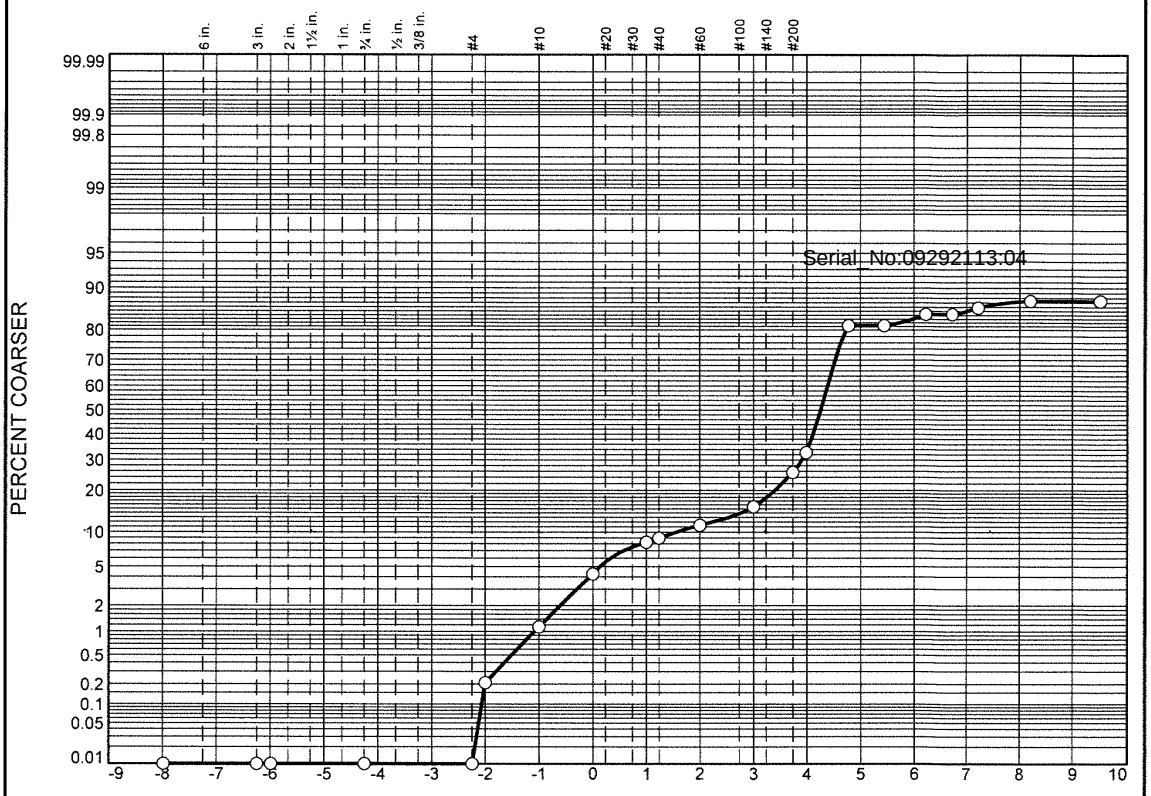
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.8	5.4	7.0	5.0	6.0	20.0	43.4	39.1	3.7	0.6	1.8	45.2	9.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0044	0.0285	0.0389	0.0456	0.0514	0.0582	0.0697	0.2225	0.4479	0.7353	1.4308

Fineness Modulus	C_u	C_c
0.60	16.00	6.83

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	0.9	3.2	4.0	3.0	4.2	17.8	47.9	1.9	1.9	2.2	12.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1310	0.0575	0.0523	0.0434	0.0078			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|640|SED|02 **Sample No.:** L2146075-22

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|640|SED|02

Sample Number: L2146075-22

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 43.20
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
43.20	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.09	0.00	99.8
		#10	0.40	0.00	98.9
		#18	1.35	0.00	95.7
		#35	1.73	0.00	91.7
		#40	0.30	0.00	91.0
		#60	1.03	0.00	88.7
		#120	1.80	0.00	84.5
		#200	4.39	0.00	74.3
		#230	3.09	0.00	67.2

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 67.2
Weight of hydrometer sample =35.37
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	18.8
5.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0230	18.8
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	15.7
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	15.7
60.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0067	14.2
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	12.7
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	12.7

Alpha Analytical

Fractional Components

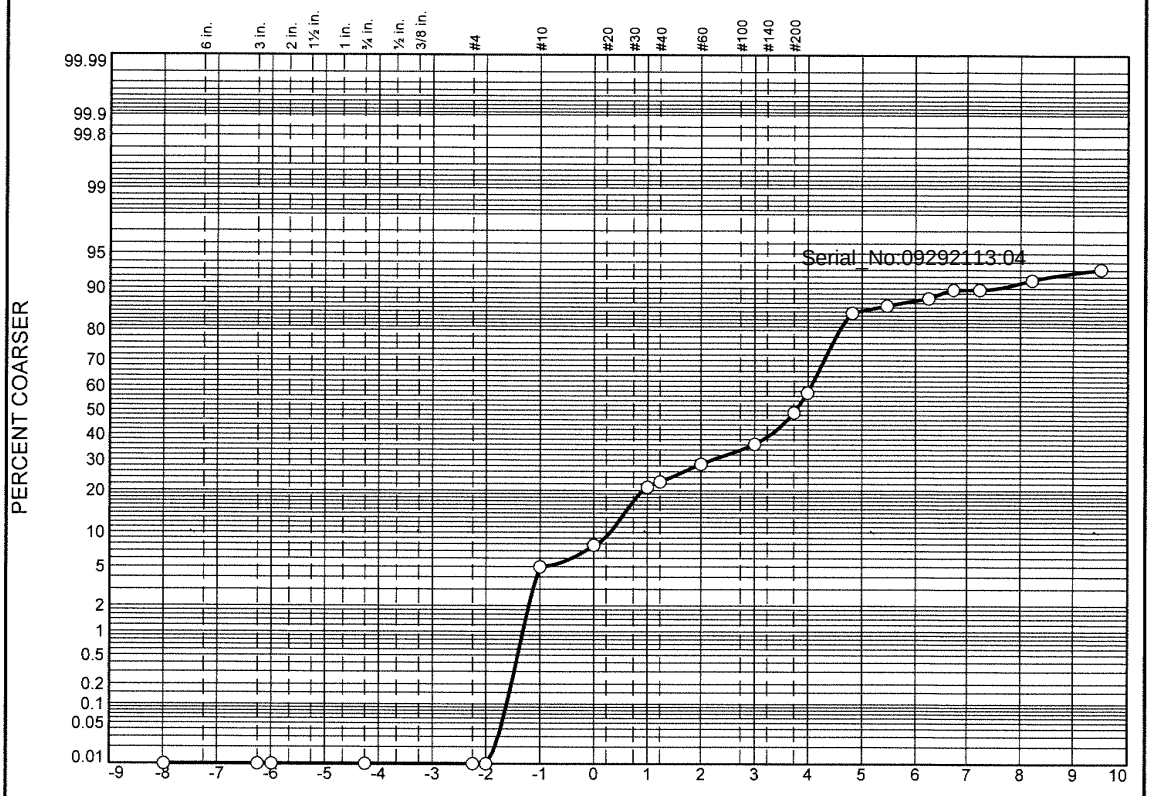
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	0.9	3.2	4.0	3.0	4.2	17.8	32.2	47.9	1.9	1.9	2.2	53.9	12.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0078	0.0375	0.0434	0.0478	0.0523	0.0575	0.0943	0.1310	0.3380	0.9121

Fineness Modulus
0.36

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	5.0	2.8	13.2	7.6	7.6	21.6	27.5	2.3	2.1	1.2	9.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6456	0.1013	0.0735	0.0509	0.0332	0.0054	4.76	18.83

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|642|SED|01 **Sample No.:** L2146075-23

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|642|SED|01

Sample Number: L2146075-23

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 41.04
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
41.04	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	2.05	0.00	95.0
		#18	1.16	0.00	92.2
		#35	5.41	0.00	79.0
		#40	0.68	0.00	77.3
		#60	2.44	0.00	71.4
		#120	3.11	0.00	63.8
		#200	5.32	0.00	50.9
		#230	3.38	0.00	42.6

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 42.6
Weight of hydrometer sample =41.04
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0090	1.0091	0.0134	9.0	13.9	0.0354	15.3
5.00	21.3	1.0080	1.0081	0.0134	8.0	14.2	0.0226	13.6
15.00	21.3	1.0070	1.0071	0.0134	7.0	14.4	0.0132	11.9
30.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0094	10.3
60.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0066	10.3
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	8.6
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	6.9

Fractional Components

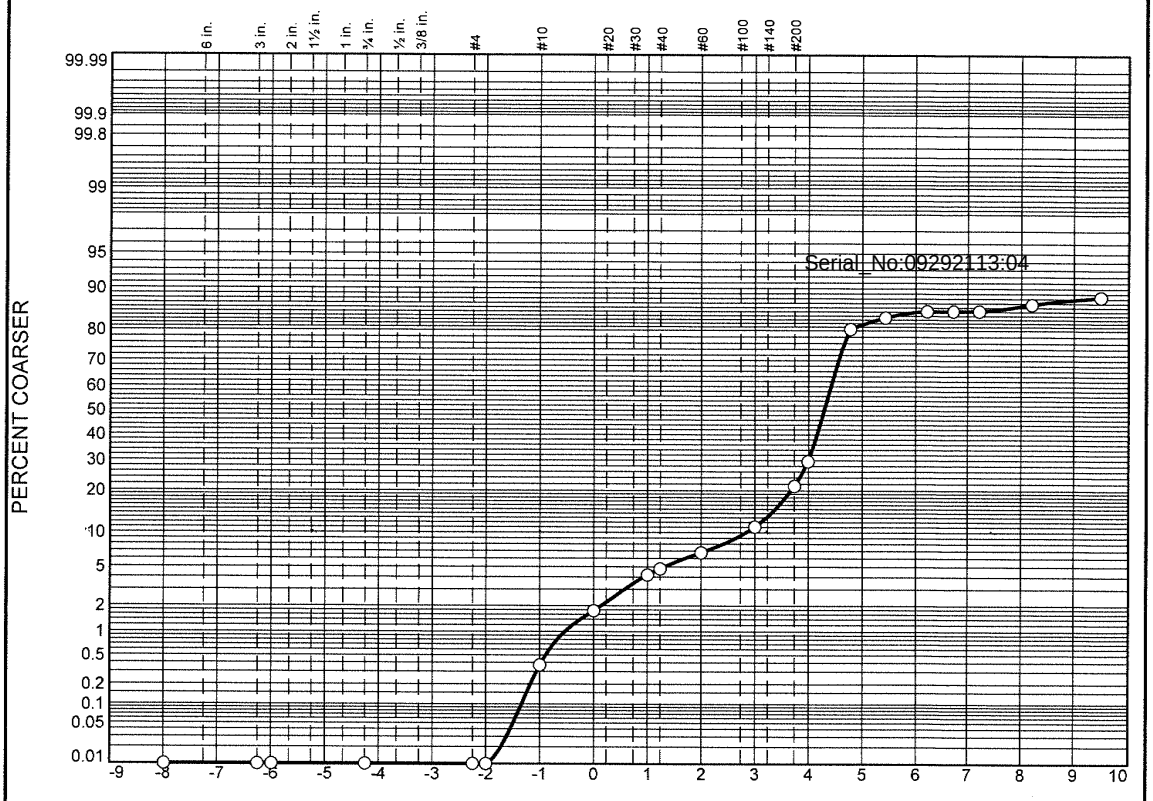
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	5.0	2.8	13.2	7.6	7.6	21.6	52.8	27.5	2.3	2.1	1.2	33.1	9.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0054	0.0332	0.0417	0.0509	0.0602	0.0735	0.1013	0.5283	0.6456	0.8077	1.9833

Fineness Modulus	C_u	C_c
0.85	18.83	4.76

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	1.4	2.4	2.6	4.3	19.1	51.5	3.2	0.3	1.2	13.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0957	0.0559	0.0511	0.0425	0.0151			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|644|SED|01 **Sample No.:** L2146075-24

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|644|SED|01

Sample Number: L2146075-24

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.38
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.38	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.13	0.00	99.6
		#18	0.49	0.00	98.2
		#35	0.86	0.00	95.8
		#40	0.22	0.00	95.2
		#60	0.69	0.00	93.2
		#120	1.52	0.00	88.9
		#200	3.66	0.00	78.6
		#230	2.92	0.00	70.4

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 70.4
Weight of hydrometer sample =35.38
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0060	1.0061	0.0134	6.0	14.7	0.0364	19.6
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	16.4
15.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0135	14.8
30.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0095	14.8
60.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0067	14.8
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	13.3
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	11.7

Alpha Analytical

Fractional Components

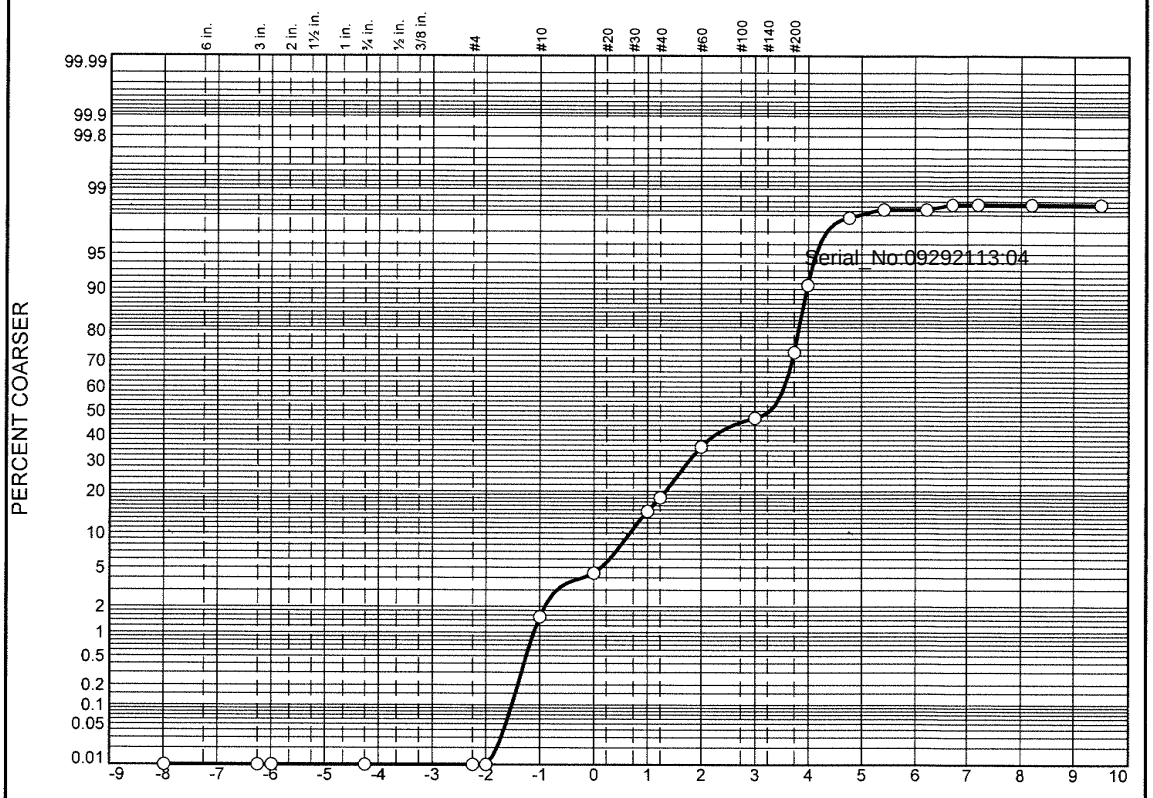
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	1.4	2.4	2.6	4.3	19.1	29.8	51.5	3.2	0.3	1.2	56.2	13.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0151	0.0367	0.0425	0.0469	0.0511	0.0559	0.0783	0.0957	0.1392	0.4032

Fineness Modulus
0.21

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.5	2.9	10.2	20.7	11.7	44.2	6.9	0.2	0.2	0.0	1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4907	0.2094	0.1028	0.0771	0.0677	0.0637	0.45	3.29

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|646|SED|01 **Sample No.:** L2146075-25

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|646|SED|01

Sample Number: L2146075-25

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.08
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.08	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.55	0.00	98.5
		#18	1.05	0.00	95.6
		#35	3.67	0.00	85.4
		#40	1.27	0.00	81.9
		#60	6.21	0.00	64.7
		#120	4.21	0.00	53.0
		#200	9.44	0.00	26.8
		#230	6.32	0.00	9.3

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.3
Weight of hydrometer sample =36.08
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	2.1
5.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0234	1.7
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	1.7
30.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0096	1.5
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	1.5
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	1.5
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	1.5

Fractional Components

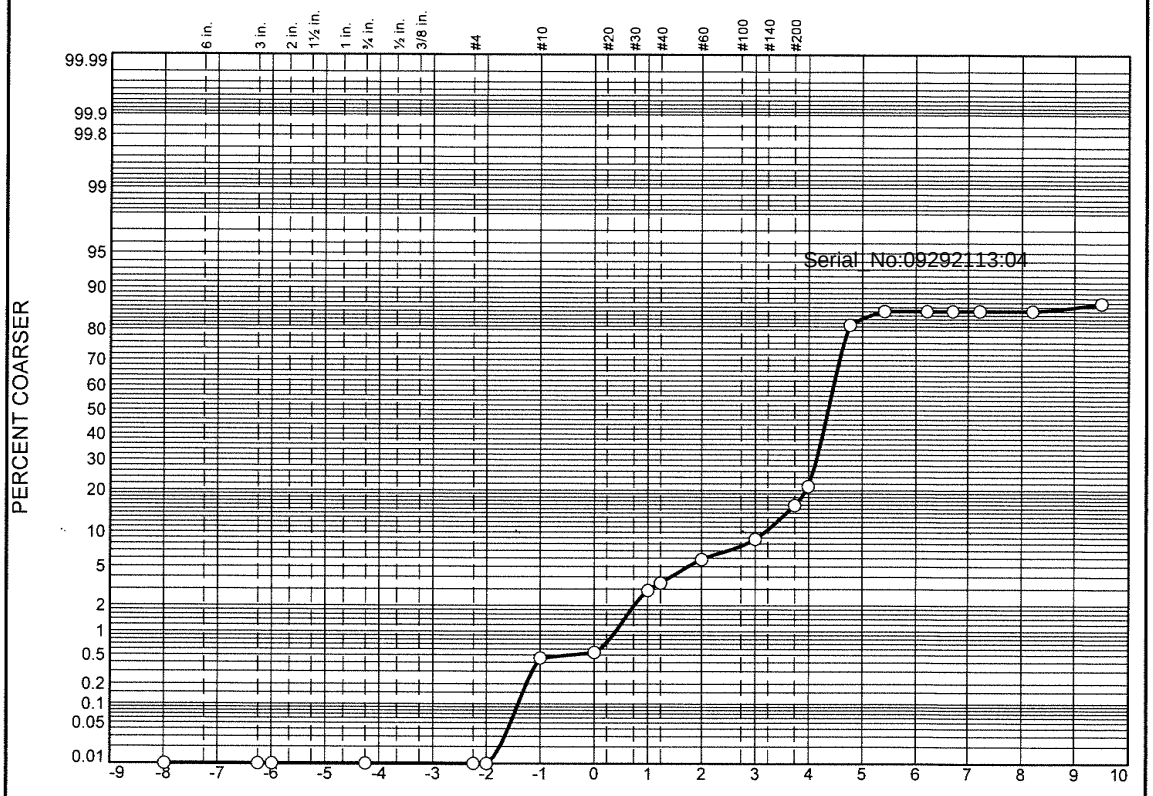
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.5	2.9	10.2	20.7	11.7	44.2	89.7	6.9	0.2	0.2	0.0	7.3	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0565	0.0637	0.0677	0.0709	0.0771	0.0852	0.1028	0.2094	0.3955	0.4907	0.6247	0.9098

Fineness Modulus	C_u	C_c
0.90	3.29	0.45

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	0.0	2.4	2.9	3.0	12.9	61.6	1.8	0.0	0.0	14.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0787	0.0521	0.0486	0.0420	0.0238			

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|648|SED|01 **Sample No.:** L2146075-26

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|648|SED|01

Sample Number: L2146075-26

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.16
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.16	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.16	0.00	99.5
		#18	0.03	0.00	99.5
		#35	0.83	0.00	97.1
		#40	0.20	0.00	96.5
		#60	0.83	0.00	94.2
		#120	1.03	0.00	91.2
		#200	2.51	0.00	84.1
		#230	1.87	0.00	78.8

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 78.8
Weight of hydrometer sample =35.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	18.5
5.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0234	14.9
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	14.9
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	14.9
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	14.9
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	14.9
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	13.1

Alpha Analytical

Fractional Components

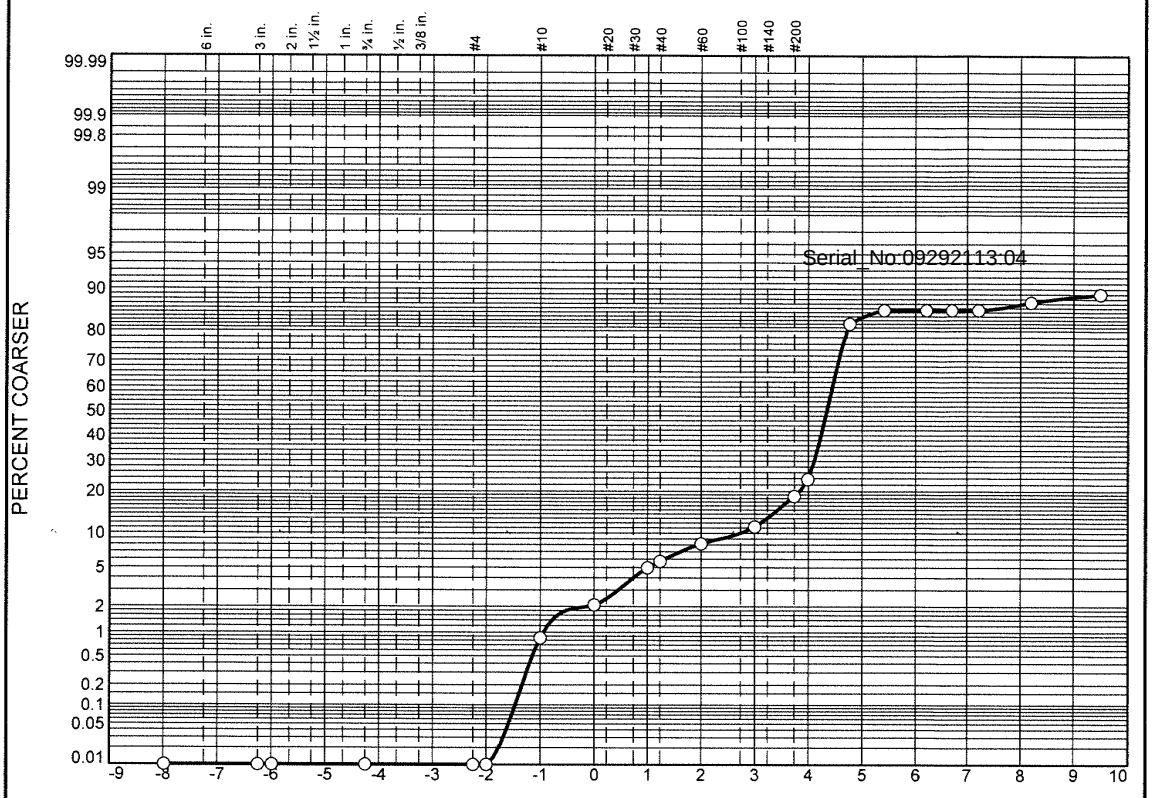
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	0.0	2.4	2.9	3.0	12.9	21.2	61.6	1.8	0.0	0.0	63.4	14.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0238	0.0376	0.0420	0.0454	0.0486	0.0521	0.0646	0.0787	0.1098	0.2984

Fineness Modulus
0.15

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.9	1.2	2.9	3.2	3.0	13.0	59.6	1.7	0.0	1.4	13.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0926	0.0530	0.0493	0.0424	0.0261			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|648|SED|01 **Sample No.:** WG1548338-2

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|648|SED|01

Sample Number: WG1548338-2

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.13
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.13	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.30	0.00	99.1
		#18	0.43	0.00	97.9
		#35	1.02	0.00	95.0
		#40	0.26	0.00	94.3
		#60	0.86	0.00	91.8
		#120	1.07	0.00	88.8
		#200	2.59	0.00	81.4
		#230	1.80	0.00	76.3

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 76.3
Weight of hydrometer sample =35.13
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	18.0
5.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0234	14.5
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	14.5
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	14.5
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	14.5
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	12.7
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	11.0

Fractional Components

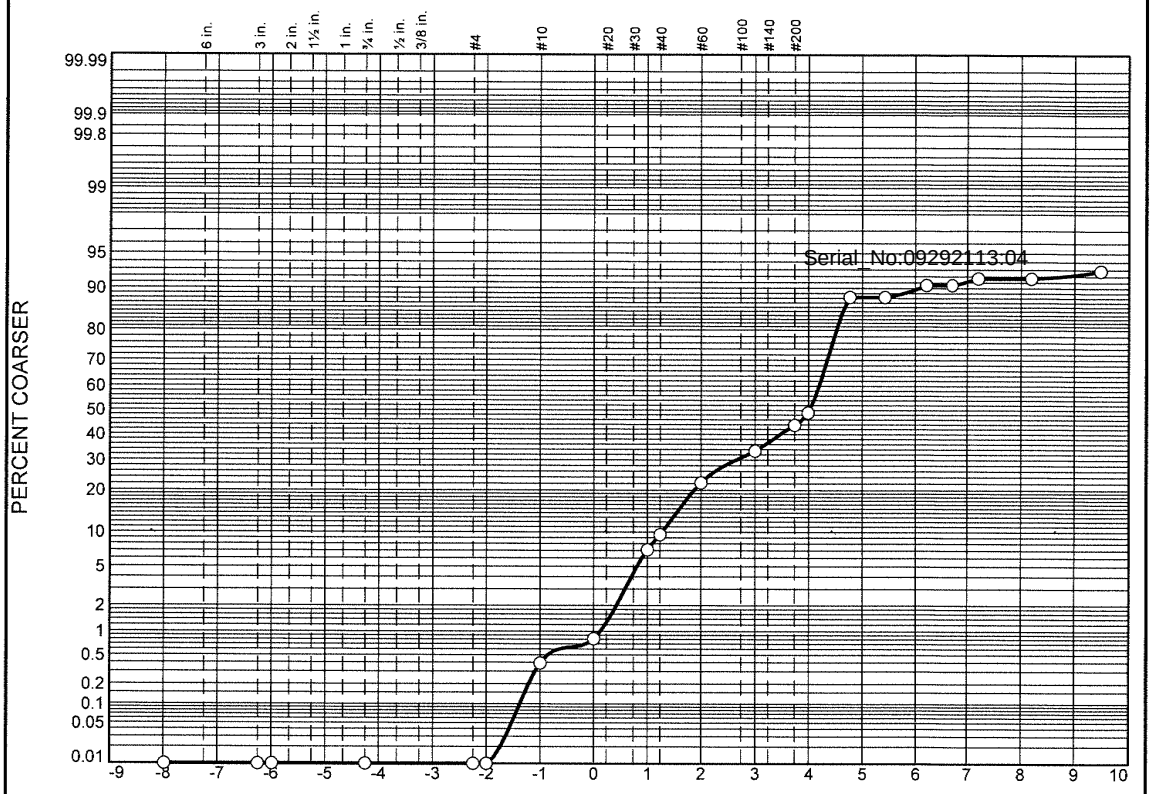
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.9	1.2	2.9	3.2	3.0	13.0	23.3	59.6	1.7	0.0	1.4	62.7	13.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0261	0.0380	0.0424	0.0459	0.0493	0.0530	0.0698	0.0926	0.1494	0.4982

Fineness Modulus
0.24

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	0.4	6.3	15.1	11.2	15.9	38.9	1.5	1.5	0.5	8.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3290	0.0898	0.0617	0.0491	0.0401	0.0148	1.81	6.07

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|650|SED|01 **Sample No.:** L2146075-27

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|650|SED|01

Sample Number: L2146075-27

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.95
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.95	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.14	0.00	99.6
		#18	0.15	0.00	99.2
		#35	2.26	0.00	92.9
		#40	0.88	0.00	90.5
		#60	4.55	0.00	77.8
		#120	4.02	0.00	66.6
		#200	3.71	0.00	56.3
		#230	1.85	0.00	51.2

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 51.2
Weight of hydrometer sample =35.95
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	11.8
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	11.8
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	9.5
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	9.5
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	8.3
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	8.3
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	7.2

Fractional Components

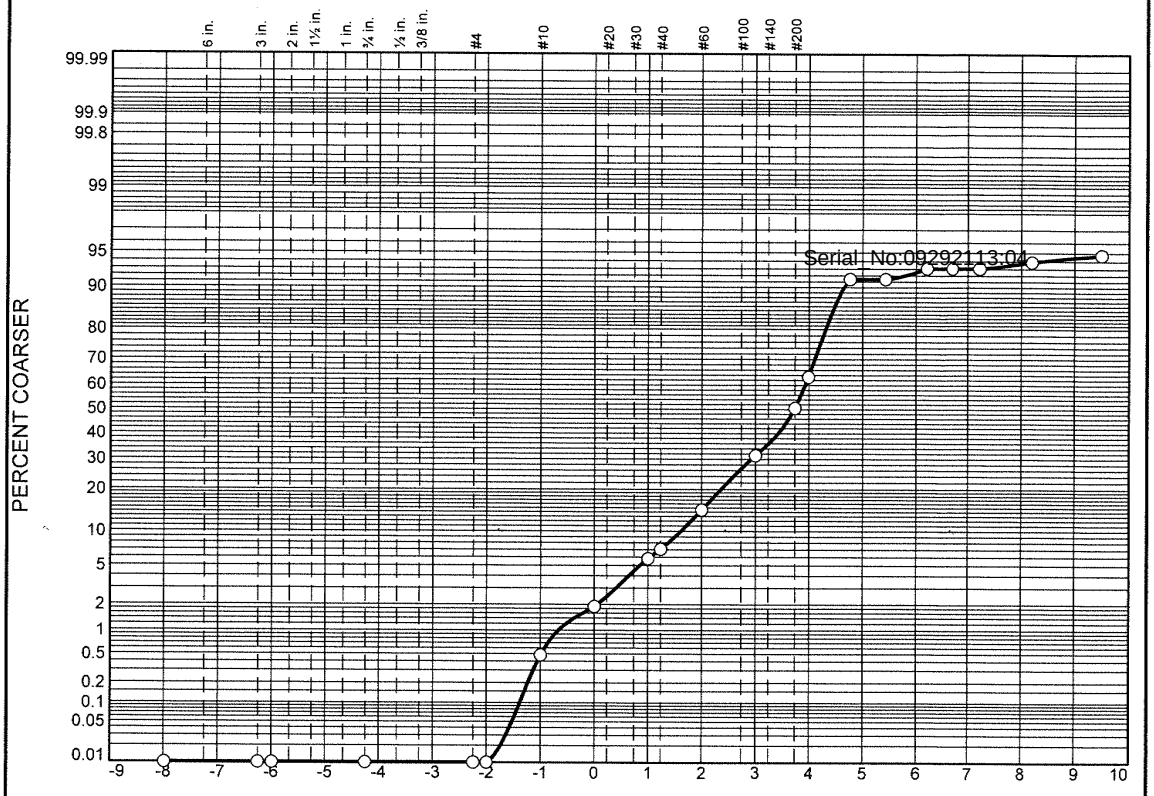
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	0.4	6.3	15.1	11.2	15.9	48.9	38.9	1.5	1.5	0.5	42.4	8.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0148	0.0401	0.0436	0.0491	0.0545	0.0617	0.0898	0.2725	0.3290	0.4137	0.5723

Fineness Modulus	C_u	C_c
0.53	6.07	1.81

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	1.4	3.9	8.7	16.8	32.6	27.5	1.1	0.6	0.6	6.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2438	0.0928	0.0756	0.0579	0.0458	0.0396	0.91	2.34

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|652|SED|01 **Sample No.:** L2146075-28

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|652|SED|01

Sample Number: L2146075-28

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.32
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.32	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.17	0.00	99.5
		#18	0.50	0.00	98.1
		#35	1.38	0.00	94.2
		#40	0.44	0.00	93.0
		#60	2.63	0.00	85.5
		#120	5.95	0.00	68.7
		#200	6.76	0.00	49.5
		#230	4.52	0.00	36.7

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 36.7
Weight of hydrometer sample =35.32
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	8.6
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	8.6
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	6.9
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	6.9
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	6.9
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	6.1
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	5.3

Alpha Analytical

Fractional Components

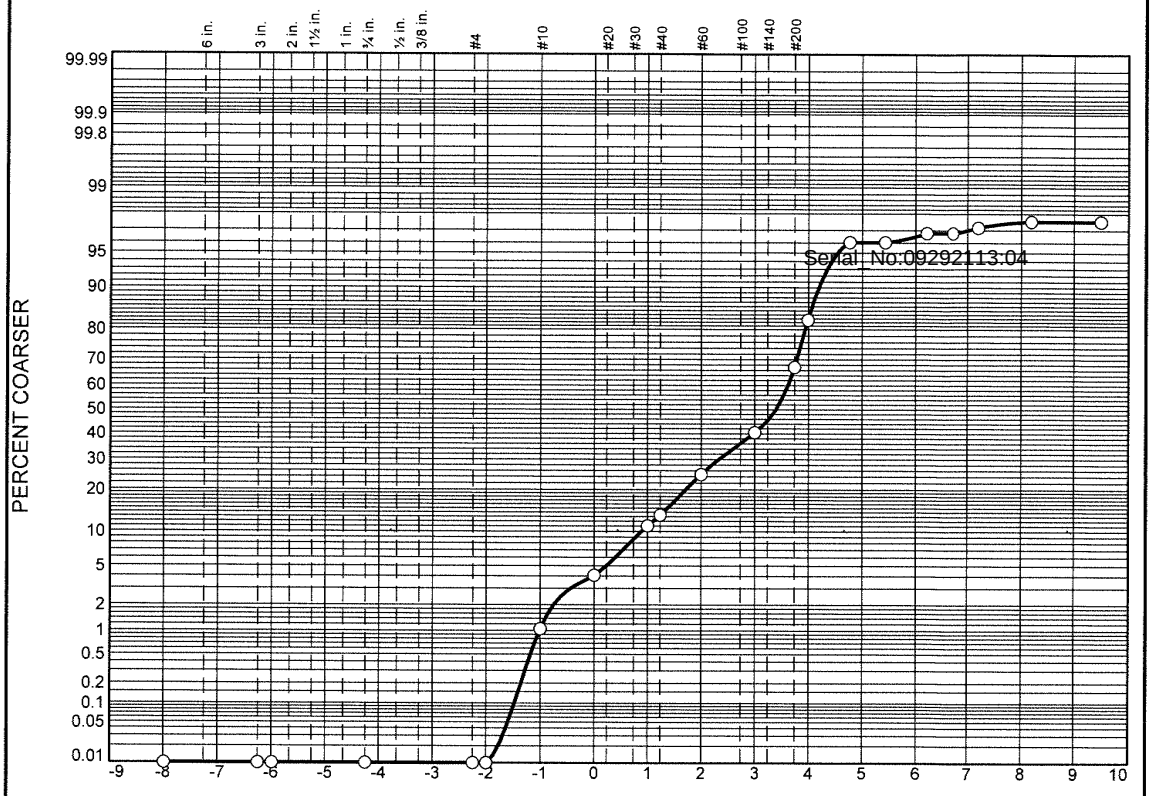
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	1.4	3.9	8.7	16.8	32.6	63.4	27.5	1.1	0.6	0.6	29.8	6.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0396	0.0458	0.0503	0.0579	0.0657	0.0756	0.0928	0.1945	0.2438	0.3263	0.5562

Fineness Modulus	C_u	C_c
0.44	2.34	0.91

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.1	3.0	7.0	13.7	15.6	42.8	12.8	0.5	0.5	0.5	2.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3851	0.1271	0.0952	0.0728	0.0608	0.0546	0.76	2.33

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|654|SED|01 **Sample No.:** L2146075-29

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|654|SED|01

Sample Number: L2146075-29

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.16
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.16	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.38	0.00	98.9
		#18	1.09	0.00	95.9
		#35	2.53	0.00	88.9
		#40	0.82	0.00	86.7
		#60	4.13	0.00	75.2
		#120	5.67	0.00	59.6
		#200	9.68	0.00	32.8
		#230	5.59	0.00	17.3

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.3
Weight of hydrometer sample =36.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	4.0
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	4.0
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	3.2
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	3.2
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	2.8
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	2.4
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	2.4

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.1	3.0	7.0	13.7	15.6	42.8	82.1	12.8	0.5	0.5	0.5	14.3	2.5

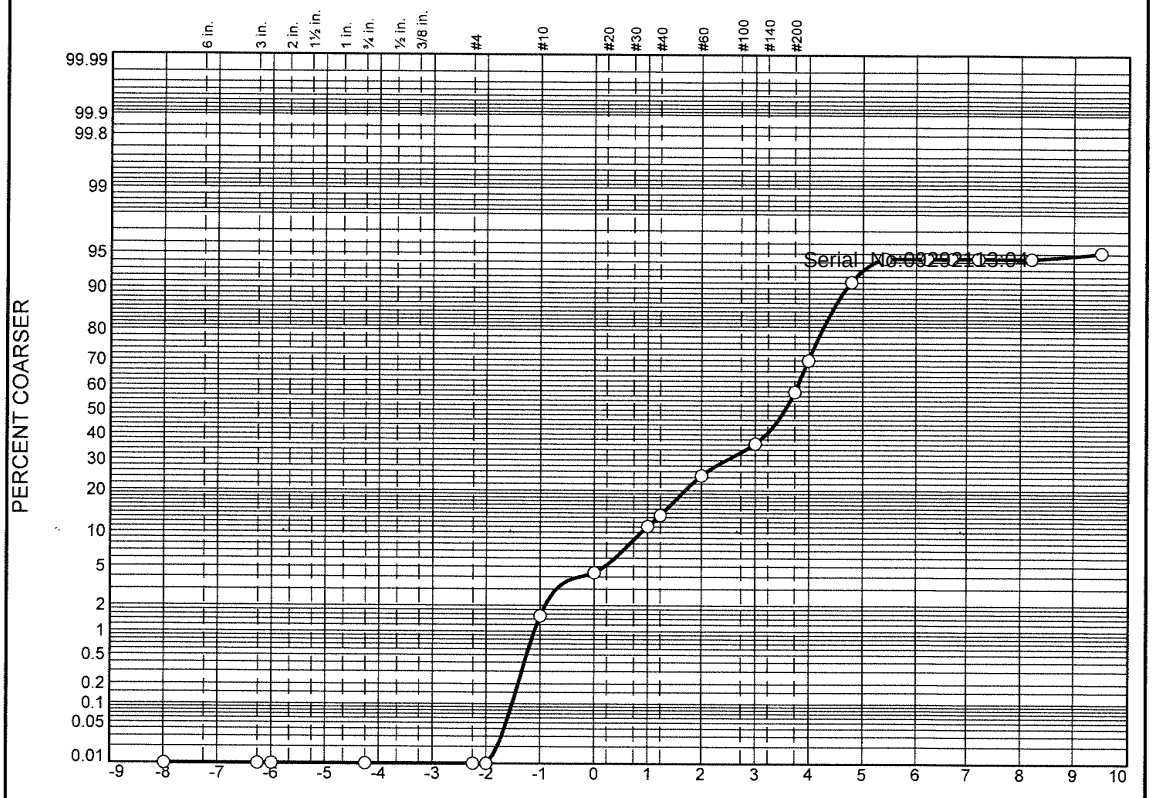
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0430	0.0546	0.0608	0.0653	0.0728	0.0815	0.0952	0.1271	0.3045	0.3851	0.5408	0.8539

Fineness Modulus	C_u	C_c
0.69	2.33	0.76

Serial_No:09292113:04

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.5	2.9	6.7	13.5	11.8	34.1	22.5	1.5	0.0	0.0	5.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3893	0.1087	0.0852	0.0630	0.0467	0.0386	0.95	2.81

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|656|SED|01 **Sample No.:** L2146075-30

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|656|SED|01

Sample Number: L2146075-30

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.06
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.06	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.55	0.00	98.5
		#18	1.03	0.00	95.6
		#35	2.43	0.00	88.9
		#40	0.85	0.00	86.5
		#60	4.01	0.00	75.4
		#120	4.24	0.00	63.6
		#200	7.70	0.00	42.3
		#230	4.43	0.00	30.0

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 30.0
Weight of hydrometer sample =36.06
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0362	8.9
5.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0234	5.5
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	5.5
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	5.5
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	5.5
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	5.5
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	4.9

Alpha Analytical

Fractional Components

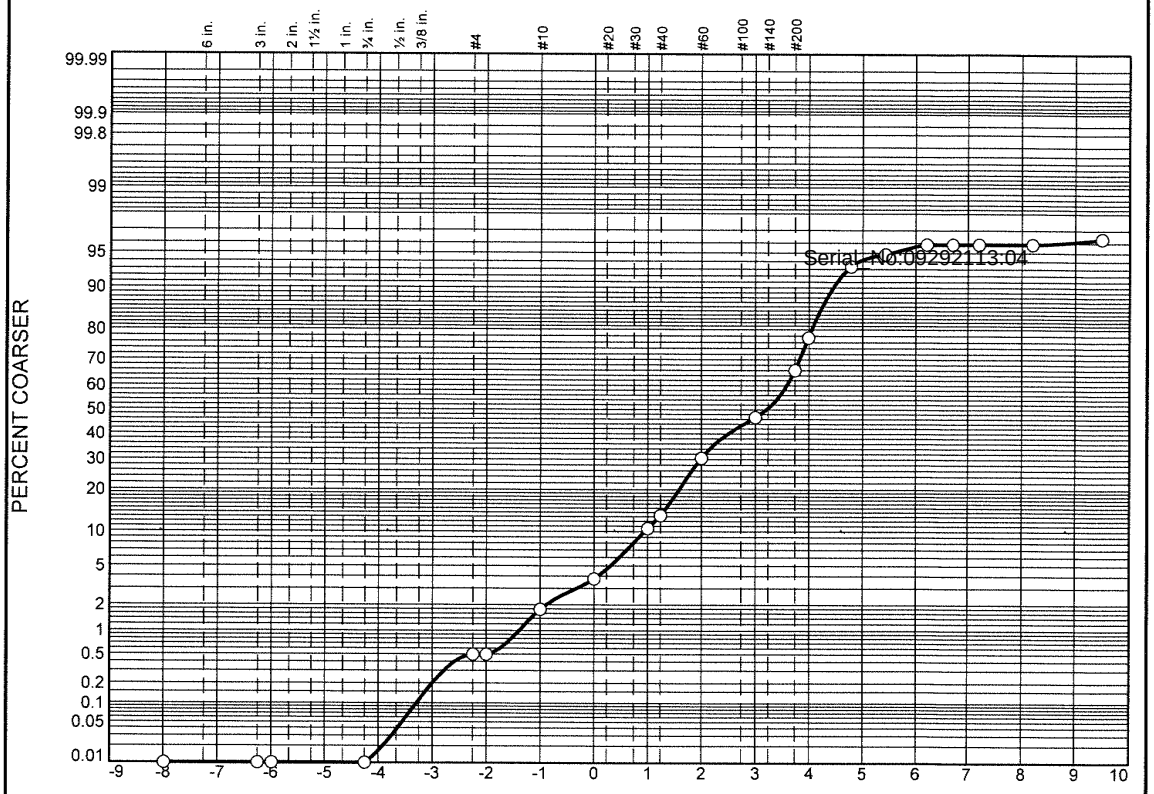
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.5	2.9	6.7	13.5	11.8	34.1	69.0	22.5	1.5	0.0	0.0	24.0	5.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0016	0.0386	0.0467	0.0528	0.0630	0.0726	0.0852	0.1087	0.3076	0.3893	0.5418	0.8742

Fineness Modulus	C_u	C_c
0.67	2.81	0.95

Serial_No:09292113:04

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	1.3	1.9	6.9	19.9	16.2	31.3	16.2	1.5	0.1	0.0	4.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3937	0.1765	0.1082	0.0706	0.0540	0.0456	0.62	3.87

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|658|SED|01 **Sample No.:** L2146075-31

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

9/29/2021

Location: 3664|2021|ECR-B|658|SED|01

Sample Number: L2146075-31

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.11
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.11	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.18	0.00	99.5
		#5	0.00	0.00	99.5
		#10	0.46	0.00	98.2
		#18	0.71	0.00	96.3
		#35	2.46	0.00	89.4
		#40	0.98	0.00	86.7
		#60	6.23	0.00	69.5
		#120	5.85	0.00	53.3
		#200	6.96	0.00	34.0
		#230	4.15	0.00	22.5

Serial_No:09292113:04

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 22.5
Weight of hydrometer sample =36.11
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0065	1.0066	0.0134	6.5	14.6	0.0362	6.7
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	5.2
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	4.2
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	4.2
60.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0068	4.2
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	4.2
1440.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0014	3.7

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	1.3	1.9	6.9	19.9	16.2	31.3	76.2	16.2	1.5	0.1	0.0	17.8	4.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0214	0.0456	0.0540	0.0602	0.0706	0.0831	0.1082	0.1765	0.3331	0.3937	0.5193	0.8102

Fineness Modulus	C_u	C_c
0.80	3.87	0.62

Serial_No:09292113:04

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:09292113:04

8/26/21

L2160075

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|602|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon -01	6	Cooler #1
3664|2021|ECR-B|604|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon -02	6	Cooler #1
3664|2021|ECR-B|606|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -03	6	Cooler #1
3664|2021|ECR-B|608|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -04	6	Cooler #1
3664|2021|ECR-B|610|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -05	6	Cooler #1
3664|2021|ECR-B|612|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -06	6	Cooler #1
3664|2021|ECR-B|614|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -07	6	Cooler #1
3664|2021|ECR-B|616|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -08	6	Cooler #1
3664|2021|ECR-B|618|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -09	6	Cooler #1
3664|2021|ECR-B|620|Sed|TOC|01	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -10	6	Cooler #1
3664|2021|ECR-B|620|Sed|TOC|02	8/17/2021	SmithMac	125-mL glass	freeze	total organic carbon -11	6	Cooler #1; QC duplicate
3664|2021|ECR-B|622|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -12	6	Cooler #1
3664|2021|ECR-B|624|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -13	6	Cooler #1
3664|2021|ECR-B|626|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -14	6	Cooler #1
3664|2021|ECR-B|628|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -15	6	Cooler #1
3664|2021|ECR-B|630|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -16	6	Cooler #1
3664|2021|ECR-B|632|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -17	6	Cooler #1
3664|2021|ECR-B|634|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -18	6	Cooler #1
3664|2021|ECR-B|636|Sed|TOC|01	8/16/2021	SmithMac	125-mL glass	freeze	total organic carbon -19	6	Cooler #1

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY:
DATE/TIME: 8/26/21 1000
RECEIVED BY:
DATE/TIME: 8/26/21 1000

RELINQUISHED BY:
DATE/TIME: 8/26/21 1150
RECEIVED BY:
DATE/TIME:

CSA CONTACT NAME: Jason Clermont
TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms when applicable, at the time of sample receipt. Note: Initials are not acceptable.

Serial_No:09292113:04

8/26/21

L2146075

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|638|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -20	6	Cooler #1
3664|2021|ECR-B|640|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -21	6	Cooler #1
3664|2021|ECR-B|640|Sed|TOC|02	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -22	6	Cooler #1; QC duplicate
3664|2021|ECR-B|642|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -23	6	Cooler #1
3664|2021|ECR-B|644|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -24	6	Cooler #1
3664|2021|ECR-B|646|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -25	6	Cooler #1
3664|2021|ECR-B|648|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -26	6	Cooler #1
3664|2021|ECR-B|650|Sed|TOC|01	8/15/2021	SmithMac	125-mL glass	freeze	total organic carbon -27	6	Cooler #1
3664|2021|ECR-B|652|Sed|TOC|01	8/14/2021	SmithMac	125-mL glass	freeze	total organic carbon -28	6	Cooler #1
3664|2021|ECR-B|654|Sed|TOC|01	8/14/2021	SmithMac	125-mL glass	freeze	total organic carbon -29	6	Cooler #1
3664|2021|ECR-B|656|Sed|TOC|01	8/14/2021	SmithMac	125-mL glass	freeze	total organic carbon -30	6	Cooler #1
3664|2021|ECR-B|658|Sed|TOC|01	8/14/2021	SmithMac	125-mL glass	freeze	total organic carbon -31	6	Cooler #1
3664|2021|ECR-B|602|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size -01	6	Cooler #2
3664|2021|ECR-B|604|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size -02	6	Cooler #2
3664|2021|ECR-B|606|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -03	6	Cooler #2
3664|2021|ECR-B|608|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -04	6	Cooler #2
3664|2021|ECR-B|610|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -05	6	Cooler #2
3664|2021|ECR-B|612|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -06	6	Cooler #2

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY:
DATE/TIME: 8/26/21 1000
RECEIVED BY: Mark Mann AM
DATE/TIME: 8/26/21 1000

RELINQUISHED BY:
DATE/TIME: 8/26/21 1150
RECEIVED BY:
DATE/TIME:

CSA CONTACT NAME: Jason Clermont
TELEPHONE NUMBER: 252-258-1676

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when applicable at the time of sample receipt. Note: Initials are not acceptable.

8/26/21

L2146075

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|614|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -07	6	Cooler #2
3664|2021|ECR-B|616|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -08	6	Cooler #2
3664|2021|ECR-B|618|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -09	6	Cooler #2
3664|2021|ECR-B|620|Sed|GS|01	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -10	6	Cooler #2
3664|2021|ECR-B|620|Sed|GS|02	8/17/2021	SmithMac	250-mL plastic	freeze	grain size -11	6	Cooler #2; QC duplicate
3664|2021|ECR-B|622|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -12	6	Cooler #2
3664|2021|ECR-B|624|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -13	6	Cooler #2
3664|2021|ECR-B|626|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -14	6	Cooler #2
3664|2021|ECR-B|628|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -15	6	Cooler #2
3664|2021|ECR-B|630|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -16	6	Cooler #2
3664|2021|ECR-B|632|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -17	6	Cooler #2
3664|2021|ECR-B|634|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -18	6	Cooler #2
3664|2021|ECR-B|636|Sed|GS|01	8/16/2021	SmithMac	250-mL plastic	freeze	grain size -19	6	Cooler #2
3664|2021|ECR-B|638|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -20	6	Cooler #2
3664|2021|ECR-B|640|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -21	6	Cooler #2
3664|2021|ECR-B|640|Sed|GS|02	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -22	6	Cooler #2; QC duplicate
3664|2021|ECR-B|642|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -23	6	Cooler #2
3664|2021|ECR-B|644|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -24	6	Cooler #2
3664|2021|ECR-B|646|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -25	6	Cooler #2

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: _____ DATE/TIME: 8/26/21 1000 RECEIVED BY: _____ DATE/TIME: 8/26/21 1000

RELINQUISHED BY: _____ DATE/TIME: 8/26/21 1150 RECEIVED BY: _____ DATE/TIME: _____

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms when applicable at the time of sample receipt. Note: Initials are not acceptable.

Serial_No:09292113:04

8/26/21

L2146075

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|648|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -26	6	Cooler #2
3664|2021|ECR-B|650|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size -27	6	Cooler #2
3664|2021|ECR-B|652|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size -28	6	Cooler #2
3664|2021|ECR-B|654|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size -29	6	Cooler #2
3664|2021|ECR-B|656|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size -30	6	Cooler #2
3664|2021|ECR-B|658|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size -31	6	Cooler #2
3664|2021|ECR-B|516|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-C|1516|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|518|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|520|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|522|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|524|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|526|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|528|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|528|Sed|TOC|02	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 ; QC duplicate
3664|2021|ECR-B|530|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|532|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|534|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: _____ DATE/TIME: 8/26/21 1000 RECEIVED BY: MGM MMR AM DATE/TIME: 8/26/21 1000

RELINQUISHED BY: MGM DATE/TIME: 8/26/21 1500 RECEIVED BY: _____ DATE/TIME: _____

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1526

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when applicable, at the time of sample receipt. Note, initials are not acceptable.

Serial_No:10042117:12

ANALYTICAL REPORT

Lab Number:	L2146082
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	10/04/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2146082-01	3664|2021|ECR-B|516|SED|01	SEDIMENT	OFFSHORE MA / NY	08/21/21 00:00	08/26/21
L2146082-02	3664|2021|ECR-C|1516|SED|01	SEDIMENT	OFFSHORE MA / NY	08/21/21 00:00	08/26/21
L2146082-03	3664|2021|ECR-B|518|SED|01	SEDIMENT	OFFSHORE MA / NY	08/21/21 00:00	08/26/21
L2146082-04	3664|2021|ECR-B|520|SED|01	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-05	3664|2021|ECR-B|522|SED|01	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-06	3664|2021|ECR-B|524|SED|01	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-07	3664|2021|ECR-B|526|SED|01	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-08	3664|2021|ECR-B|528|SED|01	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-09	3664|2021|ECR-B|528|SED|02	SEDIMENT	OFFSHORE MA / NY	08/20/21 00:00	08/26/21
L2146082-10	3664|2021|ECR-B|530|SED|01	SEDIMENT	OFFSHORE MA / NY	08/19/21 00:00	08/26/21
L2146082-11	3664|2021|ECR-B|532|SED|01	SEDIMENT	OFFSHORE MA / NY	08/19/21 00:00	08/26/21
L2146082-12	3664|2021|ECR-B|534|SED|01	SEDIMENT	OFFSHORE MA / NY	08/19/21 00:00	08/26/21
L2146082-13	3664|2021|ECR-B|536|SED|01	SEDIMENT	OFFSHORE MA / NY	08/19/21 00:00	08/26/21
L2146082-14	3664|2021|ECR-B|538|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-15	3664|2021|ECR-B|540|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-16	3664|2021|ECR-B|542|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-17	3664|2021|ECR-B|544|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-18	3664|2021|ECR-B|546|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-19	3664|2021|ECR-B|548|SED|01	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21
L2146082-20	3664|2021|ECR-B|548|SED|02	SEDIMENT	OFFSHORE MA / NY	08/18/21 00:00	08/26/21

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The samples were received at the laboratory below the required temperature range. The samples were transported to the laboratory in a cooler with ice and were not received frozen.

Grain Size

The WG1548859-1 Laboratory Duplicate RPDs for pebble (120%), % very coarse sand (133%), % coarse sand (29%), % medium sand (29%), silt (74%) and clay (106%), performed on L2146082-01, are outside the acceptance criteria. The elevated RPDs have been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2146082-20: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Susan E O'Neil Susan O' Neil

Title: Technical Director/Representative Date: 10/04/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-01
Client ID: 3664|2021|ECR-B|516|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/21/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.152		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.130		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.141		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.200		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	2.40		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	7.60		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	67.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	13.6		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	7.80		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-02
Client ID: 3664|2021|ECR-C|1516|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/21/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.074		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.078		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.076		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	2.00		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	26.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	44.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	14.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	5.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	1.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	4.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	0.600		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-03
Client ID: 3664|2021|ECR-B|518|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/21/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.084		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.075		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.080		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.300		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	25.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	43.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	19.8		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	1.40		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	8.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-04
Client ID: 3664|2021|ECR-B|520|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.305		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.290		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.298		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.800		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	4.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	15.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	50.3		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	11.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	15.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	2.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-05
Client ID: 3664|2021|ECR-B|522|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.189		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.141		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.165		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	1.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	1.00		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	4.70		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	22.1		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	52.3		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	6.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	10.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-06
Client ID: 3664|2021|ECR-B|524|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.090		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.086		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.088		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.600		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	1.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	25.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	54.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	6.80		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	10.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-07
Client ID: 3664|2021|ECR-B|526|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.046		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.043		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.045		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.600		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	6.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	47.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	30.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	3.70		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.300		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	8.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-08
Client ID: 3664|2021|ECR-B|528|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.114		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.089		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.102		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	4.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	45.8		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	35.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	3.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.600		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	8.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-09
Client ID: 3664|2021|ECR-B|528|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/20/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.068		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.061		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.065		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
% Very Coarse Sand	3.70		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
% Coarse Sand	45.8		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
% Medium Sand	36.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
% Fine Sand	4.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
% Very Fine Sand	0.700		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
Silt - (3.9-62.5 um)	7.40		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2
Clay - (<3.9 um)	0.700		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	L2

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-10
Client ID: 3664|2021|ECR-B|530|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/19/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.472		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	0.428		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	0.450		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	2.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	1.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	4.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	11.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	24.1		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	26.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	14.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	13.6		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	2.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-11
Client ID: 3664|2021|ECR-B|532|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/19/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.493		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.401		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.447		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.700		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	5.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	28.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	27.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	14.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	17.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	3.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-12
Client ID: 3664|2021|ECR-B|534|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/19/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.624		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.593		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.608		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	1.40		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	5.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	23.1		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	38.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	17.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	12.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-13
Client ID: 3664|2021|ECR-B|536|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/19/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.379		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.286		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.332		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.200		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	1.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	24.3		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	38.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	13.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	18.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	2.70		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-14
Client ID: 3664|2021|ECR-B|538|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.140		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.167		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.154		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.600		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	0.400		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	29.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	46.8		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	10.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.500		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	10.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-15
Client ID: 3664|2021|ECR-B|540|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.069		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.081		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.075		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	3.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	40.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	30.1		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	12.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	1.00		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	10.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.60		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-16
Client ID: 3664|2021|ECR-B|542|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.569		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.753		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.661		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.900		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	1.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	12.6		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	50.3		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	14.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	2.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.900		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	14.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	2.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-17
Client ID: 3664|2021|ECR-B|544|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.512		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.568		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.540		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	1.90		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	2.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	2.40		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	4.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	12.2		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	37.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	14.5		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	22.0		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	3.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-18
Client ID: 3664|2021|ECR-B|546|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.556		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.486		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.521		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	1.00		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	21.7		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	32.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	20.6		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	5.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	16.4		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	2.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-19
Client ID: 3664|2021|ECR-B|548|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.161		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.132		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.146		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	1.20		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	11.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	66.9		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	8.00		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	1.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.500		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	8.50		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

SAMPLE RESULTS

Lab ID: L2146082-20
Client ID: 3664|2021|ECR-B|548|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/18/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.117		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.216		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	0.166		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Cobbles	ND		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Pebble (4.0-64 mm)	0.800		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Coarse Sand	11.8		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Coarse Sand	66.6		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Medium Sand	8.30		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Fine Sand	1.60		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
% Very Fine Sand	0.400		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Silt - (3.9-62.5 um)	8.60		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP
Clay - (<3.9 um)	0.800		%	0.100	NA	1	-	09/21/21 11:08	12,D6913/D7928(M)	SP

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146082
Report Date: 10/04/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 11-20 Batch: WG1545054-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	09/14/21 10:11	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 01-10 Batch: WG1546325-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	09/13/21 21:17	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: BEACON WIND

Project Number: 3664

Lab Number: L2146082

Report Date: 10/04/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 Batch: WG1545054-2								
Total Organic Carbon (Rep1)	101		-		75-125	-		25
Total Organic Carbon (Rep2)	100		-		75-125	-		25
Total Organic Carbon (Average)	101		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 Batch: WG1546325-2								
Total Organic Carbon (Rep1)	97		-		75-125	-		25
Total Organic Carbon (Rep2)	113		-		75-125	-		25
Total Organic Carbon (Average)	105		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG1545054-4 QC Sample: L2147704-03 Client ID: MS Sample												
Total Organic Carbon (Rep1)	20.4	0.812	18.8	**0**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	22.2	0.895	21.1	**0**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG1545054-5 QC Sample: L2146082-17 Client ID: 3664|2021|ECR-B|544|SED|01												
Total Organic Carbon (Rep1)	0.512	1.18	1.48	82		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.568	1.03	1.67	107		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1546325-4 QC Sample: L2146082-01 Client ID: 3664|2021|ECR-B|516|SED|01												
Total Organic Carbon (Rep1)	0.152	1.59	1.58	90		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.130	1.25	1.38	100		-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2146082
Report Date: 10/04/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG1545054-3 QC Sample: L2147704-03 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	20.4	20.9	%	2		25
Total Organic Carbon (Rep2)	22.2	21.5	%	3		25
Total Organic Carbon (Average)	21.3	21.2	%	0		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1546325-3 QC Sample: L2146082-01 Client ID: 3664|2021|ECR-B|516|SED|01						
Total Organic Carbon (Rep1)	0.152	0.153	%	1		25
Total Organic Carbon (Rep2)	0.130	0.146	%	12		25
Total Organic Carbon (Average)	0.141	0.150	%	6		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2146082
Report Date: 10/04/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1548859-1 QC Sample: L2146082-01 Client ID: 3664|2021|ECR-B|516|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	0.100	0.400	%	**120**	Q	20
Granule (2.0-4.0 mm)	ND	ND	%	NC		20
% Very Coarse Sand	0.200	1.00	%	**133**	Q	20
% Coarse Sand	2.40	1.80	%	**29**	Q	20
% Medium Sand	7.60	5.70	%	**29**	Q	20
% Fine Sand	67.2	57.7	%	15		20
% Very Fine Sand	13.6	12.8	%	6		20
Silt - (3.9-62.5 um)	7.80	17.0	%	**74**	Q	20
Clay - (<3.9 um)	1.10	3.60	%	**106**	Q	20

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146082-01A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146082-01B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-02A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-02B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-03A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-03B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-04A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146082-04B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:10042117:12

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2146082-05A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2146082-05B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-06A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146082-06B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-07A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-07B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-08A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-08B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-09A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146082-09B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:10042117:12

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146082-10A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146082-10B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-11A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-11B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-12A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2146082-12B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-13A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146082-13B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-14A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-14B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:10042117:12

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146082-15A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146082-15B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-16A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-16B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-17A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2146082-17B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-18A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2146082-18B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146082-19A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146082-19B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146082
Report Date: 10/04/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146082-20A	Plastic 8oz unpreserved for Grain Size	A	NA		0.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146082-20B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2146082
Project Number:	3664	**Report Date:**	10/04/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

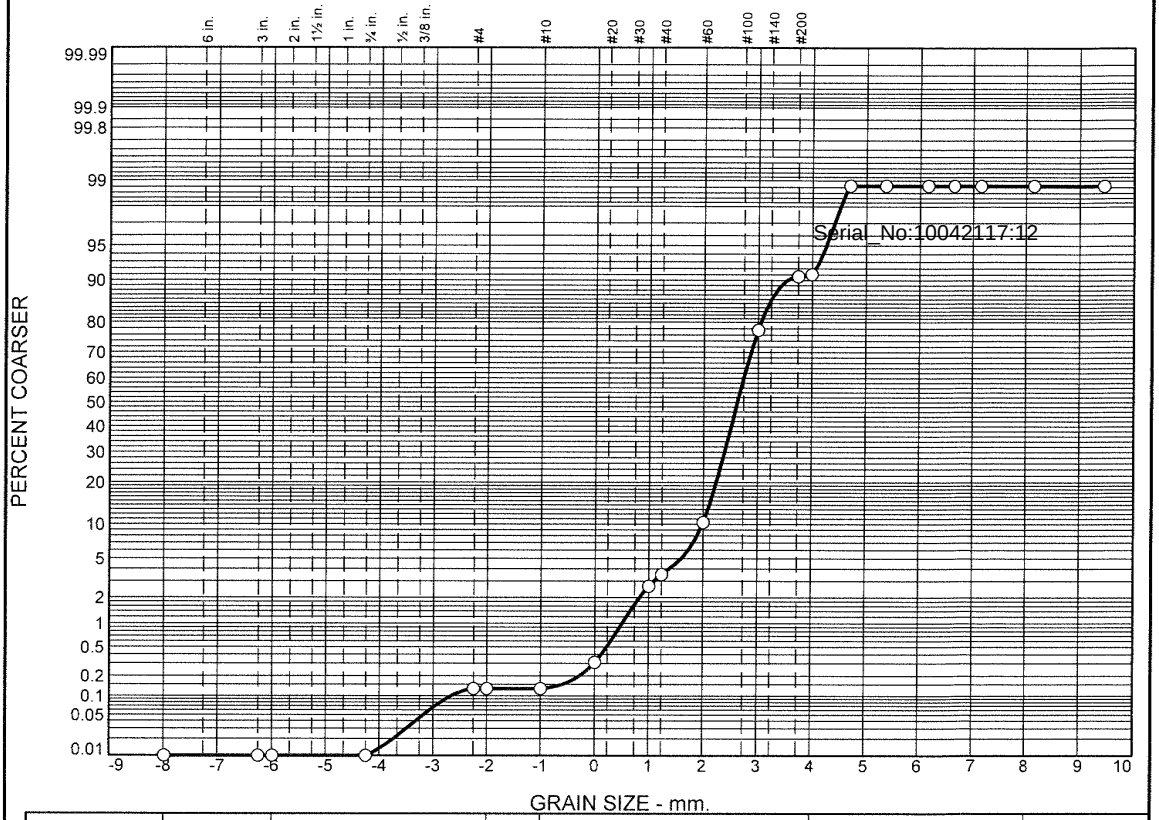
We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Serial_No:10042117:12

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.0	0.2	2.4	7.6	67.2	13.6	7.8	0.0	0.0		1.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2272	0.1755	0.1623	0.1367	0.1086	0.0864	1.23	2.03

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|516|SED|01 **Sample No.:** L2146082-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|516|SED|01

Sample Number: L2146082-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 38.77
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.77	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.05	0.00	99.9
		#5	0.00	0.00	99.9
		#10	0.00	0.00	99.9
		#18	0.07	0.00	99.7
		#35	0.91	0.00	97.3
		#40	0.33	0.00	96.5
		#60	2.65	0.00	89.7
		#120	26.05	0.00	22.5
		#200	5.09	0.00	9.3
		#230	0.15	0.00	9.0

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.0
Weight of hydrometer sample =35.48
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0385	1.1
5.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0244	1.1
15.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0141	1.1
30.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0099	1.1
60.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0070	1.1
240.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0035	1.1
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	1.1

Fractional Components

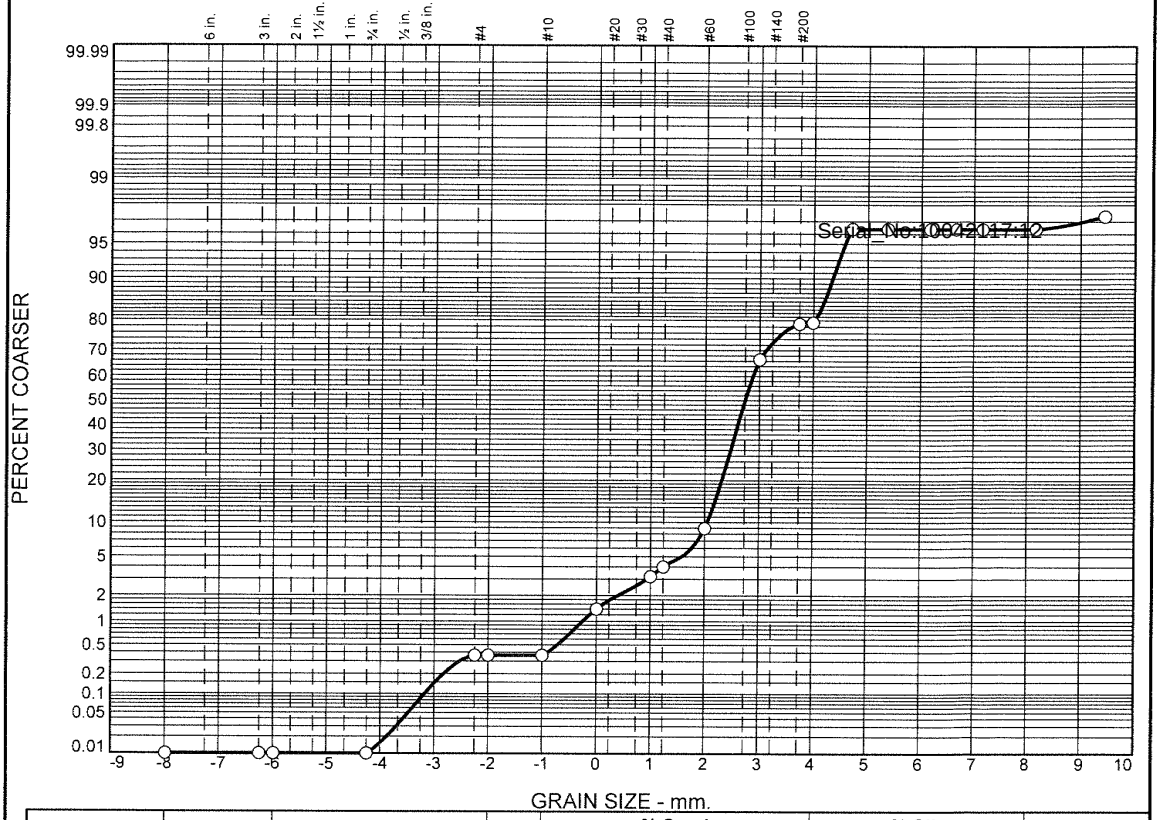
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.0	0.2	2.4	7.6	67.2	13.6	91.0	7.8	0.0	0.0		7.8	1.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0521	0.0864	0.1086	0.1204	0.1367	0.1498	0.1623	0.1755	0.2117	0.2272	0.2524	0.3311

Fineness Modulus	C_u	C_c
0.68	2.03	1.23

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.0	1.0	1.8	5.7	57.7	12.9	16.9	0.0	0.0		3.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.2164	0.1638	0.1497	0.1150	0.0544	0.0489	1.65	3.35

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|516|SED|01 **Sample No.:** WG1548859-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|516|SED|01

Sample Number: WG1548859-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 38.61
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.61	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.14	0.00	99.6
		#5	0.00	0.00	99.6
		#10	0.00	0.00	99.6
		#18	0.40	0.00	98.6
		#35	0.69	0.00	96.8
		#40	0.31	0.00	96.0
		#60	1.90	0.00	91.1
		#120	22.28	0.00	33.4
		#200	4.75	0.00	21.1
		#230	0.15	0.00	20.7

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 20.7
Weight of hydrometer sample =35.45
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0382	3.6
5.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0242	3.6
15.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0140	3.6
30.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0099	3.6
60.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0070	3.6
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	3.6
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.6

Fractional Components

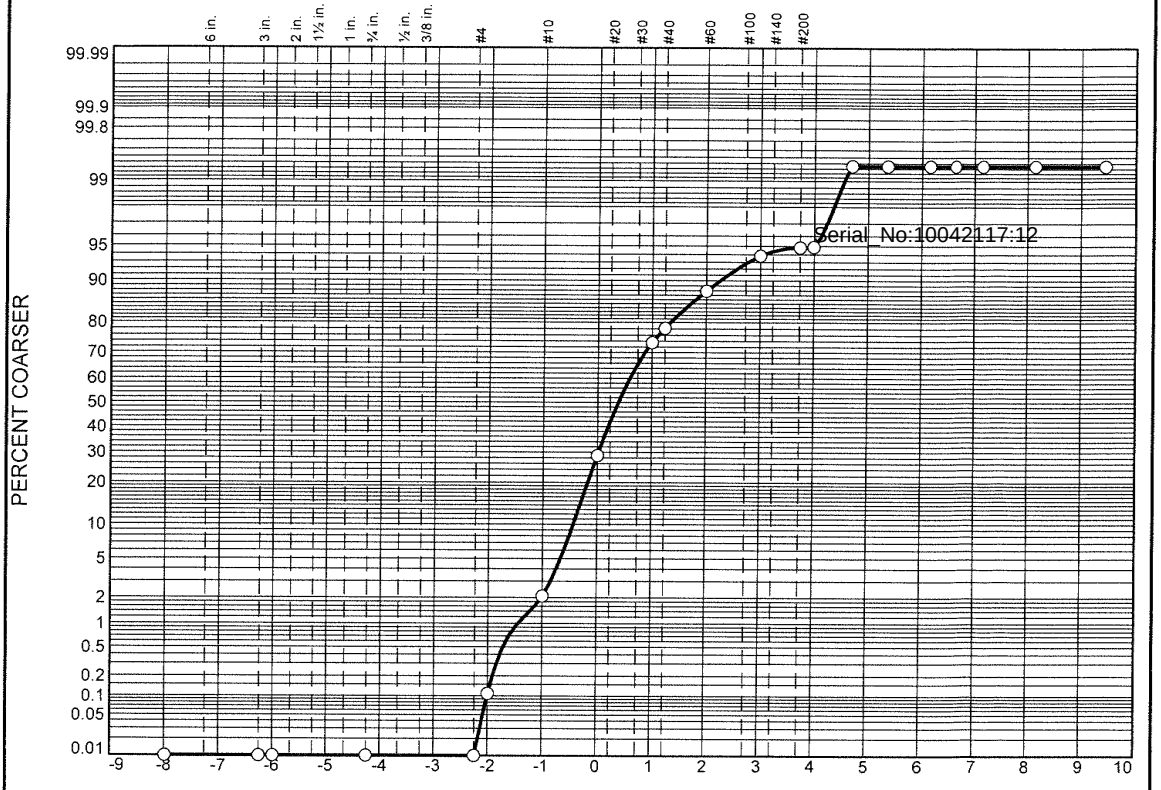
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	0.0	1.0	1.8	5.7	57.7	12.9	79.1	16.9	0.0	0.0		16.9	3.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0419	0.0489	0.0544	0.0613	0.1150	0.1356	0.1497	0.1638	0.2009	0.2164	0.2414	0.3361

Fineness Modulus	C_u	C_c
0.60	3.35	1.65

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	2.0	26.7	44.7	14.4	5.9	1.2	4.4	0.0	0.0	0.0	0.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2209	0.8701	0.7654	0.5468	0.3041	0.2087	1.65	4.17

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1516|SED|01 **Sample No.:** L2146082-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-C|1516|SED|01

Sample Number: L2146082-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 119.99
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
119.99	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.13	0.00	99.9
		#10	2.36	0.00	97.9
		#18	32.10	0.00	71.2
		#35	53.56	0.00	26.5
		#40	5.64	0.00	21.8
		#60	11.66	0.00	12.1
		#120	7.15	0.00	6.2
		#200	1.20	0.00	5.2
		#230	0.07	0.00	5.1

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 5.1
Weight of hydrometer sample =35.54
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	0.6
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	0.6
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	0.6
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	0.6
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	0.6
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	0.6
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	0.6

Fractional Components

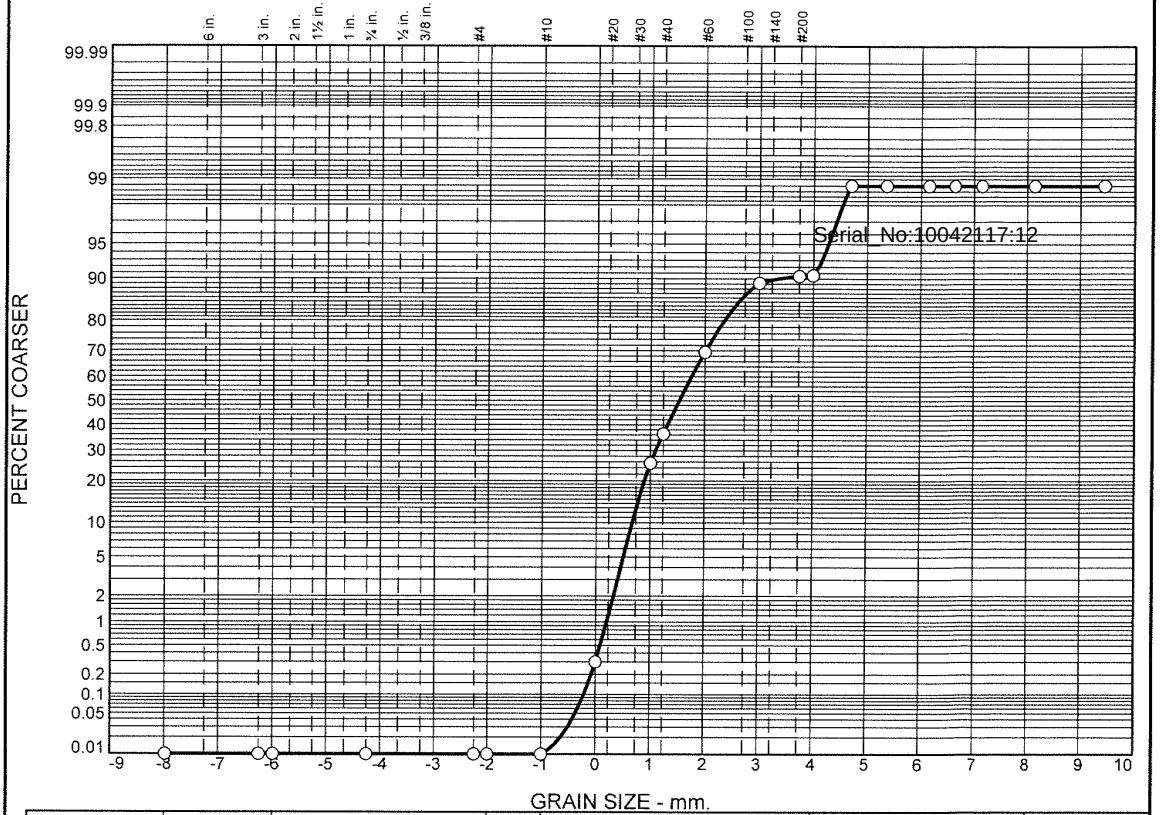
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	2.0	26.7	44.7	14.4	5.9	1.2	92.9	4.4	0.0	0.0	0.0	4.4	0.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0621	0.2087	0.3041	0.3934	0.5468	0.6615	0.7654	0.8701	1.1268	1.2209	1.3518	1.5898

Fineness Modulus	C_u	C_c
2.62	4.17	1.65

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.0	0.3	25.2	43.9	19.8	1.5	8.1	0.0	0.0	0.0	1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5791	0.4023	0.3463	0.2472	0.1623	0.0968	1.57	4.16

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|518|SED|01 **Sample No.:** L2146082-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|518|SED|01

Sample Number: L2146082-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 106.39
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
106.39	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.00	0.00	100.0
		#18	0.32	0.00	99.7
		#35	26.85	0.00	74.5
		#40	11.54	0.00	63.6
		#60	35.17	0.00	30.6
		#120	20.99	0.00	10.8
		#200	1.37	0.00	9.5
		#230	0.13	0.00	9.4

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.4
Weight of hydrometer sample =35.55
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x** Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.2
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.2

Fractional Components

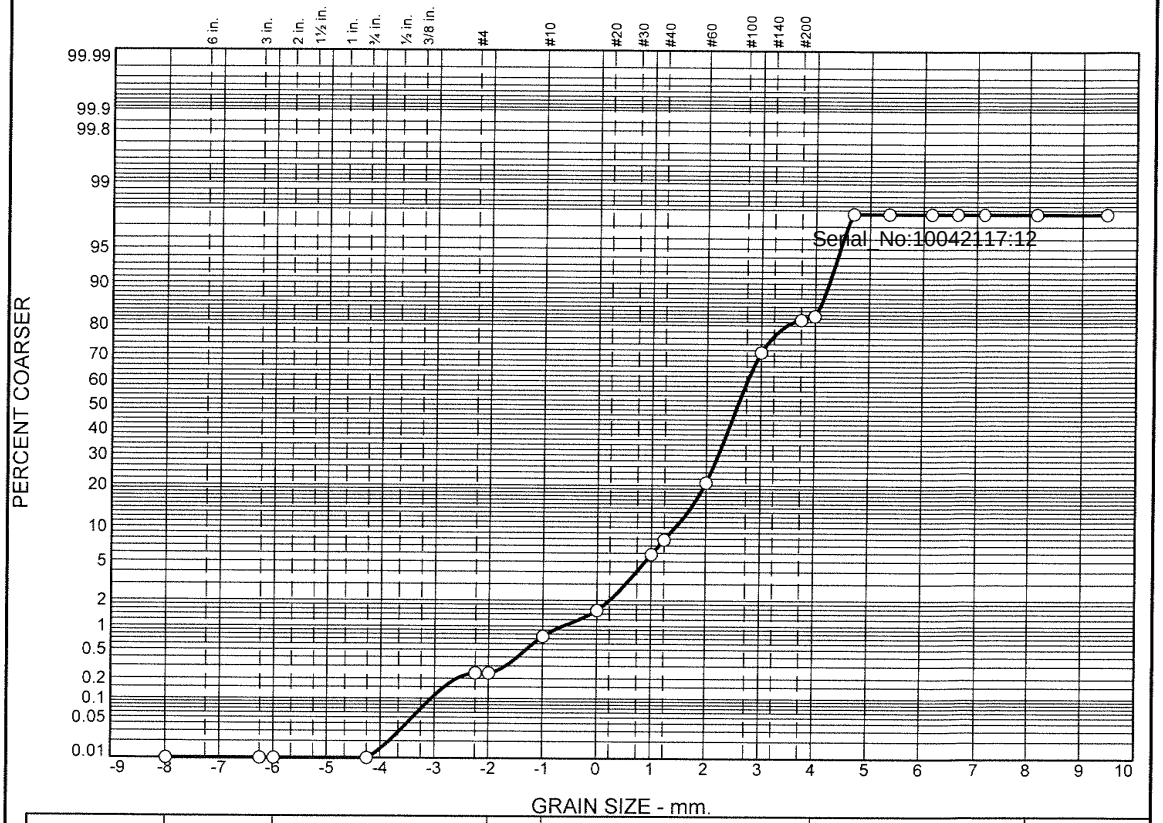
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.0	0.3	25.2	43.9	19.8	1.5	90.7	8.1	0.0	0.0	0.0	8.1	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0516	0.0968	0.1623	0.1944	0.2472	0.2961	0.3463	0.4023	0.5395	0.5791	0.6282	0.7030

Fineness Modulus	C_u	C_c
1.59	4.16	1.57

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	0.5	0.8	4.3	15.0	50.3	11.8	14.9	0.0	0.0	0.0	2.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.2919	0.1885	0.1678	0.1277	0.0587	0.0525	1.65	3.59

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|520\|SED\|01 **Sample No.:** L2146082-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|520|SED|01

Sample Number: L2146082-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 71.27
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
71.27	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.17	0.00	99.8
		#5	0.00	0.00	99.8
		#10	0.36	0.00	99.3
		#18	0.57	0.00	98.5
		#35	3.06	0.00	94.2
		#40	1.45	0.00	92.1
		#60	9.22	0.00	79.2
		#120	35.85	0.00	28.9
		#200	7.47	0.00	18.4
		#230	0.77	0.00	17.3

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.3
Weight of hydrometer sample =35.64
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	2.2
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	2.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	2.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	2.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.2

Fractional Components

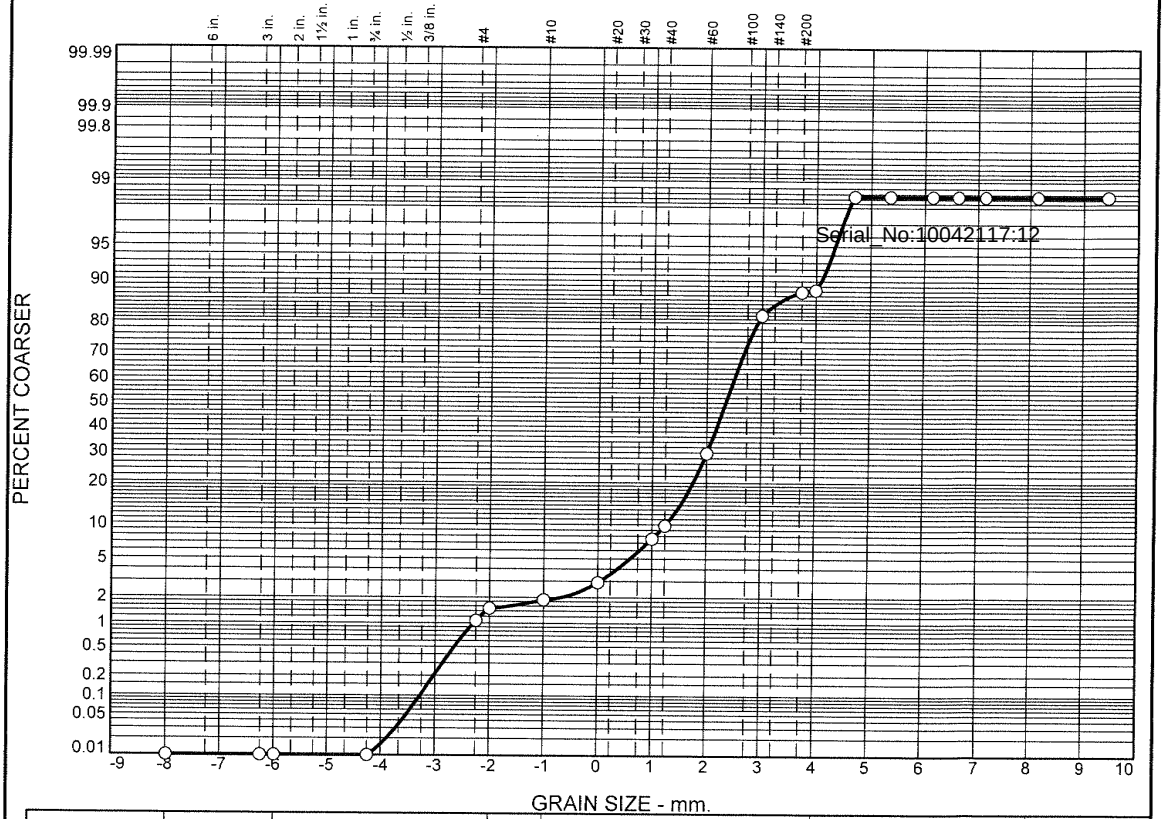
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	0.5	0.8	4.3	15.0	50.3	11.8	82.2	14.9	0.0	0.0	0.0	14.9	2.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0457	0.0525	0.0587	0.0901	0.1277	0.1485	0.1678	0.1885	0.2544	0.2919	0.3680	0.5406

Fineness Modulus	C_u	C_c
0.80	3.59	1.65

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.5	0.4	1.0	4.7	22.1	52.3	6.3	10.2	0.0	0.0	0.0	1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.3379	0.2195	0.1967	0.1560	0.1042	0.0583	1.90	3.76

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|522|SED|01 **Sample No.:** L2146082-05

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|522|SED|01

Sample Number: L2146082-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 99.28
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
99.28	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	1.07	0.00	98.9
		#5	0.42	0.00	98.5
		#10	0.38	0.00	98.1
		#18	1.01	0.00	97.1
		#35	4.66	0.00	92.4
		#40	2.14	0.00	90.2
		#60	19.79	0.00	70.3
		#120	51.96	0.00	18.0
		#200	5.73	0.00	12.2
		#230	0.42	0.00	11.8

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.8
Weight of hydrometer sample =35.64
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.5
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.5
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.5
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.5
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.5
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.5
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.5

Fractional Components

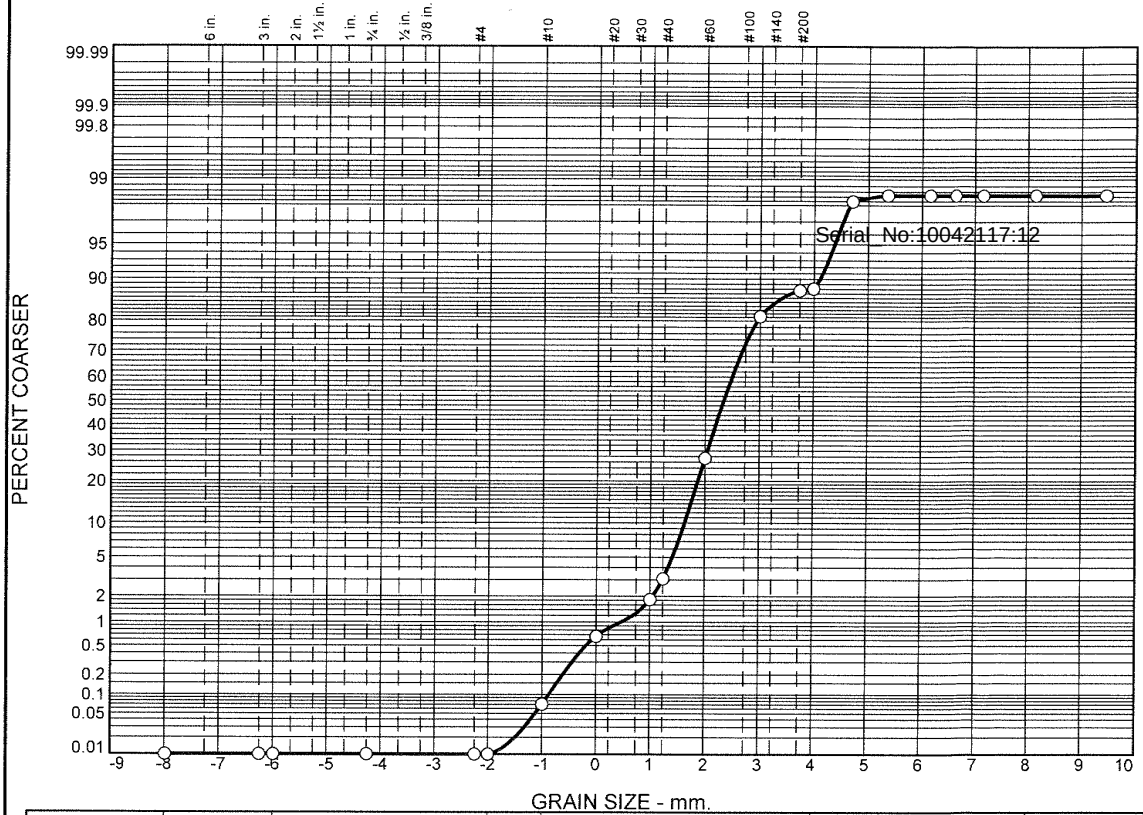
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.5	0.4	1.0	4.7	22.1	52.3	6.3	86.4	10.2	0.0	0.0	0.0	10.2	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0493	0.0583	0.1042	0.1315	0.1560	0.1764	0.1967	0.2195	0.2962	0.3379	0.4186	0.6628

Fineness Modulus	C_u	C_c
1.03	3.76	1.90

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.6	1.1	25.5	54.0	6.9	10.2	0.1	0.0		1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.2939	0.2189	0.1978	0.1561	0.1019	0.0575	1.93	3.81

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|524|SED|01 **Sample No.:** L2146082-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|524|SED|01

Sample Number: L2146082-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 70.80
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
70.80	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.05	0.00	99.9
		#18	0.42	0.00	99.3
		#35	0.83	0.00	98.2
		#40	0.87	0.00	96.9
		#60	17.19	0.00	72.7
		#120	38.18	0.00	18.7
		#200	4.55	0.00	12.3
		#230	0.24	0.00	12.0

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.0
Weight of hydrometer sample =35.22
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.66
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0138	3.5	15.4	0.0383	1.8
5.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0243	1.5
15.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0140	1.5
30.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0099	1.5
60.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0070	1.5
240.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0035	1.5
1440.00	18.8	1.0030	1.0028	0.0138	3.0	15.5	0.0014	1.5

Fractional Components

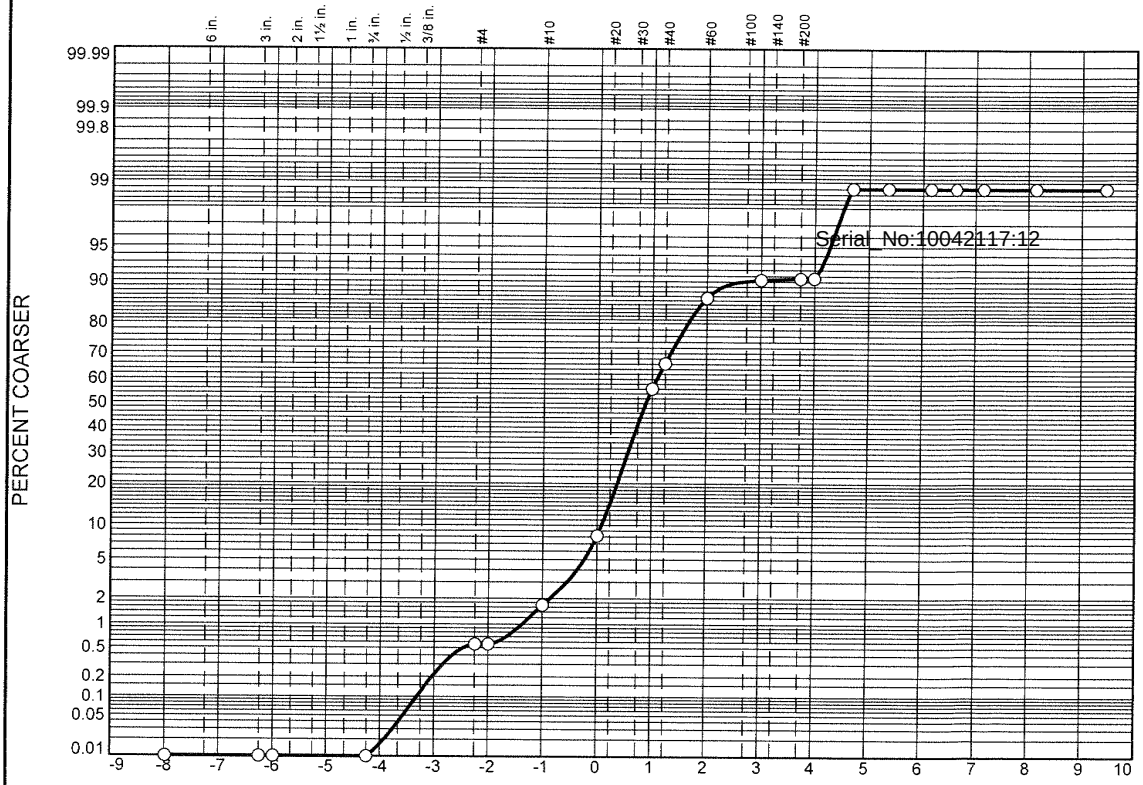
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.6	1.1	25.5	54.0	6.9	88.1	10.2	0.1	0.0		10.3	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0481	0.0575	0.1019	0.1294	0.1561	0.1775	0.1978	0.2189	0.2732	0.2939	0.3230	0.3773

Fineness Modulus	C_u	C_c
0.88	3.81	1.93

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.6	1.1	6.5	47.9	30.5	3.7	0.4	8.1	0.0	0.0		1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8421	0.6070	0.5411	0.3962	0.2697	0.1572	1.65	3.86

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|526|SED|01 **Sample No.:** L2146082-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|526|SED|01

Sample Number: L2146082-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 85.60
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
85.60	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.48	0.00	99.4
		#5	0.00	0.00	99.4
		#10	0.96	0.00	98.3
		#18	5.56	0.00	91.8
		#35	41.03	0.00	43.9
		#40	8.62	0.00	33.8
		#60	17.46	0.00	13.4
		#120	3.18	0.00	9.7
		#200	0.22	0.00	9.5
		#230	0.02	0.00	9.4

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.4
Weight of hydrometer sample =35.89
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.2
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.2

Fractional Components

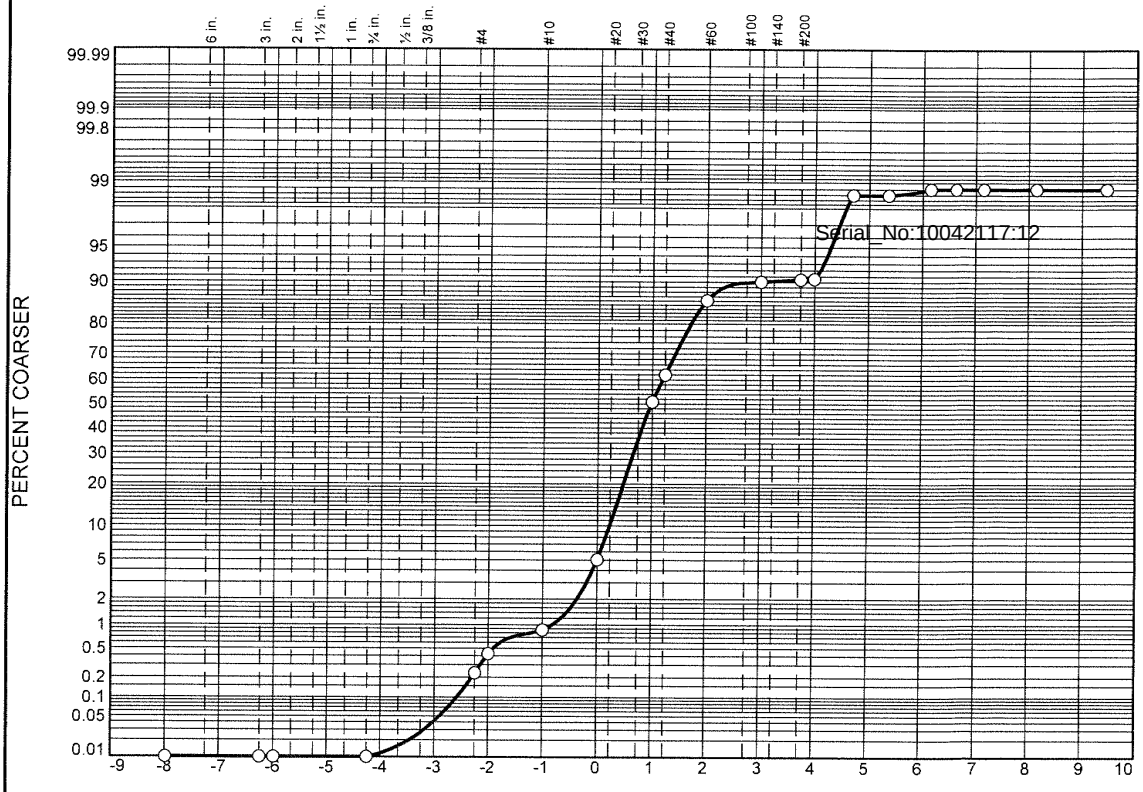
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.6	1.1	6.5	47.9	30.5	3.7	0.4	89.0	8.1	0.0	0.0		8.1	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0515	0.1572	0.2697	0.3180	0.3962	0.4719	0.5411	0.6070	0.7750	0.8421	0.9434	1.1754

Fineness Modulus	C_u	C_c
2.20	3.86	1.65

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.5	4.2	45.8	35.2	3.9	0.6	8.0	0.1	0.1	0.0	1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7752	0.5688	0.5056	0.3724	0.2622	0.1290	1.89	4.41

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|528|SED|01 **Sample No.:** L2146082-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|528|SED|01

Sample Number: L2146082-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 117.54
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
117.54	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.27	0.00	99.8
		#5	0.23	0.00	99.6
		#10	0.52	0.00	99.1
		#18	4.94	0.00	94.9
		#35	53.83	0.00	49.1
		#40	12.97	0.00	38.1
		#60	28.46	0.00	13.9
		#120	4.61	0.00	10.0
		#200	0.50	0.00	9.5
		#230	0.11	0.00	9.4

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.4
Weight of hydrometer sample =35.76
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	1.4
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	1.4
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.2

Fractional Components

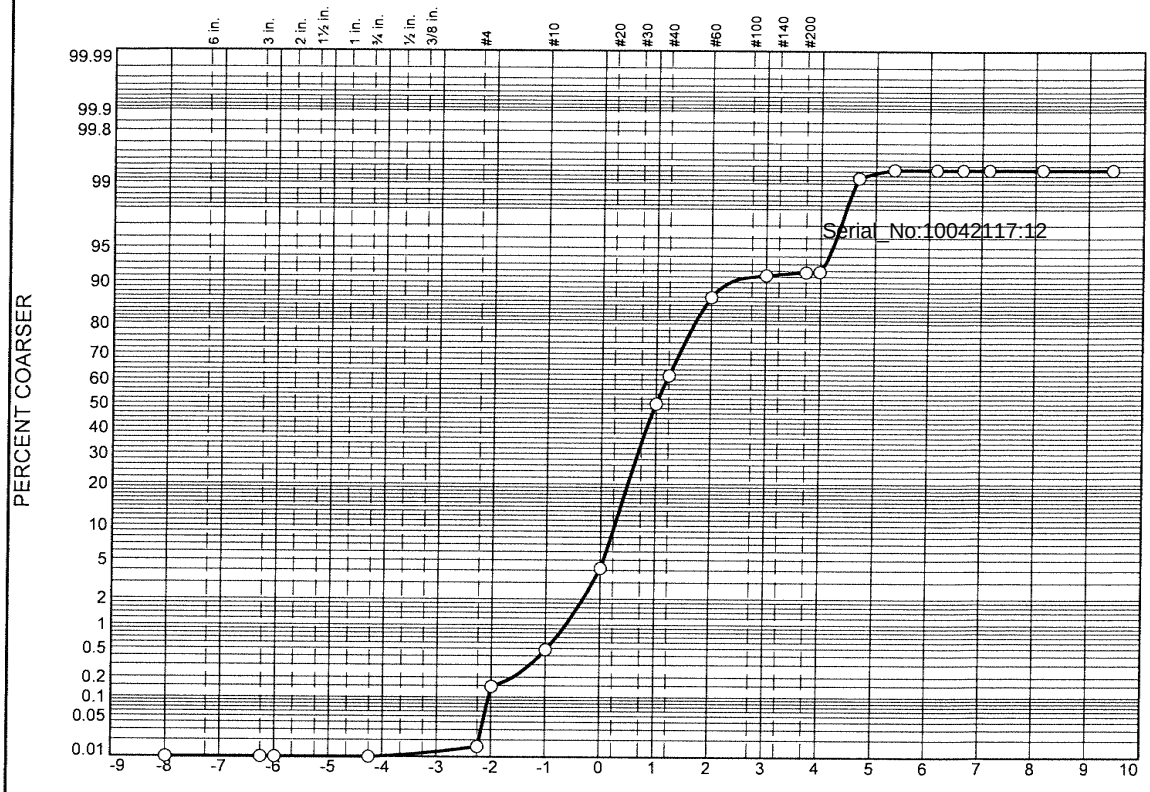
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	0.5	4.2	45.8	35.2	3.9	0.6	89.7	8.0	0.1	0.1	0.0	8.2	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0509	0.1290	0.2622	0.3050	0.3724	0.4379	0.5056	0.5688	0.7192	0.7752	0.8544	1.0034

Fineness Modulus	C_u	C_c
2.09	4.41	1.89

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.4	3.7	45.8	36.9	4.3	0.7	7.4	0.0	0.0	0.0	0.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7618	0.5620	0.5000	0.3731	0.2692	0.1979	1.25	2.84

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|528|SED|02 **Sample No.:** L2146082-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|528|SED|02

Sample Number: L2146082-09

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 130.28
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
130.28	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.02	0.00	100.0
		#5	0.17	0.00	99.9
		#10	0.44	0.00	99.5
		#18	4.82	0.00	95.8
		#35	59.70	0.00	50.0
		#40	15.08	0.00	38.4
		#60	32.96	0.00	13.1
		#120	5.66	0.00	8.8
		#200	0.67	0.00	8.3
		#230	0.14	0.00	8.2

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 8.2
Weight of hydrometer sample =35.56
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0387	0.9
5.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0246	0.7
15.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0142	0.7
30.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0100	0.7
60.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0071	0.7
240.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0036	0.7
1440.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0014	0.7

Fractional Components

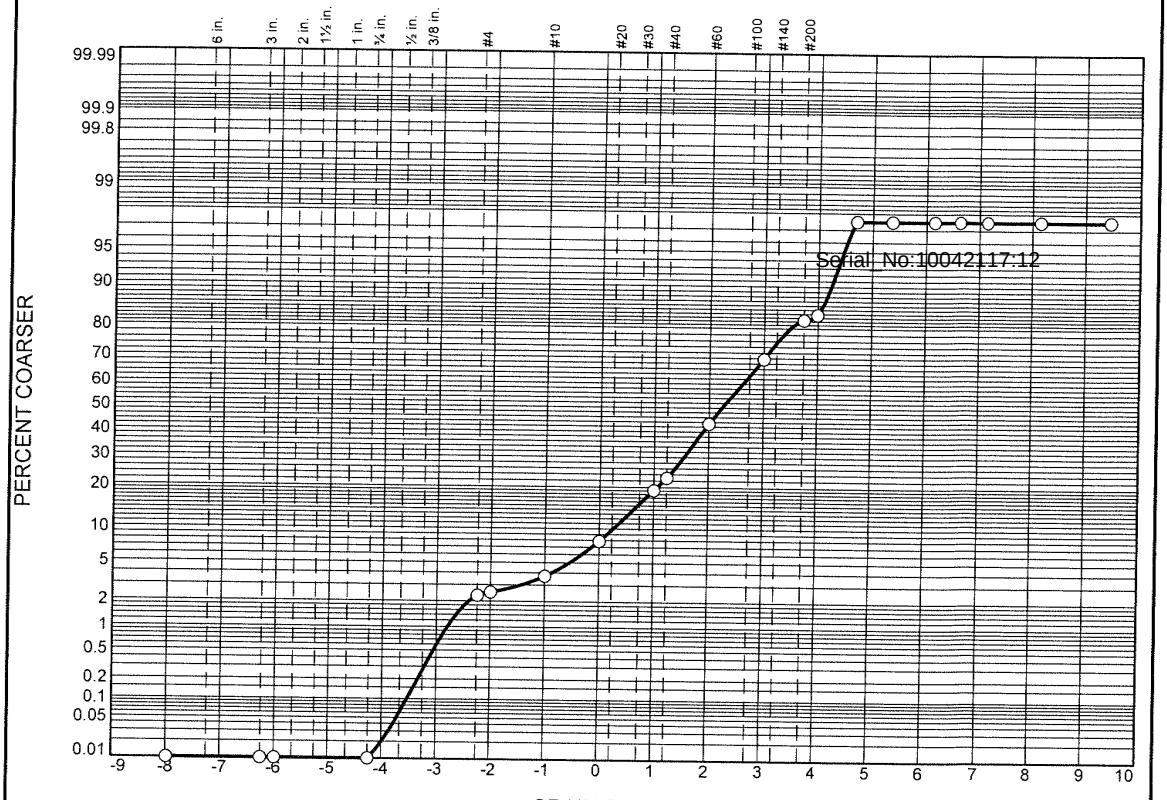
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.4	3.7	45.8	36.9	4.3	0.7	91.4	7.4	0.0	0.0	0.0	7.4	0.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0537	0.1979	0.2692	0.3090	0.3731	0.4352	0.5000	0.5620	0.7084	0.7618	0.8353	0.9645

Fineness Modulus	C_u	C_c
2.09	2.84	1.25

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.5	1.2	4.2	11.2	24.1	26.5	14.3	13.5	0.0	0.0	0.0	2.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6138	0.2691	0.2118	0.1238	0.0602	0.0528	1.08	5.09

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|530|SED|01 **Sample No.:** L2146082-10

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|530|SED|01

Sample Number: L2146082-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 95.74
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
95.74	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	2.20	0.00	97.7
		#5	0.20	0.00	97.5
		#10	1.14	0.00	96.3
		#18	4.00	0.00	92.1
		#35	10.76	0.00	80.9
		#40	3.59	0.00	77.1
		#60	19.45	0.00	56.8
		#120	25.35	0.00	30.3
		#200	12.13	0.00	17.7
		#230	1.38	0.00	16.2

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.2
Weight of hydrometer sample =35.20
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	2.5
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	2.5
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	2.5
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	2.5
60.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0070	2.5
240.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0035	2.5
1440.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0014	2.5

Fractional Components

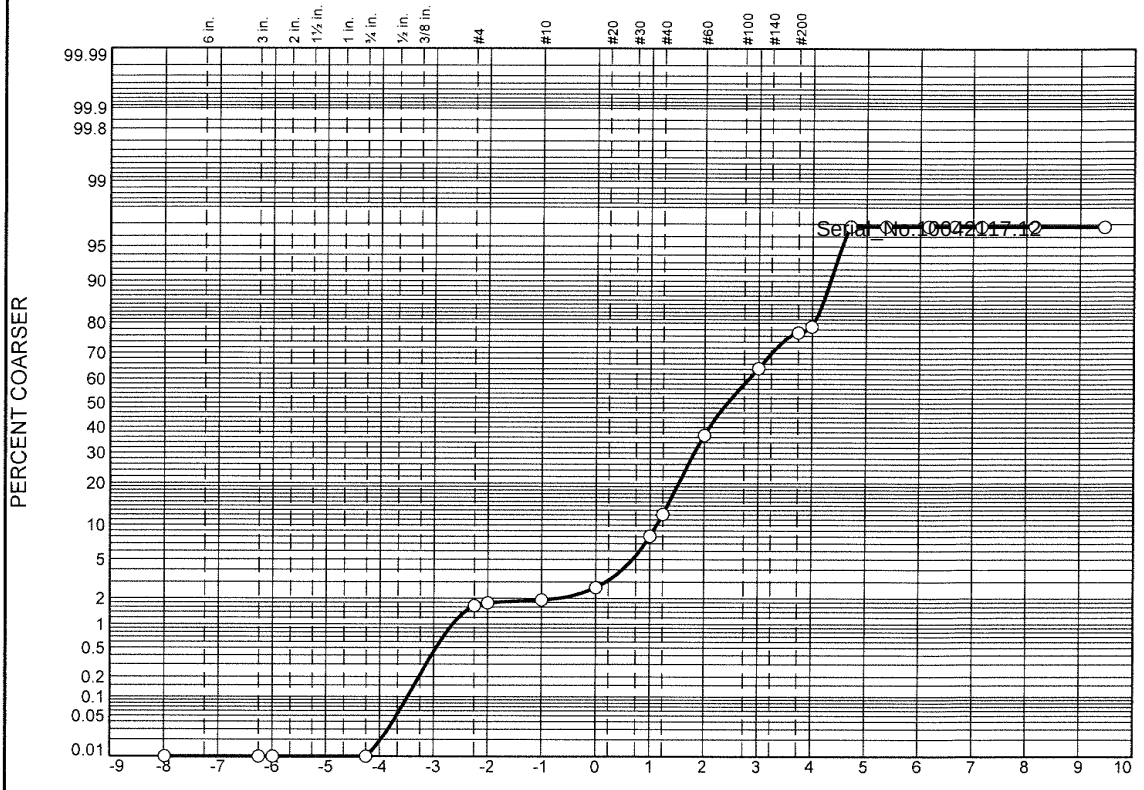
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.5	1.2	4.2	11.2	24.1	26.5	14.3	80.3	13.5	0.0	0.0	0.0	13.5	2.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0454	0.0528	0.0602	0.0892	0.1238	0.1629	0.2118	0.2691	0.4797	0.6138	0.8358	1.4603

Fineness Modulus	C_u	C_c
1.26	5.09	1.08

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	0.1	0.7	5.5	28.7	27.4	15.0	17.6	0.0	0.0		3.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3903	0.2343	0.1862	0.1055	0.0548	0.0496	0.96	4.72

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|532\|SED\|01 **Sample No.:** L2146082-11

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|532|SED|01

Sample Number: L2146082-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 64.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
64.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	1.06	0.00	98.3
		#5	0.08	0.00	98.2
		#10	0.09	0.00	98.1
		#18	0.45	0.00	97.4
		#35	3.51	0.00	91.9
		#40	2.58	0.00	87.9
		#60	15.83	0.00	63.2
		#120	17.63	0.00	35.8
		#200	8.23	0.00	22.9
		#230	1.20	0.00	21.1

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 21.1
Weight of hydrometer sample =35.39
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	3.2
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	3.2
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	3.2
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	3.2
60.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0070	3.2
240.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0035	3.2
1440.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0014	3.2

Fractional Components

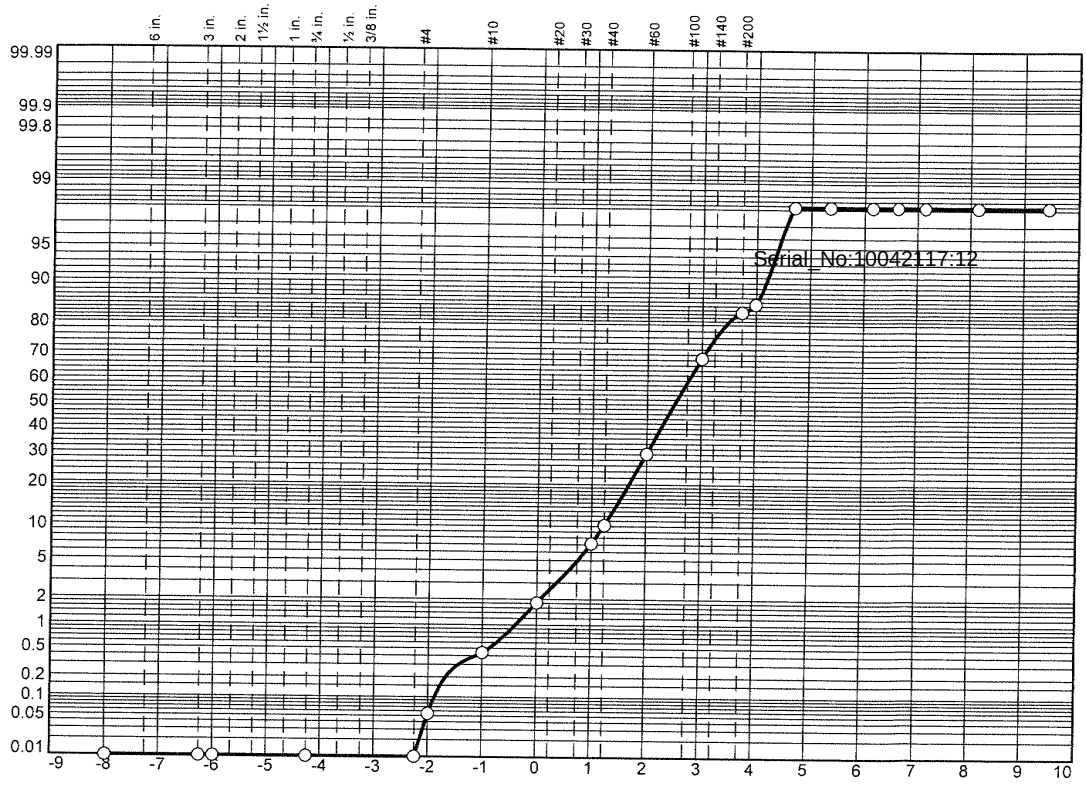
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	0.1	0.7	5.5	28.7	27.4	15.0	77.3	17.6	0.0	0.0		17.6	3.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0429	0.0496	0.0548	0.0610	0.1055	0.1413	0.1862	0.2343	0.3462	0.3903	0.4585	0.6255

Fineness Modulus	C_u	C_c
0.97	4.72	0.96

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.3	1.4	5.3	23.1	38.4	17.1	12.4	0.0	0.0		1.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.3567	0.2094	0.1764	0.1212	0.0644	0.0551	1.27	3.80

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|534|SED|01 **Sample No.:** L2146082-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|534|SED|01

Sample Number: L2146082-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 72.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
72.90	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.04	0.00	99.9
		#10	0.28	0.00	99.6
		#18	1.01	0.00	98.2
		#35	3.87	0.00	92.9
		#40	2.23	0.00	89.8
		#60	14.61	0.00	69.8
		#120	27.95	0.00	31.4
		#200	10.88	0.00	16.5
		#230	1.43	0.00	14.5

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.5
Weight of hydrometer sample =35.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.9
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.9
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.9
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.9
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.9
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.9
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.9

Fractional Components

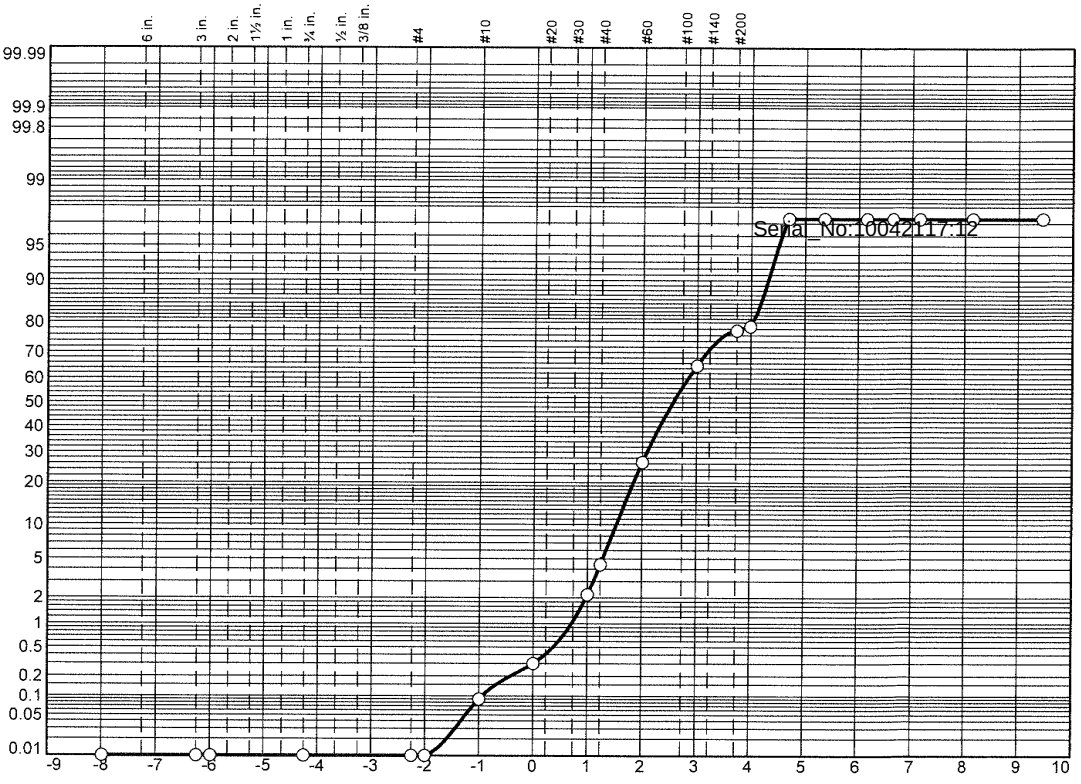
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.3	1.4	5.3	23.1	38.4	17.1	85.3	12.4	0.0	0.0		12.4	1.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0474	0.0551	0.0644	0.0921	0.1212	0.1479	0.1764	0.2094	0.3112	0.3567	0.4286	0.5945

Fineness Modulus	C_u	C_c
0.87	3.80	1.27

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.2	1.9	24.3	38.5	14.0	18.3	0.0	0.0	0.0	2.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			0.3077	0.2008	0.1694	0.1100	0.0550	0.0501	1.20	4.01

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|536|SED|01 **Sample No.:** L2146082-13

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|536|SED|01

Sample Number: L2146082-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 66.71
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
66.71	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.06	0.00	99.9
		#18	0.14	0.00	99.7
		#35	1.24	0.00	97.8
		#40	1.49	0.00	95.6
		#60	14.73	0.00	73.5
		#120	25.71	0.00	35.0
		#200	8.32	0.00	22.5
		#230	0.86	0.00	21.2

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 21.2
Weight of hydrometer sample =35.90
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	2.7
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	2.7
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	2.7
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	2.7
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.7
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.7
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.7

Fractional Components

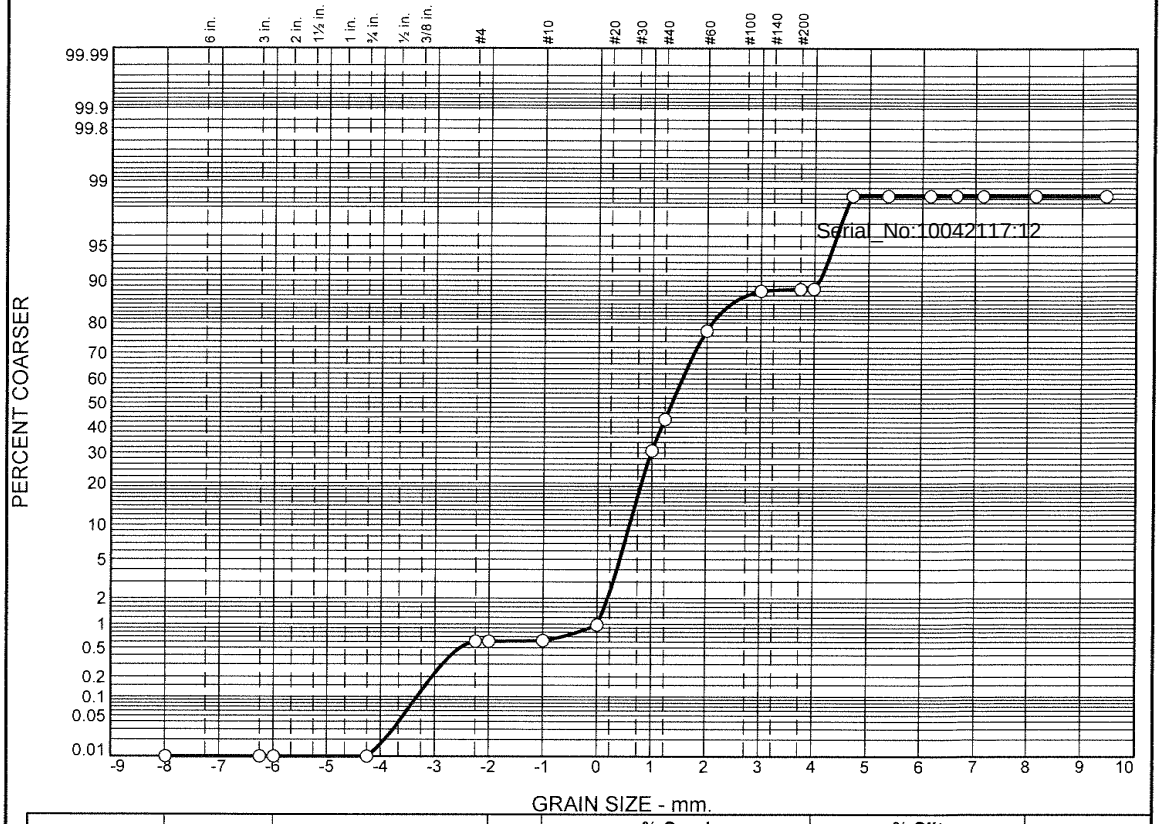
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.2	1.9	24.3	38.5	14.0	78.9	18.3	0.0	0.0	0.0	18.3	2.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0440	0.0501	0.0550	0.0608	0.1100	0.1397	0.1694	0.2008	0.2794	0.3077	0.3464	0.4123

Fineness Modulus	C_u	C_c
0.74	4.01	1.20

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.6	0.0	0.4	29.7	46.8	10.5	0.5	10.0	0.0	0.0	0.0	1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6107	0.4431	0.3886	0.2922	0.1839	0.0585	3.29	7.58

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|538|SED|01 **Sample No.:** L2146082-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|538|SED|01

Sample Number: L2146082-14

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 80.48
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
80.48	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.49	0.00	99.4
		#5	0.00	0.00	99.4
		#10	0.01	0.00	99.4
		#18	0.29	0.00	99.0
		#35	23.95	0.00	69.3
		#40	9.97	0.00	56.9
		#60	27.68	0.00	22.5
		#120	8.45	0.00	12.0
		#200	0.30	0.00	11.6
		#230	0.02	0.00	11.6

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.6
Weight of hydrometer sample =35.25
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.5
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.5
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.5
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.5
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.5
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.5
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.5

Fractional Components

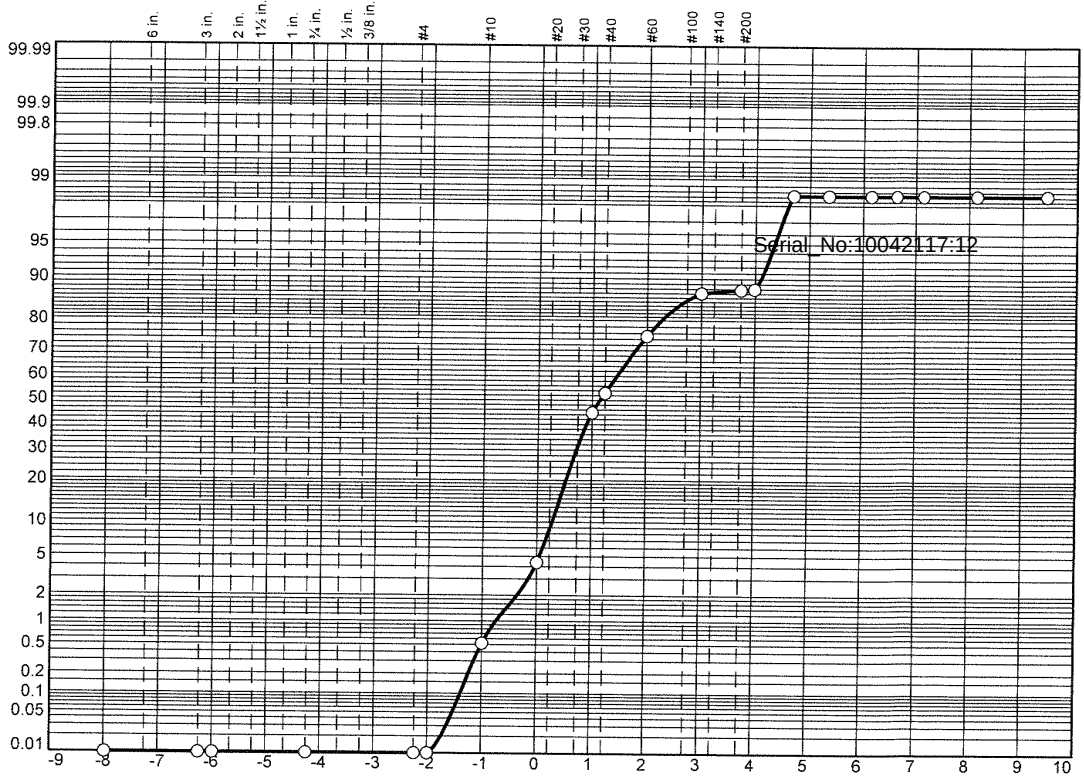
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.6	0.0	0.4	29.7	46.8	10.5	0.5	87.9	10.0	0.0	0.0	0.0	10.0	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0493	0.0585	0.1839	0.2327	0.2922	0.3404	0.3886	0.4431	0.5706	0.6107	0.6631	0.7494

Fineness Modulus	C_u	C_c
1.74	7.58	3.29

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	3.9	40.5	30.1	12.0	1.1	10.3	0.0	0.0		1.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7475	0.5372	0.4537	0.2883	0.1549	0.0578	2.68	9.30

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|540|SED|01 **Sample No.:** L2146082-15

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|540|SED|01

Sample Number: L2146082-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 82.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
82.67	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.43	0.00	99.5
		#18	3.18	0.00	95.6
		#35	33.47	0.00	55.1
		#40	6.72	0.00	47.0
		#60	18.22	0.00	25.0
		#120	9.94	0.00	13.0
		#200	0.62	0.00	12.2
		#230	0.15	0.00	12.0

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.0
Weight of hydrometer sample =35.10
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.6
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.6
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.6
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.6
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.6
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.6
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.6

Fractional Components

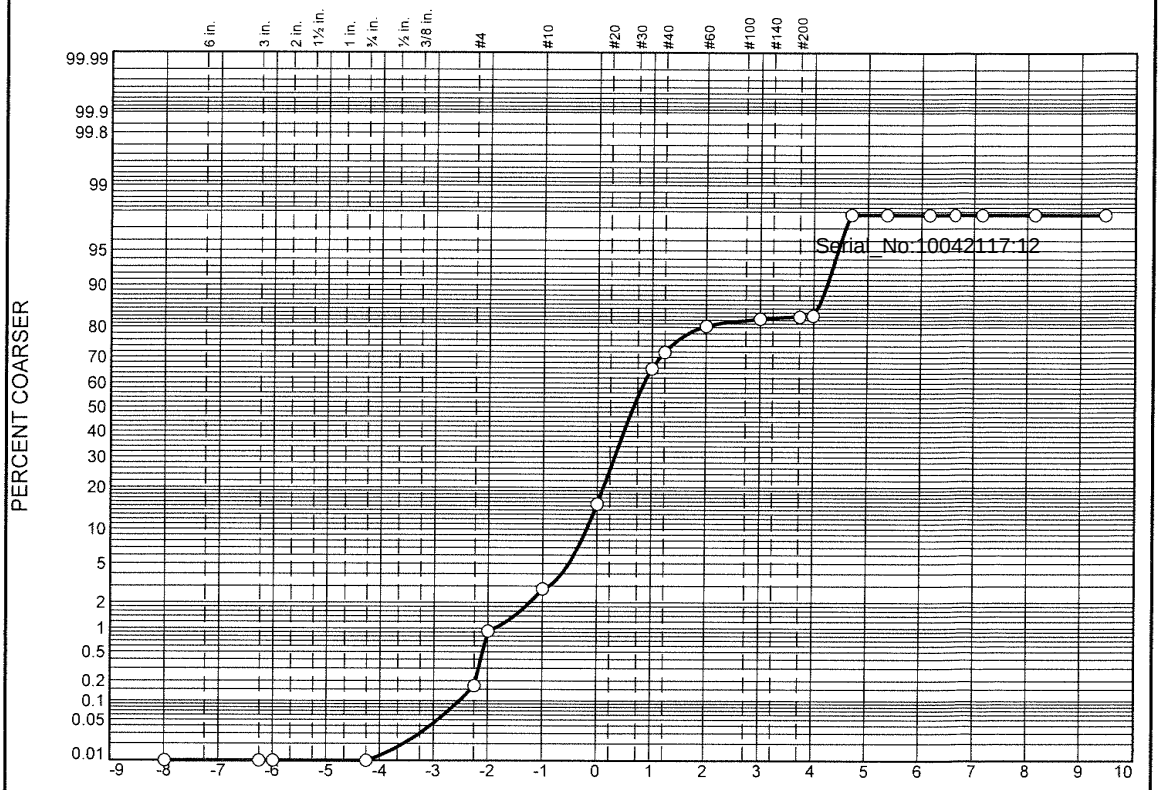
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	3.9	40.5	30.1	12.0	1.1	87.6	10.3	0.0	0.0		10.3	1.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0489	0.0578	0.1549	0.2077	0.2883	0.3644	0.4537	0.5372	0.6930	0.7475	0.8234	0.9668

Fineness Modulus	C_u	C_c
1.88	9.30	2.68

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.9	1.9	12.6	50.3	14.5	2.2	1.0	14.4	0.0	0.0	0.0	2.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0083	0.7122	0.6328	0.4501	0.0592	0.0526	5.41	13.53

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|542\|SED\|01 **Sample No.:** l2146082-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|542|SED|01

Sample Number: I2146082-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 65.15
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.15	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.11	0.00	99.8
		#5	0.49	0.00	99.1
		#10	1.23	0.00	97.2
		#18	8.21	0.00	84.6
		#35	32.78	0.00	34.3
		#40	3.96	0.00	28.2
		#60	5.50	0.00	19.8
		#120	1.39	0.00	17.6
		#200	0.37	0.00	17.1
		#230	0.16	0.00	16.8

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.8
Weight of hydrometer sample =35.35
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	2.2
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	2.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	2.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	2.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.2

Fractional Components

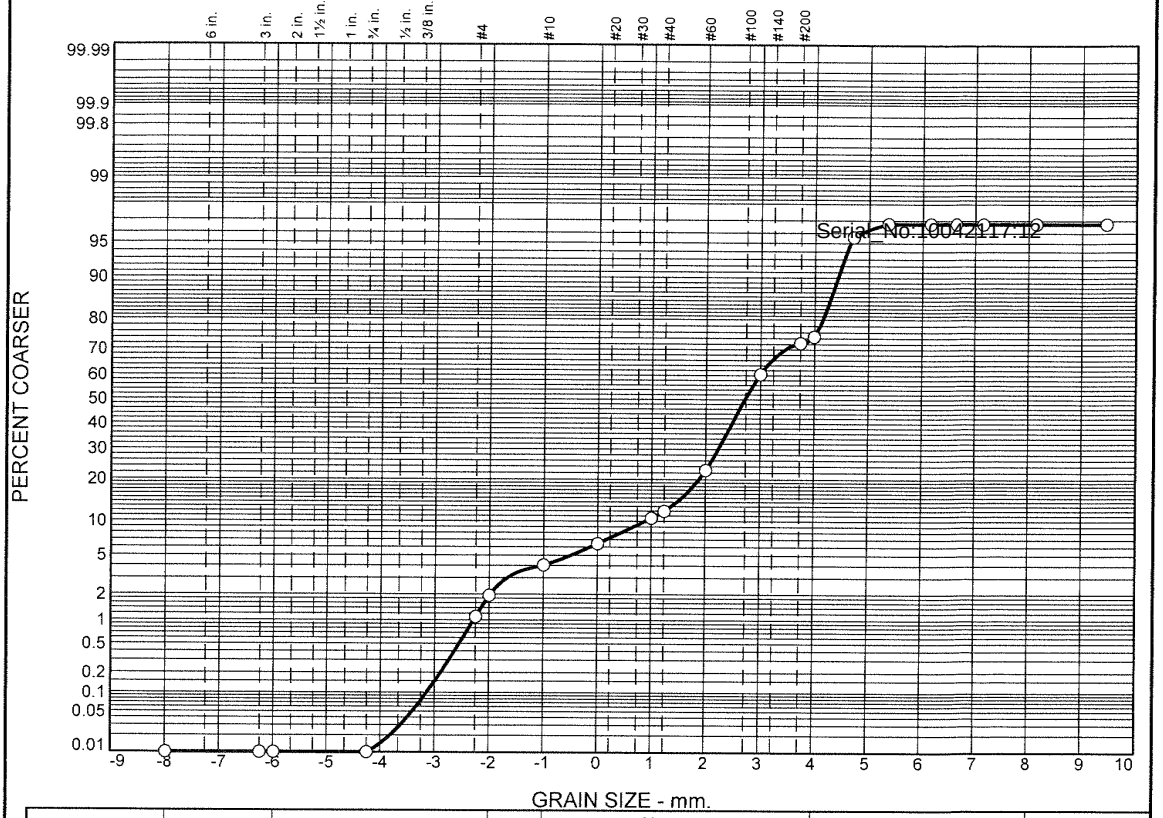
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.9	1.9	12.6	50.3	14.5	2.2	1.0	80.6	14.4	0.0	0.0	0.0	14.4	2.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0458	0.0526	0.0592	0.2588	0.4501	0.5529	0.6328	0.7122	0.9220	1.0083	1.1400	1.4290

Fineness Modulus	C_u	C_c
2.26	13.53	5.41

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.9	2.1	2.4	4.2	12.2	37.5	14.5	21.5	0.5	0.0		3.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.3377	0.1787	0.1518	0.0915	0.0514	0.0466	1.01	3.84

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|544|SED|01 **Sample No.:** L2146082-17

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|544|SED|01

Sample Number: L2146082-17

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 71.94
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
71.94	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.79	0.00	98.9
		#5	0.60	0.00	98.1
		#10	1.51	0.00	96.0
		#18	1.73	0.00	93.6
		#35	2.97	0.00	89.4
		#40	1.02	0.00	88.0
		#60	7.78	0.00	77.2
		#120	27.01	0.00	39.7
		#200	8.63	0.00	27.7
		#230	1.61	0.00	25.4

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 25.4
Weight of hydrometer sample =35.51
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0382	4.4
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	3.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	3.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	3.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	3.2
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	3.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	3.2

Fractional Components

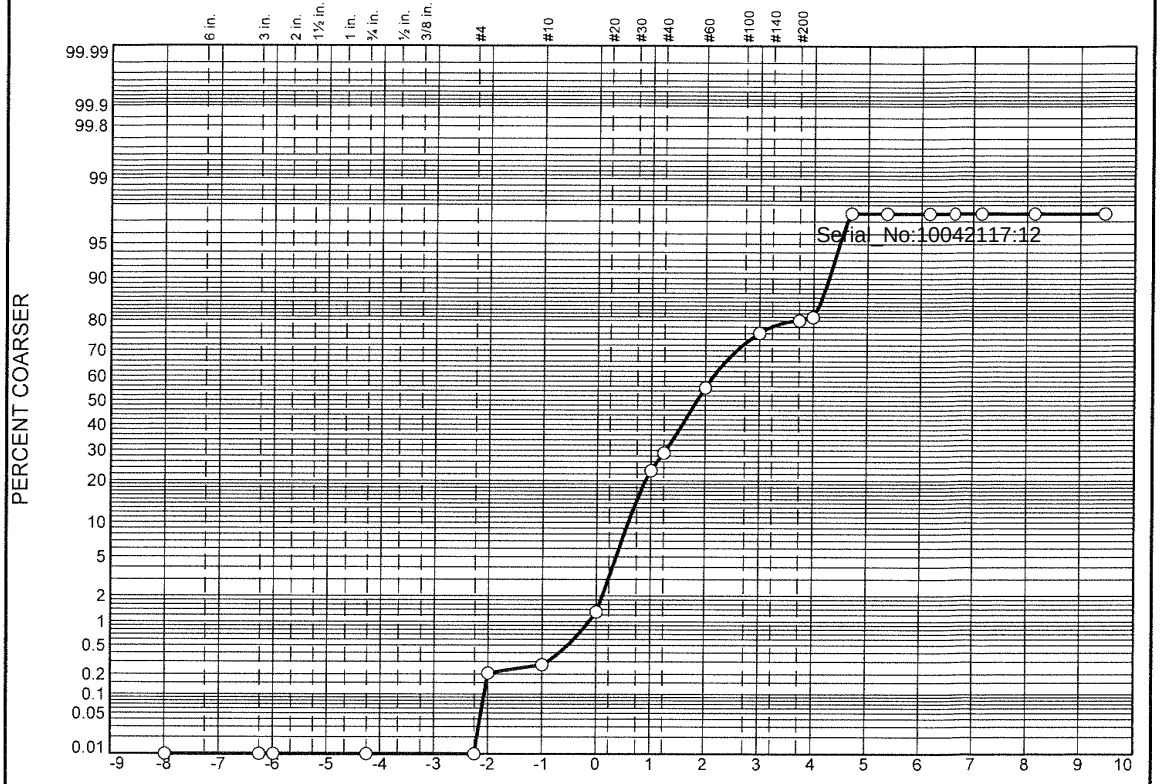
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.9	2.1	2.4	4.2	12.2	37.5	14.5	70.8	21.5	0.5	0.0		22.0	3.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0397	0.0466	0.0514	0.0560	0.0915	0.1259	0.1518	0.1787	0.2717	0.3377	0.5390	1.4063

Fineness Modulus	C_u	C_c
0.88	3.84	1.01

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	0.1	1.0	21.7	32.4	20.6	5.1	16.4	0.0	0.0		2.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5953	0.3352	0.2780	0.1672	0.0567	0.0512	1.63	6.54

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|546|SED|01 **Sample No.:** L2146082-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|546|SED|01

Sample Number: L2146082-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 77.37
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
77.37	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.16	0.00	99.8
		#10	0.05	0.00	99.7
		#18	0.80	0.00	98.7
		#35	16.81	0.00	77.0
		#40	4.65	0.00	71.0
		#60	20.36	0.00	44.6
		#120	16.00	0.00	24.0
		#200	3.05	0.00	20.0
		#230	0.73	0.00	19.1

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 19.1
Weight of hydrometer sample =35.09
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x** Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	2.5
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	2.5
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	2.5
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	2.5
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.5
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.5
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.5

Fractional Components

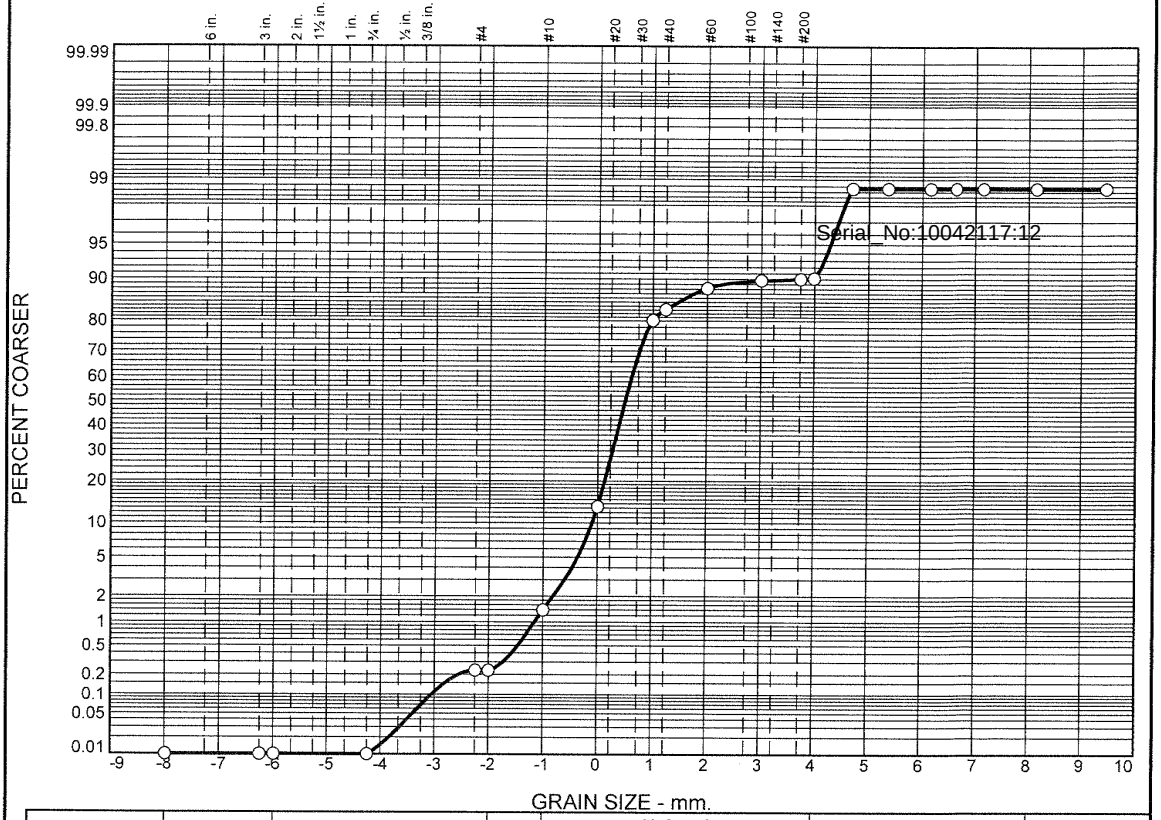
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	0.1	1.0	21.7	32.4	20.6	5.1	80.8	16.4	0.0	0.0		16.4	2.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0448	0.0512	0.0567	0.0747	0.1672	0.2253	0.2780	0.3352	0.5357	0.5953	0.6669	0.7776

Fineness Modulus	C_u	C_c
1.34	6.54	1.63

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	1.2	11.9	66.9	8.0	1.5	0.5	8.5	0.0	0.0	0.0	1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9734	0.7626	0.7065	0.5915	0.3607	0.0721	6.36	10.58

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|548|SED|01 **Sample No.:** L2146082-19

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|548|SED|01

Sample Number: L2146082-19

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 135.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
135.42	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.31	0.00	99.8
		#5	0.00	0.00	99.8
		#10	1.58	0.00	98.6
		#18	16.15	0.00	86.7
		#35	90.50	0.00	19.8
		#40	4.06	0.00	16.9
		#60	6.83	0.00	11.8
		#120	2.08	0.00	10.3
		#200	0.33	0.00	10.0
		#230	0.18	0.00	9.9

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.9
Weight of hydrometer sample =35.11
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.3
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.3
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.3
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.3
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.3
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.3
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.3

Alpha Analytical

Fractional Components

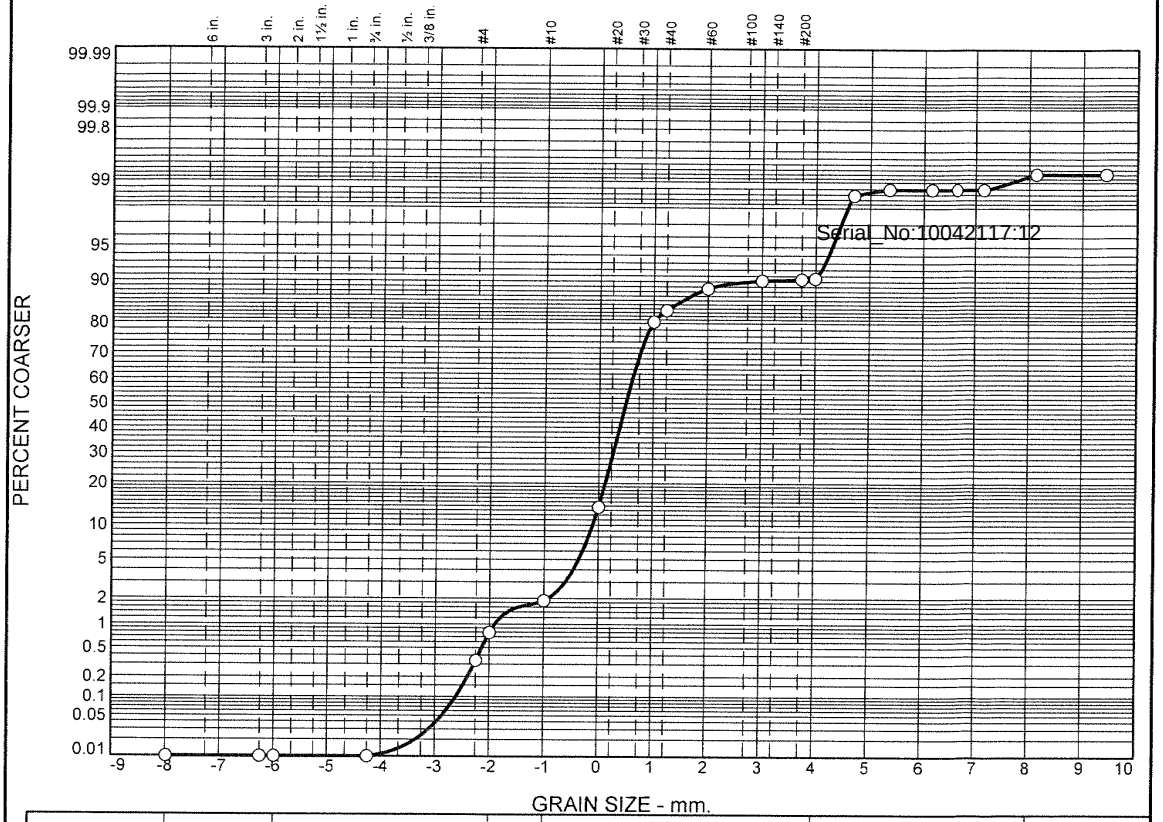
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	1.2	11.9	66.9	8.0	1.5	0.5	88.8	8.5	0.0	0.0	0.0	8.5	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0510	0.0721	0.3607	0.5022	0.5915	0.6519	0.7065	0.7626	0.9118	0.9734	1.0695	1.2849

Fineness Modulus	C_u	C_c
2.53	10.58	6.36

Serial_No:10042117:12

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.8	1.1	11.8	66.6	8.3	1.6	0.4	8.1	0.1	0.0	0.4	0.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.9803	0.7670	0.7100	0.5933	0.3760	0.1407	3.26	5.45

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|548|SED|02 **Sample No.:** L2146082-20

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/4/2021

Location: 3664|2021|ECR-B|548|SED|02

Sample Number: L2146082-20

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 142.36
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
142.36	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75"	0.00	0.00	100.0
		#4	0.48	0.00	99.7
		#5	0.64	0.00	99.2
		#10	1.57	0.00	98.1
		#18	16.86	0.00	86.3
		#35	94.83	0.00	19.7
		#40	4.53	0.00	16.5
		#60	7.22	0.00	11.4
		#120	2.24	0.00	9.8
		#200	0.34	0.00	9.6
		#230	0.15	0.00	9.5

Serial_No:10042117:12

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.5
Weight of hydrometer sample =35.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	1.4
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.2
240.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0036	0.8
1440.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0014	0.8

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.8	1.1	11.8	66.6	8.3	1.6	0.4	88.7	8.1	0.1	0.0	0.4	8.6	0.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0507	0.1407	0.3760	0.5049	0.5933	0.6545	0.7100	0.7670	0.9184	0.9803	1.0755	1.2834

Fineness Modulus	C_u	C_c
2.55	5.45	3.26

Serial_No:10042117:12

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

8/26/21 0146082

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|648|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|650|Sed|GS|01	8/15/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|652|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|654|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|656|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|658|Sed|GS|01	8/14/2021	SmithMac	250-mL plastic	freeze	grain size	6	Cooler #2
3664|2021|ECR-B|516|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -01
3664|2021|ECR-C|1516|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -02
3664|2021|ECR-B|518|Sed|TOC|01	8/21/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -03
3664|2021|ECR-B|520|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -04
3664|2021|ECR-B|522|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -05
3664|2021|ECR-B|524|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -06
3664|2021|ECR-B|526|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -07
3664|2021|ECR-B|528|Sed|TOC|01	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -08
3664|2021|ECR-B|528|Sed|TOC|02	8/20/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 ; QC duplicate -09
3664|2021|ECR-B|530|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -10
3664|2021|ECR-B|532|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -11
3664|2021|ECR-B|534|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -12

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: _____
DATE/TIME: 8/26/21 1000
RECEIVED BY: MGM HLPL AM
DATE/TIME: 8/26/21 1000

RELINQUISHED BY: MGM
DATE/TIME: 8/26/21 1100
RECEIVED BY: MC -AM
DATE/TIME: 8/26/21 1100

CSA CONTACT NAME: Jason Clermont
TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when applicable, at the time of sample receipt. Note: Initials are not acceptable.

9/26/21

L2146032

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|536|Sed|TOC|01	8/19/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -13
3664|2021|ECR-B|538|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -14
3664|2021|ECR-B|540|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -15
3664|2021|ECR-B|542|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -16
3664|2021|ECR-B|544|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -17
3664|2021|ECR-B|546|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -18
3664|2021|ECR-B|548|Sed|TOC|01	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1 -19
3664|2021|ECR-B|548|Sed|TOC|02	8/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	5	Cooler #1; QC duplicate -20
3664|2021|ECR-B|516|Sed|GS|01	8/21/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -01
3664|2021|ECR-C|1516|Sed|GS|01	8/21/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -02
3664|2021|ECR-B|518|Sed|GS|01	8/21/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -03
3664|2021|ECR-B|520|Sed|GS|01	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -04
3664|2021|ECR-B|522|Sed|GS|01	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -05
3664|2021|ECR-B|524|Sed|GS|01	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -06
3664|2021|ECR-B|526|Sed|GS|01	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -07
3664|2021|ECR-B|528|Sed|GS|01	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -08
3664|2021|ECR-B|528|Sed|GS|02	8/20/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 ; QC duplicate -09
3664|2021|ECR-B|530|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -10

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY:
DATE/TIME: 8/26/21 1000
RECEIVED BY:
DATE/TIME: 9/26/21 1000

RELINQUISHED BY:
DATE/TIME: 8/26/21 1150
RECEIVED BY:
DATE/TIME: 8/26/21 1150

CSA CONTACT NAME: Jason Clermont
TELEPHONE NUMBER: 252-258-1626

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8/26/21 L2146082

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|532|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -11
3664|2021|ECR-B|534|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -12
3664|2021|ECR-B|536|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -13
3664|2021|ECR-B|538|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -14
3664|2021|ECR-B|540|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -15
3664|2021|ECR-B|542|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -16
3664|2021|ECR-B|544|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -17
3664|2021|ECR-B|546|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -18
3664|2021|ECR-B|548|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 -19
3664|2021|ECR-B|548|Sed|GS|02	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 ; QC duplicate -20
3664|2021|ECR-C|1208|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|223|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|225|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|227|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|229|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|231|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|233|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-B|235|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon	2	Cooler #1

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 8/26/21 1000 RECEIVED BY: [signature] DATE/TIME: 8/26/21 1000
RELINQUISHED BY: [signature] DATE/TIME: 8/26/21 1150 RECEIVED BY: [signature] DATE/TIME: 8/26/21 1150

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

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Serial_No:10062116:51

ANALYTICAL REPORT

Lab Number:	L2146084
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	10/06/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2146084-01	3664|2021|ECR-C|1208|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-02	3664|2021|ECR-B|223|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-03	3664|2021|ECR-B|225|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-04	3664|2021|ECR-B|227|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-05	3664|2021|ECR-B|229|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-06	3664|2021|ECR-B|231|SED|01	SEDIMENT	OFFSHORE MA / NY	08/25/21 00:00	08/26/21
L2146084-07	3664|2021|ECR-B|233|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-08	3664|2021|ECR-B|235|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-09	3664|2021|ECR-B|237|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-10	3664|2021|ECR-B|239|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-11	3664|2021|ECR-B|239|SED|02	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-12	3664|2021|ECR-B|241|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21
L2146084-13	3664|2021|ECR-B|243|SED|01	SEDIMENT	OFFSHORE MA / NY	08/24/21 00:00	08/26/21

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size

The WG1549545-1 Laboratory Duplicate RPD for pebble (74%) and % very fine sand (25%), performed on L2146084-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 10/06/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-01
Client ID: 3664|2021|ECR-C|1208|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.157		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.144		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	0.150		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	16.0		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	3.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	4.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	19.9		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	32.7		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	7.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	0.700		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	13.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-02
Client ID: 3664|2021|ECR-B|223|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.172		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.180		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	0.176		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	3.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	3.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	5.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	18.8		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	39.3		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	17.0		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	1.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	9.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-03
Client ID: 3664|2021|ECR-B|225|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.850		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.870		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	0.860		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	4.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	5.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	7.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	26.7		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	25.6		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	7.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	18.9		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	3.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-04
Client ID: 3664|2021|ECR-B|227|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.10		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.02		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.06		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	5.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	12.0		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	9.30		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	7.30		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	12.0		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	17.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	8.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	23.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	5.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-05
Client ID: 3664|2021|ECR-B|229|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.44		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.55		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.50		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	7.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	10.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	7.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	7.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	10.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	7.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	37.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	11.1		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-06
Client ID: 3664|2021|ECR-B|231|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/25/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.60		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.61		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.60		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.300		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	6.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	10.1		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	9.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	7.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	8.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	5.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	38.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	14.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-07
Client ID: 3664|2021|ECR-B|233|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.64		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.72		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.68		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	8.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	11.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	8.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	6.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	6.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	4.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	38.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	13.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-08
Client ID: 3664|2021|ECR-B|235|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.624		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	0.529		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	0.576		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	3.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	4.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	9.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	23.9		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	29.0		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	9.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	2.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	16.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-09
Client ID: 3664|2021|ECR-B|237|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.59		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.59		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.59		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	2.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	13.3		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	10.5		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	5.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	3.40		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	3.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	3.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	45.3		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	12.6		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-10
Client ID: 3664|2021|ECR-B|239|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.71		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.73		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.72		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	4.10		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	19.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	10.9		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	5.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	2.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	2.30		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	1.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	43.7		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	9.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-11
Client ID: 3664|2021|ECR-B|239|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.63		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.72		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.67		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	11.3		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	11.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	6.20		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	2.90		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	1.60		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	1.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	49.3		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	14.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-12
Client ID: 3664|2021|ECR-B|241|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.70		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.67		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.69		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	8.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	10.8		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	7.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	4.50		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	3.30		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	2.30		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	48.4		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	13.8		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

SAMPLE RESULTS

Lab ID: L2146084-13
Client ID: 3664|2021|ECR-B|243|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/24/21 00:00
Date Received: 08/26/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.49		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	1.66		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	1.57		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Cobbles	ND		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Pebble (4.0-64 mm)	1.00		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Granule (2.0-4.0 mm)	11.1		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Coarse Sand	11.1		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Coarse Sand	6.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Medium Sand	3.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Fine Sand	2.70		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
% Very Fine Sand	2.80		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Silt - (3.9-62.5 um)	47.7		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM
Clay - (<3.9 um)	13.2		%	0.100	NA	1	-	09/22/21 15:55	12,D6913/D7928(M)	SM

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2146084
Report Date: 10/06/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-13 Batch: WG1548551-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	09/20/21 09:27	1,9060A	SP

Lab Control Sample Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13 Batch: WG1548551-2								
Total Organic Carbon (Rep1)	91		-		75-125	-		25
Total Organic Carbon (Rep2)	109		-		75-125	-		25
Total Organic Carbon (Average)	100		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13 QC Batch ID: WG1548551-3 QC Sample: L2146084-13 Client ID: 3664|2021|ECR-B|243|SED|01												
Total Organic Carbon (Rep1)	1.49	1.69	3.12	96		-	-		75-125	-		25
Total Organic Carbon (Rep2)	1.66	1.44	2.89	85		-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2146084
Report Date: 10/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-13 QC Batch ID: WG1549545-1 QC Sample: L2146084-01 Client ID: 3664|2021|ECR-C|1208|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	16.0	7.40	%	**74**	Q	20
Granule (2.0-4.0 mm)	3.20	3.40	%	6		20
% Very Coarse Sand	4.40	3.80	%	15		20
% Coarse Sand	19.9	19.9	%	0		20
% Medium Sand	32.7	39.0	%	18		20
% Fine Sand	7.60	9.30	%	20		20
% Very Fine Sand	0.700	0.900	%	**25**	Q	20
Silt - (3.9-62.5 um)	13.4	14.0	%	4		20
Clay - (<3.9 um)	2.10	2.30	%	9		20

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2146084-01A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2146084-01B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-02A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146084-02B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-03A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2146084-03B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-04A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2146084-04B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:10062116:51

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2146084-05A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2146084-05B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-06A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146084-06B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-07A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146084-07B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-08A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146084-08B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-09A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146084-09B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:10062116:51

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2146084
Report Date: 10/06/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2146084-10A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2146084-10B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-11A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2146084-11B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-12A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2146084-12B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)
L2146084-13A	Plastic 8oz unpreserved for Grain Size	B	NA		1.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2146084-13B	Glass 120ml/4oz unpreserved	B	NA		1.6	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2146084
Project Number:	3664	**Report Date:**	10/06/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

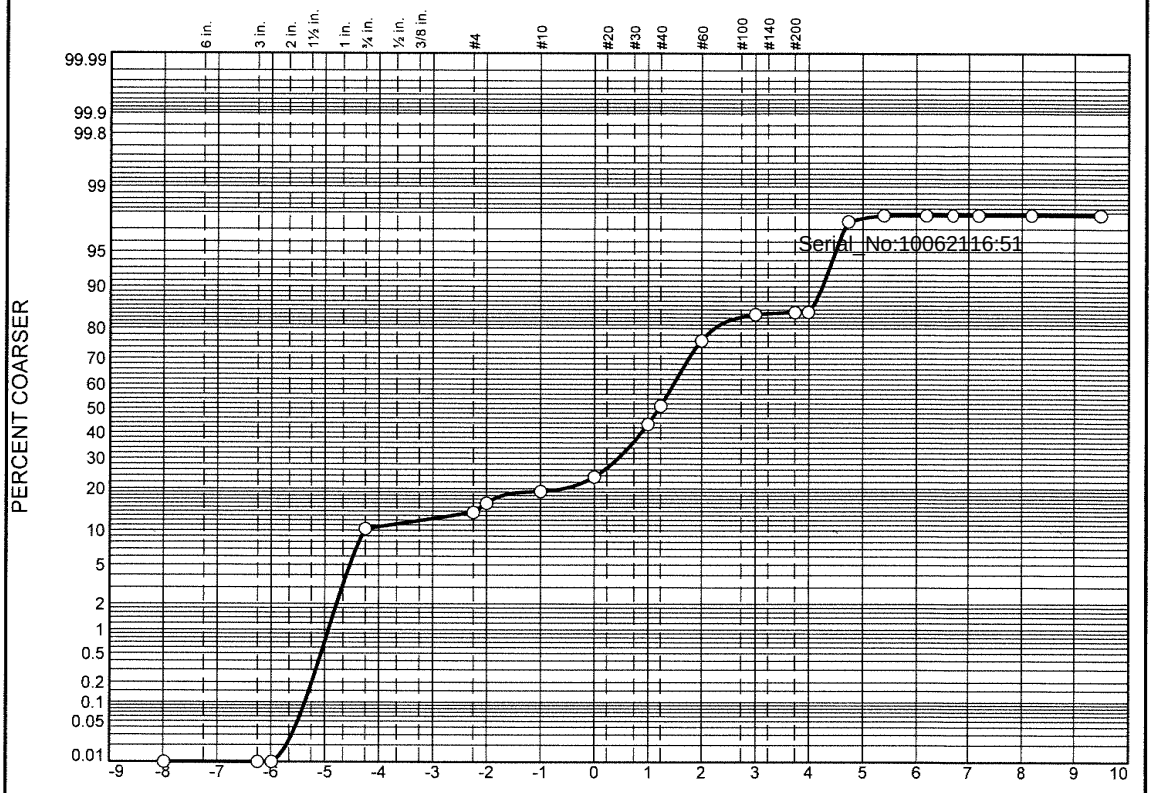
LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928
GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			16.0	3.2	4.4	19.9	32.7	7.6	0.8	13.1	0.2	0.0	0.0	2.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			4.2830	0.5441	0.4338	0.2949	0.0612	0.0524	3.05	10.39

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1208|SED|01 **Sample No.:** L2146084-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-C|1208|SED|01

Sample Number: L2146084-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 68.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.56	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	7.03	0.00	89.7
		#4	2.37	0.00	86.3
		#5	1.54	0.00	84.0
		#10	2.19	0.00	80.8
		#18	3.06	0.00	76.4
		#35	13.62	0.00	56.5
		#40	5.17	0.00	49.0
		#60	17.29	0.00	23.8
		#120	5.21	0.00	16.2
		#200	0.39	0.00	15.6
		#230	0.04	0.00	15.5

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 15.5
Weight of hydrometer sample =35.9
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0035	1.0036	0.0135	3.5	15.4	0.0375	2.5
5.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0238	2.1
15.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0138	2.1
30.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0097	2.1
60.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0069	2.1
240.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0034	2.1
1440.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0014	2.1

Fractional Components

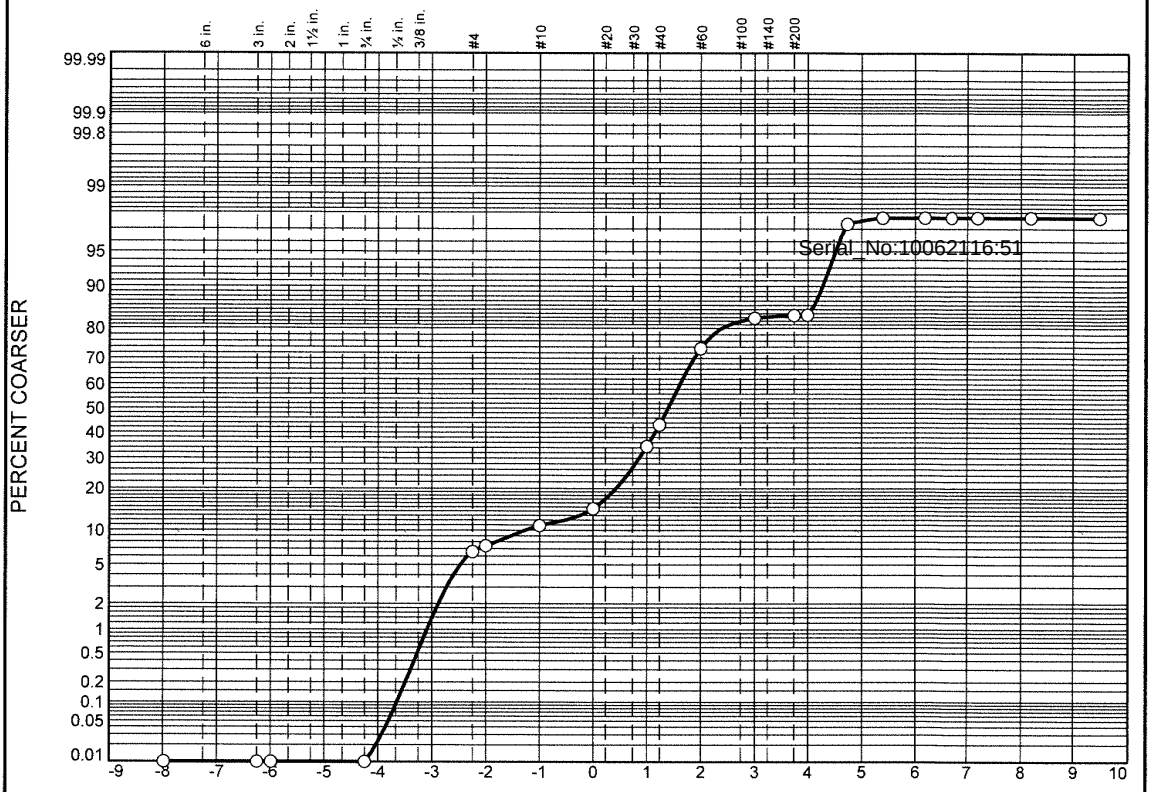
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		16.0	3.2	4.4	19.9	32.7	7.6	0.8	65.4	13.1	0.2	0.0	0.0	13.3	2.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0445	0.0524	0.0612	0.2119	0.2949	0.3592	0.4338	0.5441	1.4738	4.2830	19.2281	23.2288

Fineness Modulus	C_u	C_c
2.65	10.39	3.05

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			7.4	3.4	3.8	19.9	39.0	9.3	0.9	13.9	0.1	0.0	0.0	2.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9653	0.4487	0.3802	0.2719	0.0593	0.0515	3.20	8.71

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1208|SED|01 **Sample No.:** WG1549545-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-C|1208|SED|01

Sample Number: WG1549545-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 68.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.51	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	4.49	0.00	93.4
		#5	0.59	0.00	92.6
		#10	2.35	0.00	89.2
		#18	2.54	0.00	85.4
		#35	13.64	0.00	65.5
		#40	5.90	0.00	56.9
		#60	20.85	0.00	26.5
		#120	6.35	0.00	17.2
		#200	0.53	0.00	16.5
		#230	0.04	0.00	16.4

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.4
Weight of hydrometer sample =35.4
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0035	1.0036	0.0135	3.5	15.4	0.0375	2.7
5.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0238	2.3
15.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0138	2.3
30.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0097	2.3
60.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0069	2.3
240.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0034	2.3
1440.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0014	2.3

Fractional Components

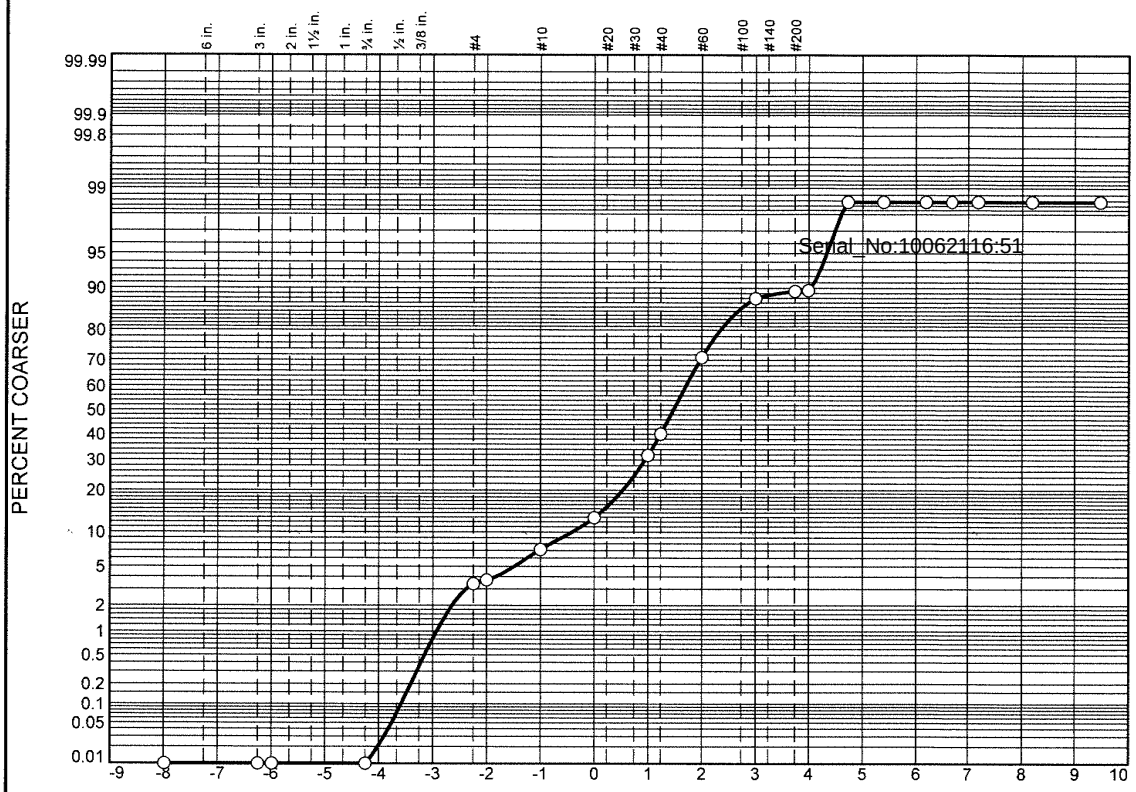
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		7.4	3.4	3.8	19.9	39.0	9.3	0.9	72.9	13.9	0.1	0.0	0.0	14.0	2.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0439	0.0515	0.0593	0.1891	0.2719	0.3256	0.3802	0.4487	0.7432	0.9653	2.3926	5.5610

Fineness Modulus	C_u	C_c
2.04	8.71	3.20

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.7	3.4	5.8	18.8	39.3	17.0	1.6	9.0	0.0	0.0	0.0	1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.8689	0.4254	0.3604	0.2552	0.1570	0.0610	2.51	6.97

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|223|SED|01 **Sample No.:** L2146084-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|223|SED|01

Sample Number: L2146084-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 145.58
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
145.58	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	4.92	0.00	96.6
		#5	0.48	0.00	96.3
		#10	4.98	0.00	92.9
		#18	8.36	0.00	87.1
		#35	27.37	0.00	68.3
		#40	12.20	0.00	59.9
		#60	45.01	0.00	29.0
		#120	24.73	0.00	12.0
		#200	2.07	0.00	10.6
		#230	0.22	0.00	10.5

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.5
Weight of hydrometer sample =35.6
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0377	1.4
5.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0238	1.4
15.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0138	1.4
30.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0097	1.4
60.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0069	1.4
240.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0034	1.4
1440.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0014	1.4

Fractional Components

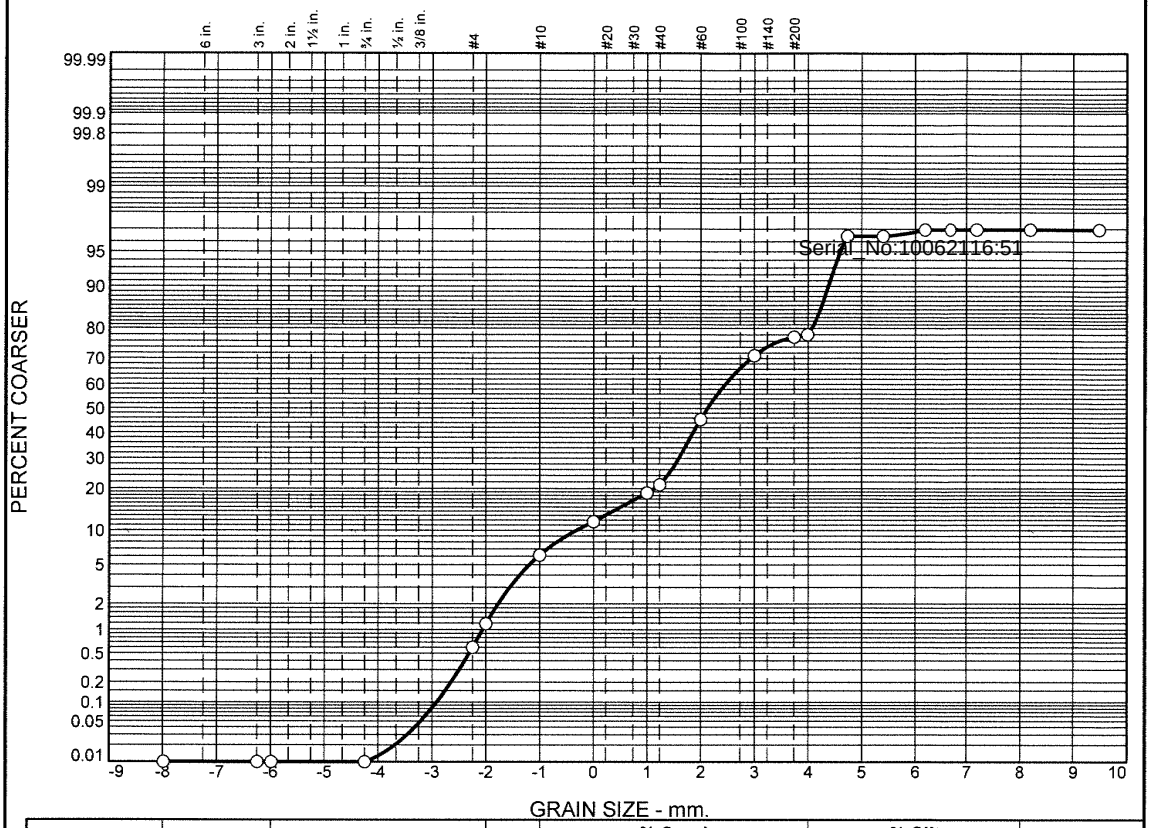
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.7	3.4	5.8	18.8	39.3	17.0	1.6	82.5	9.0	0.0	0.0	0.0	9.0	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0496	0.0610	0.1570	0.1959	0.2552	0.3066	0.3604	0.4254	0.6912	0.8689	1.3269	2.8020

Fineness Modulus	C_u	C_c
1.92	6.97	2.51

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.2	4.9	5.6	7.0	26.7	25.6	7.2	18.3	0.3	0.2	0.0	3.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6985	0.2752	0.2286	0.1305	0.0533	0.0481	1.29	5.72

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|225|SED|01 **Sample No.:** L2146084-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|225|SED|01

Sample Number: L2146084-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 118.20
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
118.20	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.71	0.00	99.4
		#5	0.68	0.00	98.8
		#10	5.87	0.00	93.9
		#18	6.54	0.00	88.3
		#35	8.30	0.00	81.3
		#40	2.90	0.00	78.8
		#60	28.62	0.00	54.6
		#120	30.33	0.00	29.0
		#200	7.41	0.00	22.7
		#230	0.86	0.00	22.0

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 22.0
Weight of hydrometer sample =35.58
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0035	1.0036	0.0135	3.5	15.4	0.0375	3.5
5.00	20.7	1.0035	1.0036	0.0135	3.5	15.4	0.0237	3.5
15.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0138	3.0
30.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0097	3.0
60.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0069	3.0
240.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0034	3.0
1440.00	20.7	1.0030	1.0031	0.0135	3.0	15.5	0.0014	3.0

Fractional Components

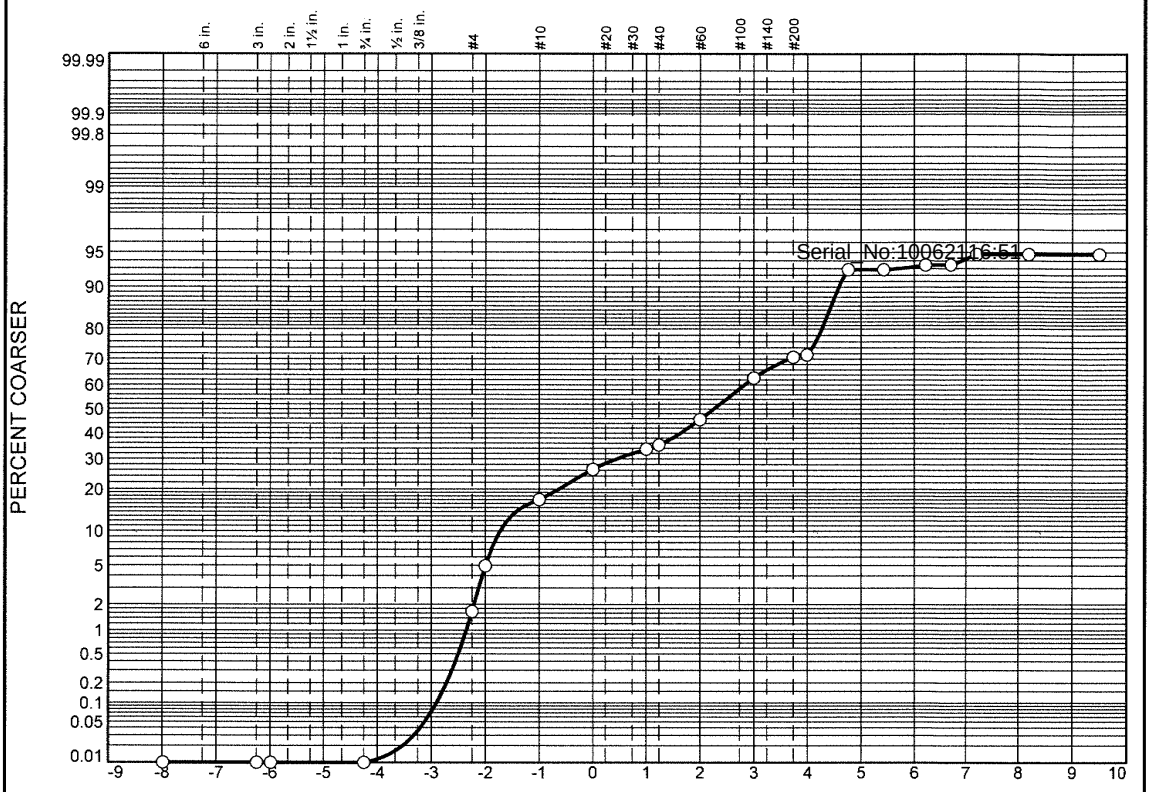
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.2	4.9	5.6	7.0	26.7	25.6	7.2	72.1	18.3	0.3	0.2	0.0	18.8	3.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0412	0.0481	0.0533	0.0592	0.1305	0.1816	0.2286	0.2752	0.4526	0.6985	1.2375	2.2837

Fineness Modulus	C_u	C_c
1.34	5.72	1.29

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			5.0	12.0	9.3	7.3	12.0	17.2	8.9	21.1	0.4	1.0	0.6	5.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.4918	0.3198	0.2088	0.0794	0.0471	0.0416	0.47	7.68

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|227|SED|01 **Sample No.:** L2146084-04

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|227|SED|01

Sample Number: L2146084-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 95.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
95.67	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	1.59	0.00	98.3
		#5	3.16	0.00	95.0
		#10	11.55	0.00	83.0
		#18	8.83	0.00	73.7
		#35	7.04	0.00	66.4
		#40	1.56	0.00	64.7
		#60	9.88	0.00	54.4
		#120	16.47	0.00	37.2
		#200	7.54	0.00	29.3
		#230	0.79	0.00	28.5

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 28.5
Weight of hydrometer sample =35.56
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0055	1.0056	0.0135	5.5	14.8	0.0368	7.2
5.00	20.7	1.0055	1.0056	0.0135	5.5	14.8	0.0233	7.2
15.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0135	6.5
30.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0096	6.5
60.00	20.7	1.0040	1.0041	0.0135	4.0	15.2	0.0068	5.2
240.00	20.7	1.0040	1.0041	0.0135	4.0	15.2	0.0034	5.2
1440.00	20.7	1.0040	1.0041	0.0135	4.0	15.2	0.0014	5.2

Fractional Components

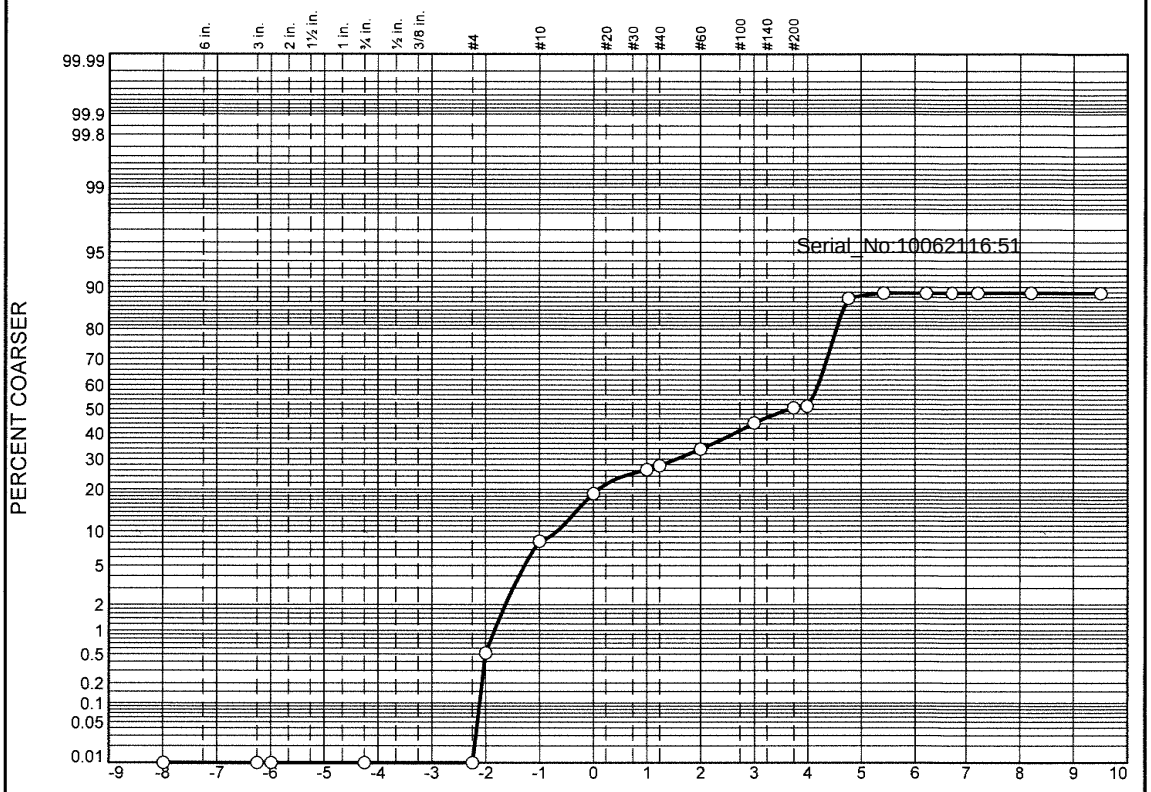
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		5.0	12.0	9.3	7.3	12.0	17.2	8.9	54.7	21.1	0.4	1.0	0.6	23.1	5.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0416	0.0471	0.0518	0.0794	0.1401	0.2088	0.3198	1.5451	2.4918	3.3038	3.9946

Fineness Modulus	C_u	C_c
1.73	7.68	0.47

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	7.8	10.5	7.5	7.5	10.5	7.3	36.7	0.6	0.0		11.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			1.1964	0.1602	0.0795	0.0487	0.0396			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|229|SED|01 **Sample No.:** L2146084-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|229|SED|01

Sample Number: L2146084-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 56.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
56.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.29	0.00	99.5
		#10	4.36	0.00	91.7
		#18	5.89	0.00	81.2
		#35	4.22	0.00	73.7
		#40	0.77	0.00	72.4
		#60	3.45	0.00	66.2
		#120	5.89	0.00	55.7
		#200	3.59	0.00	49.3
		#230	0.36	0.00	48.7

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 48.7
Weight of hydrometer sample =35.61
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0055	1.0056	0.0135	5.5	14.8	0.0368	12.2
5.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0234	11.1
15.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0135	11.1
30.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0096	11.1
60.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0068	11.1
240.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0034	11.1
1440.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0014	11.1

Fractional Components

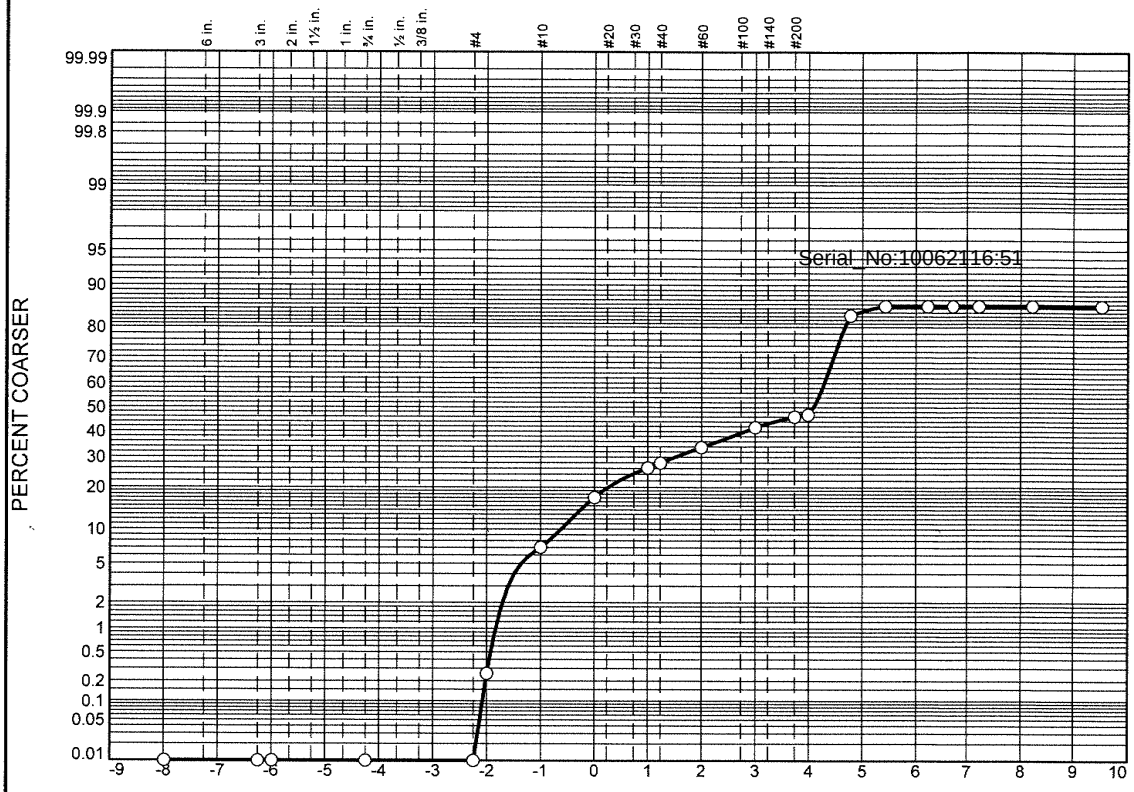
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	7.8	10.5	7.5	7.5	10.5	7.3	43.3	36.7	0.6	0.0		37.3	11.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0396	0.0431	0.0487	0.0544	0.0795	0.1602	0.9346	1.1964	1.5895	2.4229

Fineness Modulus
1.18

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.3	6.7	10.1	9.1	7.4	8.0	5.5	37.2	1.3	0.0	0.0	14.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.1284	0.1420	0.0585	0.0453	0.0272			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|231|SED|01 **Sample No.:** L2146084-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|231|SED|01

Sample Number: L2146084-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 39.19
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
39.19	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.10	0.00	99.7
		#10	2.65	0.00	93.0
		#18	3.96	0.00	82.9
		#35	3.54	0.00	73.8
		#40	0.69	0.00	72.1
		#60	2.24	0.00	66.4
		#120	3.14	0.00	58.4
		#200	1.71	0.00	54.0
		#230	0.33	0.00	53.2

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 53.2
Weight of hydrometer sample =35.89
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0070	1.0071	0.0135	7.0	14.4	0.0364	16.8
5.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0232	14.4
15.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0134	14.4
30.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0095	14.4
60.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0067	14.4
240.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0033	14.4
1440.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0014	14.4

Fractional Components

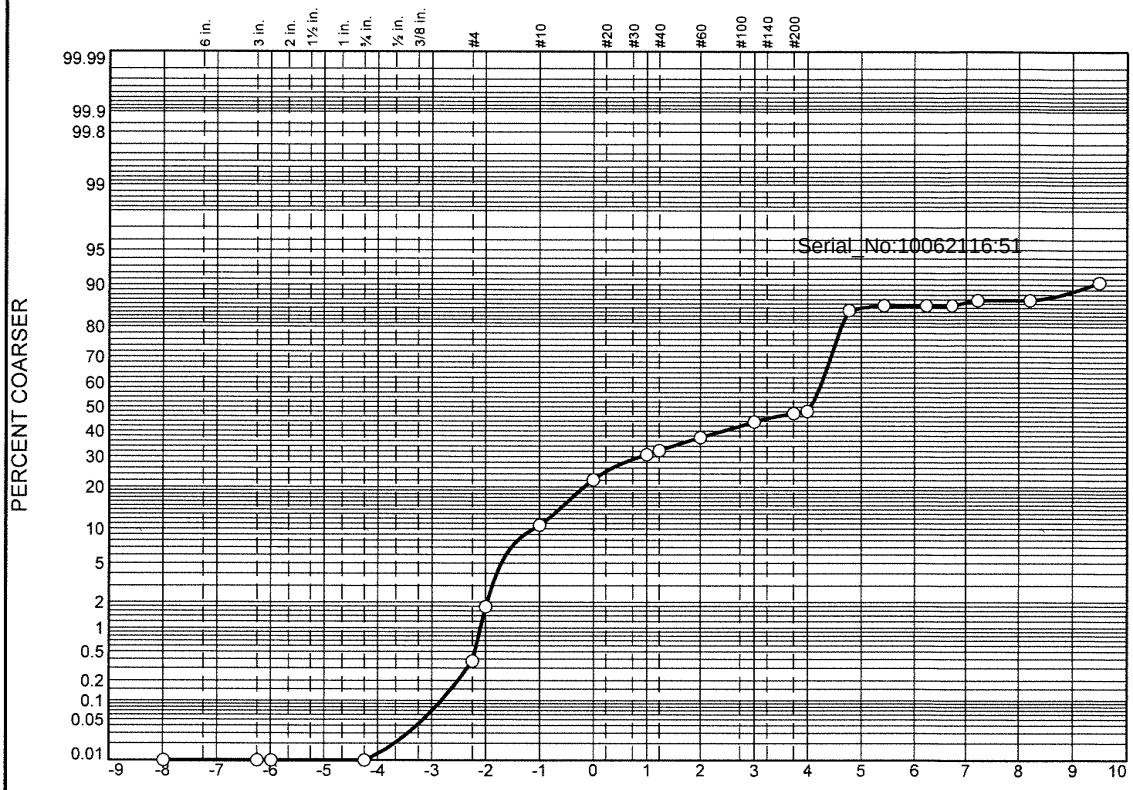
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.3	6.7	10.1	9.1	7.4	8.0	5.5	40.1	37.2	1.3	0.0	0.0	38.5	14.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0272	0.0391	0.0453	0.0509	0.0585	0.1420	0.8336	1.1284	1.5298	2.5675

Fineness Modulus
1.15

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	8.9	11.5	8.5	6.6	6.5	4.6	36.6	0.7	0.6	0.5	13.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4627	0.1847	0.0600	0.0464	0.0314	0.0015	7.75	123.07

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|233|SED|01 **Sample No.:** L2146084-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|233|SED|01

Sample Number: L2146084-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 50.61
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
50.61	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.19	0.00	99.6
		#5	0.71	0.00	98.2
		#10	4.49	0.00	89.3
		#18	5.83	0.00	77.8
		#35	4.34	0.00	69.3
		#40	0.78	0.00	67.7
		#60	2.56	0.00	62.7
		#120	3.26	0.00	56.2
		#200	1.77	0.00	52.7
		#230	0.42	0.00	51.9

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 51.9
Weight of hydrometer sample =35.25
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0065	1.0066	0.0135	6.5	14.6	0.0365	15.5
5.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0232	14.3
15.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0134	14.3
30.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0095	14.3
60.00	20.7	1.0055	1.0056	0.0135	5.5	14.8	0.0067	13.2
240.00	20.7	1.0055	1.0056	0.0135	5.5	14.8	0.0034	13.2
1440.00	20.7	1.0040	1.0041	0.0135	4.0	15.2	0.0014	9.6

Fractional Components

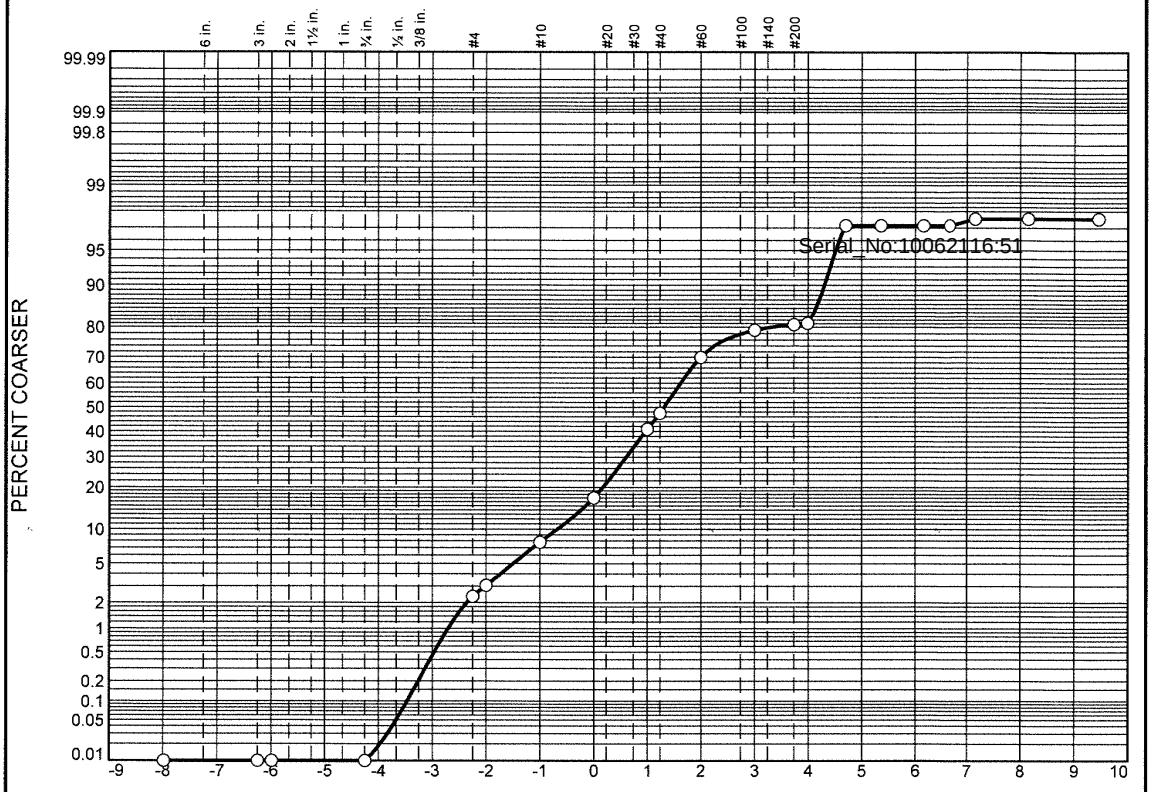
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	8.9	11.5	8.5	6.6	6.5	4.6	37.7	36.6	0.7	0.6	0.5	38.4	13.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0015	0.0314	0.0404	0.0464	0.0520	0.0600	0.1847	1.1226	1.4627	2.1465	3.2728

Fineness Modulus	C_u	C_c
1.35	123.07	7.75

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.1	4.7	9.2	23.9	29.0	9.2	2.1	16.0	0.0	0.3	0.1	2.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.1070	0.5109	0.4020	0.2496	0.0564	0.0506	2.41	10.10

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|235|SED|01 **Sample No.:** L2146084-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|235|SED|01

Sample Number: L2146084-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 112.91
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
112.91	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	2.64	0.00	97.7
		#5	0.81	0.00	96.9
		#10	5.34	0.00	92.2
		#18	10.45	0.00	83.0
		#35	26.91	0.00	59.1
		#40	7.52	0.00	52.5
		#60	25.31	0.00	30.1
		#120	10.32	0.00	20.9
		#200	1.88	0.00	19.2
		#230	0.35	0.00	18.9

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 18.9
Weight of hydrometer sample =35.6
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	2.8
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	2.8
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	2.8
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	2.8
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.4
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.4
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.4

Fractional Components

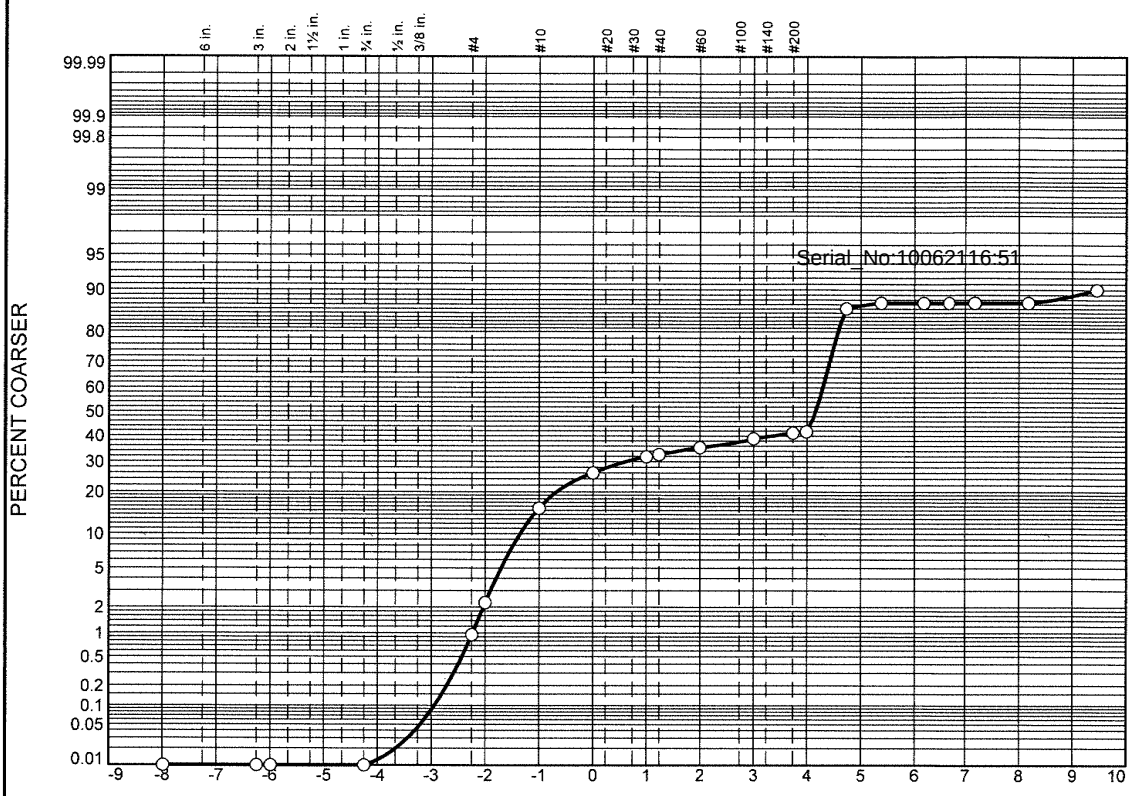
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.1	4.7	9.2	23.9	29.0	9.2	2.1	73.4	16.0	0.0	0.3	0.1	16.4	2.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0438	0.0506	0.0564	0.0988	0.2496	0.3240	0.4020	0.5109	0.8871	1.1070	1.5925	2.8252

Fineness Modulus	C_u	C_c
1.98	10.10	2.41

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.2	13.3	10.5	5.9	3.4	3.6	3.2	44.7	0.6	0.0		12.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.0456	0.0983	0.0558	0.0466	0.0387			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|237\|SED\|01 **Sample No.:** L2146084-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|237|SED|01

Sample Number: L2146084-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 52.46
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
52.46	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.50	0.00	99.0
		#5	0.67	0.00	97.8
		#10	6.96	0.00	84.5
		#18	5.53	0.00	74.0
		#35	3.05	0.00	68.1
		#40	0.44	0.00	67.3
		#60	1.39	0.00	64.7
		#120	1.85	0.00	61.1
		#200	1.23	0.00	58.8
		#230	0.30	0.00	58.2

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 58.2
Weight of hydrometer sample =35.67
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0377	13.9
5.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0240	12.6
15.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0138	12.6
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	12.6
60.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0069	12.6
240.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0035	12.6
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	10.0

Fractional Components

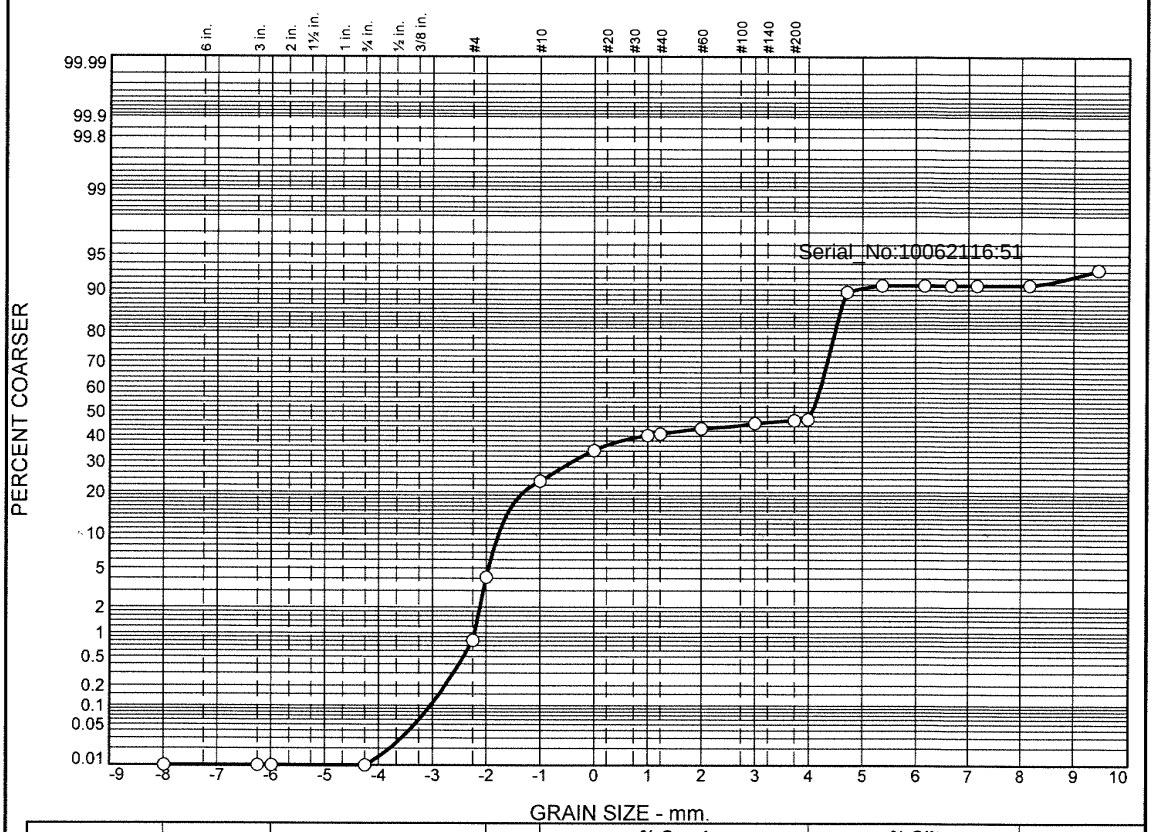
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.2	13.3	10.5	5.9	3.4	3.6	3.2	26.6	44.7	0.6	0.0		45.3	12.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0387	0.0419	0.0466	0.0509	0.0558	0.0983	1.5897	2.0456	2.5462	3.2626

Fineness Modulus
1.40

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			4.1	19.2	10.9	5.9	2.9	2.3	1.9	43.1	0.5	0.0		9.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.9777	0.5121	0.0595	0.0491	0.0418	0.0343	0.14	14.95

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|239|SED|01 **Sample No.:** L2146084-10

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|239|SED|01

Sample Number: L2146084-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 44.45
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
44.45	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.36	0.00	99.2
		#5	1.46	0.00	95.9
		#10	8.53	0.00	76.7
		#18	4.85	0.00	65.8
		#35	2.63	0.00	59.9
		#40	0.31	0.00	59.2
		#60	0.96	0.00	57.0
		#120	1.02	0.00	54.7
		#200	0.52	0.00	53.6
		#230	0.18	0.00	53.2

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 53.2
Weight of hydrometer sample =35.5
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0381	10.4
5.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0242	9.2
15.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0140	9.2
30.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0099	9.2
60.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0070	9.2
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	9.2
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	6.8

Fractional Components

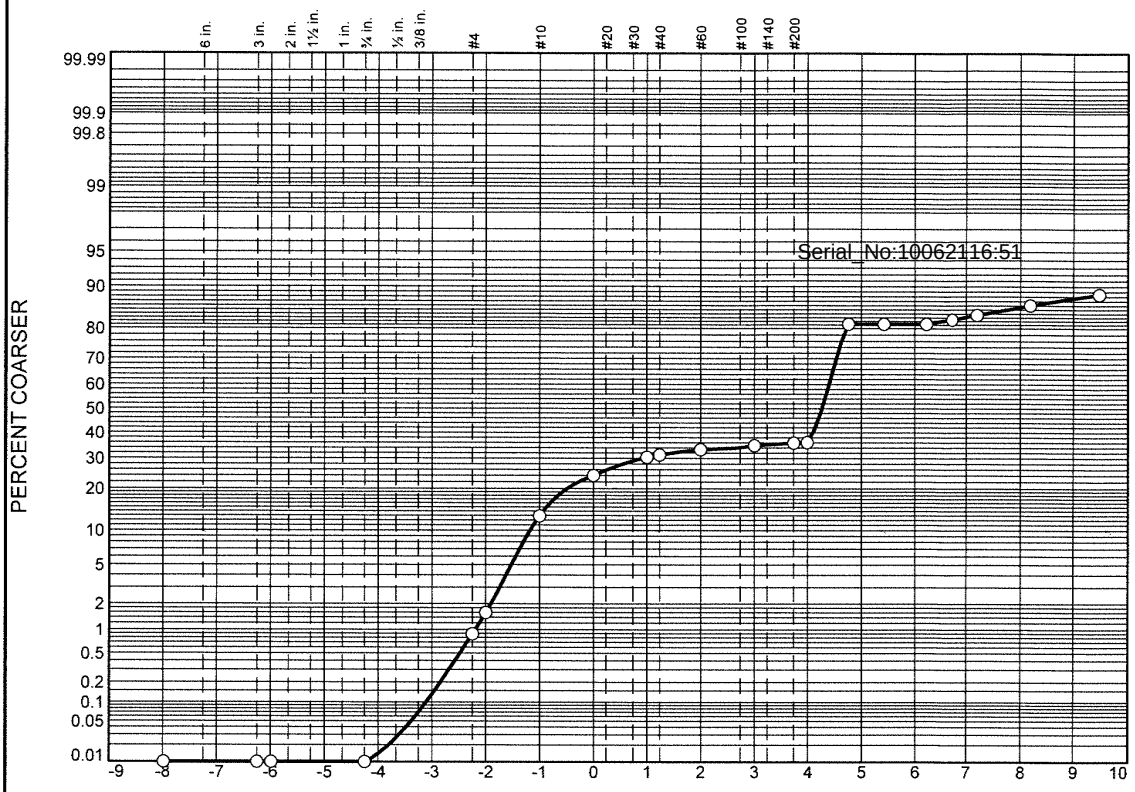
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		4.1	19.2	10.9	5.9	2.9	2.3	1.9	23.9	43.1	0.5	0.0		43.6	9.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0343	0.0418	0.0445	0.0491	0.0535	0.0595	0.5121	2.4640	2.9777	3.4075	3.8900

Fineness Modulus	C_u	C_c
1.79	14.95	0.14

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.6	11.3	11.2	6.2	2.9	1.6	1.5	45.0	0.0	1.9	2.4	14.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8264	0.0582	0.0520	0.0433	0.0047			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|239\|SED\|02 **Sample No.:** L2146084-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|239|SED|02

Sample Number: L2146084-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 42.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
42.90	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.38	0.00	99.1
		#5	0.30	0.00	98.4
		#10	4.86	0.00	87.1
		#18	4.78	0.00	75.9
		#35	2.70	0.00	69.7
		#40	0.36	0.00	68.8
		#60	0.88	0.00	66.8
		#120	0.68	0.00	65.2
		#200	0.46	0.00	64.1
		#230	0.05	0.00	64.0

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 64.0
Weight of hydrometer sample =42.9
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0080	1.0078	0.0139	8.0	14.2	0.0369	18.7
5.00	18.8	1.0080	1.0078	0.0139	8.0	14.2	0.0233	18.7
15.00	18.8	1.0080	1.0078	0.0139	8.0	14.2	0.0135	18.7
30.00	18.8	1.0075	1.0073	0.0139	7.5	14.3	0.0096	17.5
60.00	18.8	1.0070	1.0068	0.0139	7.0	14.4	0.0068	16.3
240.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0034	13.9
1440.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0014	11.5

Alpha Analytical

Fractional Components

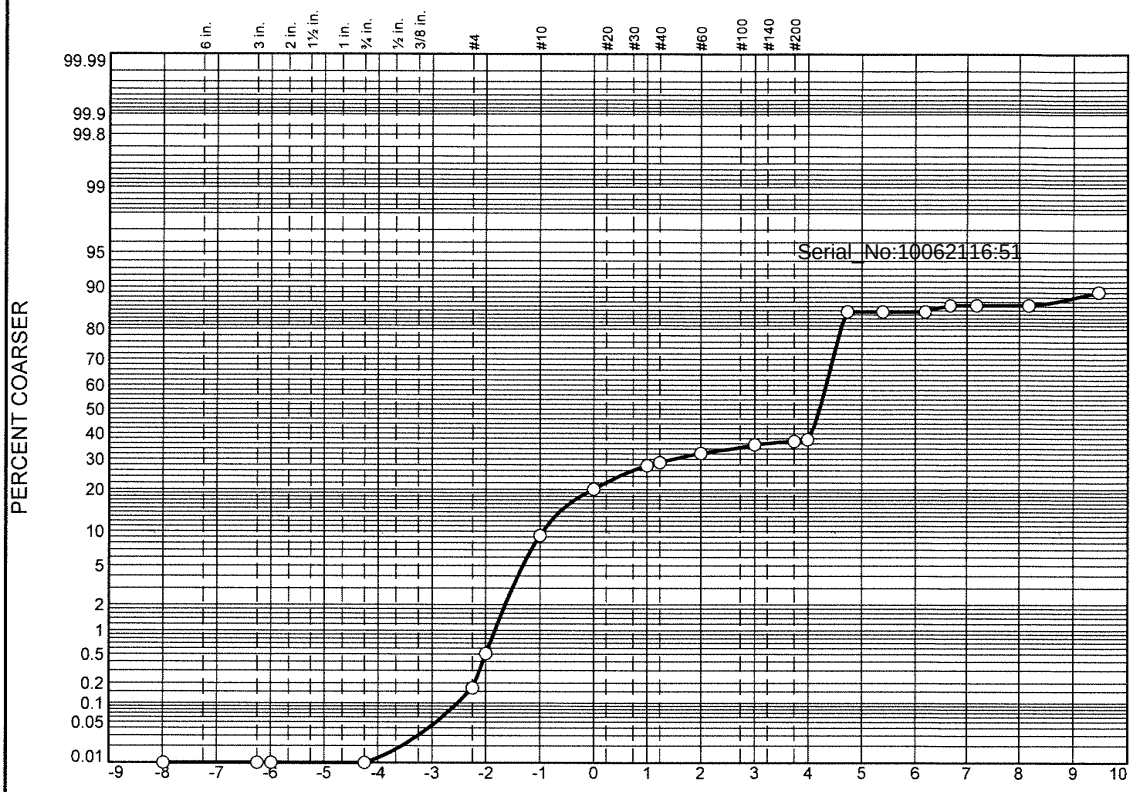
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.6	11.3	11.2	6.2	2.9	1.6	1.5	23.4	45.0	0.0	1.9	2.4	49.3	14.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0047	0.0379	0.0433	0.0476	0.0520	0.0582	1.3950	1.8264	2.2568	2.8781

Fineness Modulus
1.28

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	8.7	10.8	7.7	4.5	3.3	2.4	46.9	0.0	1.4	0.0	13.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4606	0.0601	0.0538	0.0456	0.0133			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|241|SED|01 **Sample No.:** L2146084-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|241|SED|01

Sample Number: L2146084-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 41.26
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
41.26	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.07	0.00	99.8
		#5	0.14	0.00	99.5
		#10	3.59	0.00	90.8
		#18	4.47	0.00	80.0
		#35	3.15	0.00	72.3
		#40	0.48	0.00	71.2
		#60	1.37	0.00	67.8
		#120	1.38	0.00	64.5
		#200	0.57	0.00	63.1
		#230	0.27	0.00	62.5

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 62.5
Weight of hydrometer sample =35.11
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0377	15.2
5.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0239	15.2
15.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0138	15.2
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	13.8
60.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0069	13.8
240.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0035	13.8
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	10.9

Alpha Analytical

Fractional Components

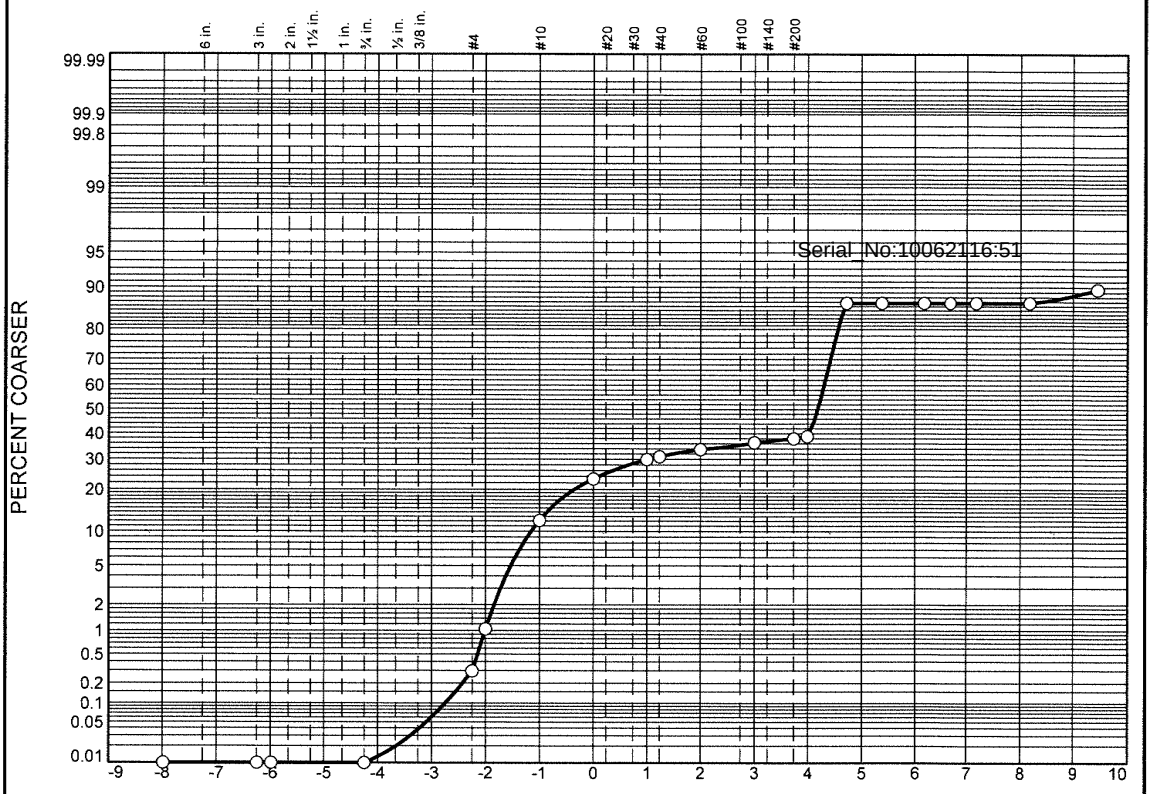
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	8.7	10.8	7.7	4.5	3.3	2.4	28.7	46.9	0.0	1.4	0.0	48.3	13.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0133	0.0410	0.0456	0.0495	0.0538	0.0601	1.0036	1.4606	1.9231	2.4894

Fineness Modulus
1.16

Serial_No:10062116:51

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.0	11.1	11.1	6.7	3.7	2.7	2.9	47.6	0.0	0.0		13.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.7227	0.0615	0.0548	0.0467	0.0394			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|243|SED|01 **Sample No.:** L2146084-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/6/2021

Location: 3664|2021|ECR-B|243|SED|01

Sample Number: L2146084-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 44.09
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
44.09	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.13	0.00	99.7
		#5	0.33	0.00	99.0
		#10	4.89	0.00	87.9
		#18	4.87	0.00	76.8
		#35	2.95	0.00	70.1
		#40	0.48	0.00	69.0
		#60	1.18	0.00	66.4
		#120	1.19	0.00	63.7
		#200	0.68	0.00	62.1
		#230	0.42	0.00	61.2

Serial_No:10062116:51

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 61.2
Weight of hydrometer sample =35.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0379	13.2
5.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0240	13.2
15.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0138	13.2
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	13.2
60.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0069	13.2
240.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0035	13.2
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	10.5

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.0	11.1	11.1	6.7	3.7	2.7	2.9	27.1	47.6	0.0	0.0		47.6	13.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0394	0.0423	0.0467	0.0505	0.0548	0.0615	1.2732	1.7227	2.2263	2.8962

Fineness Modulus
1.27

Serial_No:10062116:51

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

8/26/21 L2146084

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|532|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|534|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|536|Sed|GS|01	8/19/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|538|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|540|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|542|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|544|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|546|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|548|Sed|GS|01	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|548|Sed|GS|02	8/18/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2 ; QC duplicate
3664|2021|ECR-C|1208|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -01	2	Cooler #1
3664|2021|ECR-B|223|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -02	2	Cooler #1
3664|2021|ECR-B|225|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -03	2	Cooler #1
3664|2021|ECR-B|227|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -04	2	Cooler #1
3664|2021|ECR-B|229|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -05	2	Cooler #1
3664|2021|ECR-B|231|Sed|TOC|01	8/25/2021	SmithMac	125-mL glass	freeze	total organic carbon -06	2	Cooler #1
3664|2021|ECR-B|233|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -07	2	Cooler #1
3664|2021|ECR-B|235|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -08	2	Cooler #1

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature: ____

RELINQUISHED BY: [signature] DATE/TIME: 8/26/21 1000 RECEIVED BY: [signature] DATE/TIME: 8/26/21 1000
RELINQUISHED BY: [signature] DATE/TIME: 8/26/21 1150 RECEIVED BY: [signature] DATE/TIME: 8/26/21 1150

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in future litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when applicable, at the time of sample receipt. Note: Initials are not acceptable.

Serial_No:10062116:51

8/26/21

L21460084

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 08/26/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|237|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -09	2	Cooler #1
3664|2021|ECR-B|239|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -10	2	Cooler #1
3664|2021|ECR-B|239|Sed|TOC|02	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -11	2	Cooler #1 ; QC duplicate
3664|2021|ECR-B|241|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -12	2	Cooler #1
3664|2021|ECR-B|243|Sed|TOC|01	8/24/2021	SmithMac	125-mL glass	freeze	total organic carbon -13	2	Cooler #1
3664|2021|ECR-C|1208|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -01	2	Cooler #1
3664|2021|ECR-B|223|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -02	2	Cooler #1
3664|2021|ECR-B|225|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -03	2	Cooler #1
3664|2021|ECR-B|227|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -04	2	Cooler #1
3664|2021|ECR-B|229|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -05	2	Cooler #1
3664|2021|ECR-B|231|Sed|GS|01	8/25/2021	SmithMac	250-mL plastic	freeze	grain size -06	2	Cooler #1
3664|2021|ECR-B|233|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -07	2	Cooler #1
3664|2021|ECR-B|235|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -08	2	Cooler #1
3664|2021|ECR-B|237|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -09	2	Cooler #1
3664|2021|ECR-B|239|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -10	2	Cooler #1
3664|2021|ECR-B|239|Sed|GS|02	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -11	2	Cooler #1 ; QC duplicate
3664|2021|ECR-B|241|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -12	2	Cooler #1
3664|2021|ECR-B|243|Sed|GS|01	8/24/2021	SmithMac	250-mL plastic	freeze	grain size -13	2	Cooler #1

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: _____ DATE/TIME: 8/26/21 1000 RECEIVED BY: MGM DATE/TIME: 8/26/21 1000

RELINQUISHED BY: _____ DATE/TIME: 8/26/21 1700 RECEIVED BY: _____ DATE/TIME: 8/26/21 11:50

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

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Serial_No:11022117:23

ANALYTICAL REPORT

Lab Number:	L2151372
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/02/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151372
Report Date: 11/02/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151372-01	3664|2021|ECR-B|154|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151372-02	3664|2021|ECR-B|152|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151372-03	3664|2021|ECR-B|150|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151372-04	3664|2021|ECR-B|148|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151372-05	3664|2021|ECR-B|146|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-06	3664|2021|ECR-B|144|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-07	3664|2021|ECR-B|142|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-08	3664|2021|ECR-B|140|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-09	3664|2021|ECR-B|140|SED|02	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-10	3664|2021|ECR-B|138|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-11	3664|2021|ECR-B|136|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-12	3664|2021|ECR-B|134|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-13	3664|2021|ECR-B|132|SED|01	SEDIMENT	OFFSHORE MA / NY	09/16/21 00:00	09/22/21
L2151372-14	3664|2021|ECR-B|130|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-15	3664|2021|ECR-B|128|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-16	3664|2021|ECR-B|126|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-17	3664|2021|ECR-B|124|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-18	3664|2021|ECR-B|122|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-19	3664|2021|ECR-B|120|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151372-20	3664|2021|ECR-B|120|SED|02	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2151372-01: A sample container identified as "3664|2021|ECR-B|154|SED|01" was listed on the Chain of Custody, but not received. This was verified by the client.

Grain Size

The WG1558187-3 Laboratory Duplicate RPD for pebble (60%), granule (21%), and % very fine sand (24%), performed on L2151372-07, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2151372: Samples were frozen upon receipt in order to arrest the holding time.

L2151372-07: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/02/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-02
Client ID: 3664|2021|ECR-B|152|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/15/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.863		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	0.975		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	0.919		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	9.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	25.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	22.3		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	6.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	25.4		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	6.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-03
Client ID: 3664|2021|ECR-B|150|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/15/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.92		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	1.94		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	1.93		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.800		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	11.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	10.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	7.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	4.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	40.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.6		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-04
Client ID: 3664|2021|ECR-B|148|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/15/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.83		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	1.75		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	1.79		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	9.90		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	7.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	45.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	13.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-05
Client ID: 3664|2021|ECR-B|146|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.501		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	0.433		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	0.467		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.600		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	32.4		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	37.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	14.5		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-06
Client ID: 3664|2021|ECR-B|144|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.916		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	0.840		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	0.878		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.90		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	7.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	49.4		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	23.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	6.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	5.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-07
Client ID: 3664|2021|ECR-B|142|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.420		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	0.301		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	0.360		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	30.9		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	22.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	3.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	24.7		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-08
Client ID: 3664|2021|ECR-B|140|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.12		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	1.99		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	2.05		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.900		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	7.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	8.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	7.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	51.3		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-09
Client ID: 3664|2021|ECR-B|140|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.80		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	1.80		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	1.80		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	7.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	8.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	7.90		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	45.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	13.1		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-10
Client ID: 3664|2021|ECR-B|138|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.98		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	2.08		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	2.03		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.5		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.90		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	5.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	4.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	45.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	12.9		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-11
Client ID: 3664|2021|ECR-B|136|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.81		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	1.52		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	1.67		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	5.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	10.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	9.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	44.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	9.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-12
Client ID: 3664|2021|ECR-B|134|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.01		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.18		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.09		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.600		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	5.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	5.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	4.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	54.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-13
Client ID: 3664|2021|ECR-B|132|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/16/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.62		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.74		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.68		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	8.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	9.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	4.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	3.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	2.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	52.9		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-14
Client ID: 3664|2021|ECR-B|130|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.61		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.49		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.55		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.9		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	3.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	2.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	52.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-15
Client ID: 3664|2021|ECR-B|128|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.91		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.76		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.83		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.60		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	11.9		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	14.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	10.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	6.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	3.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	42.6		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-16
Client ID: 3664|2021|ECR-B|126|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.47		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.40		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.43		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.10		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	19.4		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	11.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	6.20		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	3.90		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.30		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	32.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-17
Client ID: 3664|2021|ECR-B|124|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.72		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.70		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.71		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	4.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	18.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	17.4		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	6.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	4.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	3.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	35.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-18
Client ID: 3664|2021|ECR-B|122|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.44		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.65		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.55		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	24.3		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	21.2		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	11.7		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	5.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	3.50		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	19.8		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	6.40		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-19
Client ID: 3664|2021|ECR-B|120|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.89		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.92		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.91		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	4.90		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	15.9		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Very Coarse Sand	30.2		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Coarse Sand	6.10		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Medium Sand	3.70		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Fine Sand	1.70		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.60		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	24.3		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.6		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151372
Report Date: 11/02/21

SAMPLE RESULTS

Lab ID: L2151372-20
Client ID: 3664|2021|ECR-B|120|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.92		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	2.86		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	2.89		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.6		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Coarse Sand	18.0		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Coarse Sand	10.7		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Medium Sand	5.70		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Fine Sand	2.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.00		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	36.7		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	9.80		%	0.100	NA	1	-	10/13/21 15:24	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
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Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 02-10 Batch: WG1560023-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/18/21 07:36	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 11-20 Batch: WG1561167-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/20/21 11:23	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

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Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 02-10 Batch: WG1560023-2								
Total Organic Carbon (Rep1)	104		-		75-125	-		25
Total Organic Carbon (Rep2)	105		-		75-125	-		25
Total Organic Carbon (Average)	104		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 Batch: WG1561167-2								
Total Organic Carbon (Rep1)	102		-		75-125	-		25
Total Organic Carbon (Rep2)	107		-		75-125	-		25
Total Organic Carbon (Average)	104		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

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Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 02-10 QC Batch ID: WG1560023-3 QC Sample: L2153722-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	30.1	1.88	37.6	**400**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	35.6	1.78	31.3	**0**	Q	-	-		75-125	-		25

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Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151372
Report Date: 11/02/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 02-18,20 QC Batch ID: WG1558187-3 QC Sample: L2151372-07 Client ID: 3664|2021|ECR-B|142|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	2.60	1.40	%	**60**	Q	20
Granule (2.0-4.0 mm)	2.60	2.10	%	**21**	Q	20
% Very Coarse Sand	7.10	6.40	%	10		20
% Coarse Sand	30.9	29.8	%	4		20
% Medium Sand	22.8	22.6	%	1		20
% Fine Sand	3.40	3.40	%	0		20
% Very Fine Sand	2.20	2.80	%	**24**	Q	20
Silt - (3.9-62.5 um)	24.7	28.2	%	13		20
Clay - (<3.9 um)	3.70	3.30	%	11		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151372
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Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 19 QC Batch ID: WG1560090-1 QC Sample: L2151373-04 Client ID: DUP Sample						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	1.00	%	NC		20
Granule (2.0-4.0 mm)	1.60	2.10	%	**27**	Q	20
% Very Coarse Sand	7.80	7.30	%	7		20
% Coarse Sand	7.40	6.10	%	19		20
% Medium Sand	11.0	7.30	%	**40**	Q	20
% Fine Sand	17.8	7.60	%	**80**	Q	20
% Very Fine Sand	8.30	6.20	%	**29**	Q	20
Silt - (3.9-62.5 um)	27.5	39.7	%	**36**	Q	20
Clay - (<3.9 um)	18.6	22.7	%	20		20

Project Name: BEACON WIND
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Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151372-02A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151372-02B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-03A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151372-03B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-04A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151372-04B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-05A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151372-05B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
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Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151372-06A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151372-06B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-07A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151372-07B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-08A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151372-08B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-09A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151372-09B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-10A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151372-10B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151372
Report Date: 11/02/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151372-11A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151372-11B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-12A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151372-12B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-13A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151372-13B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-14A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151372-14B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-15A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151372-15B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151372
Report Date: 11/02/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151372-16A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151372-16B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-17A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151372-17B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-18A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151372-18B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-19A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151372-19B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151372-20A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151372-20B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A	- Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
F	- The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.
J	- Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
ND	- Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151372
Project Number:	3664	**Report Date:**	11/02/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

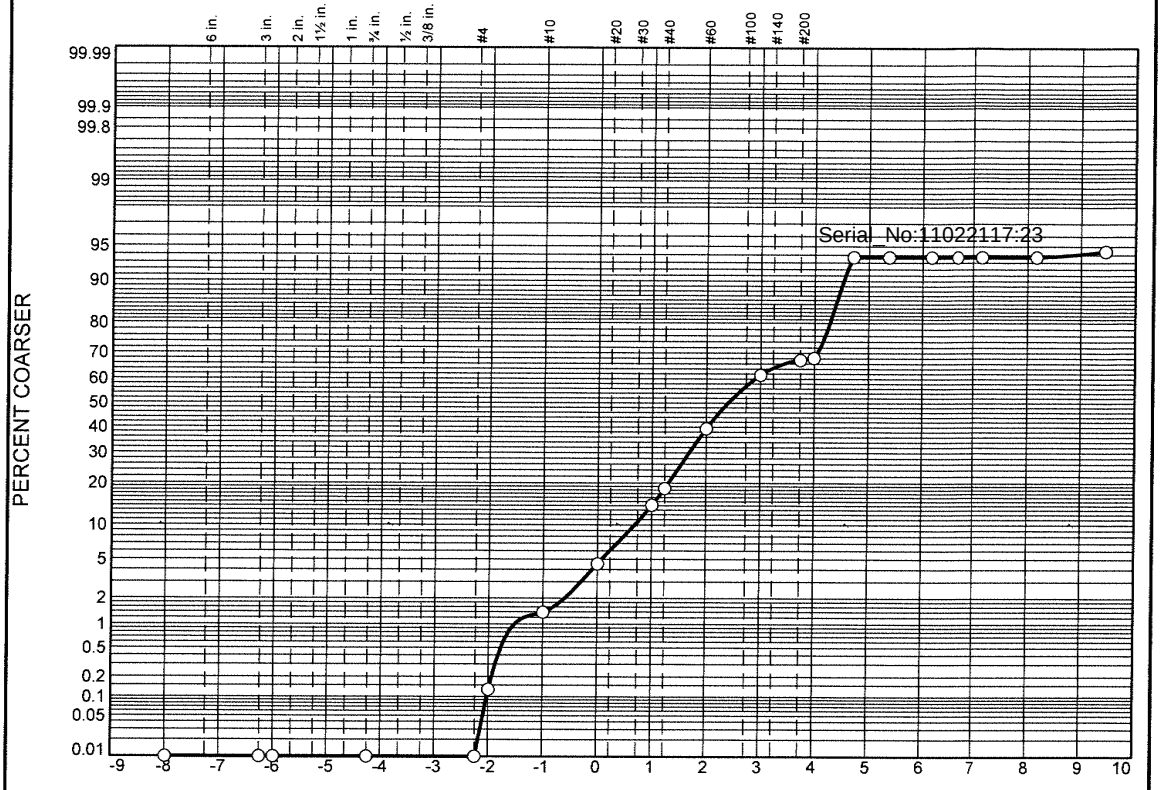
We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Serial_No:11022117:23

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	1.3	3.1	9.6	25.2	22.3	6.8	25.3	0.0	0.0		6.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.4814	0.2460	0.1889	0.0601	0.0476	0.0432	0.34	5.69

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|152|SED|01 **Sample No.:** L2151372-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|152|SED|01

Sample Number: L2151372-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 69.63
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
69.63	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.09	0.00	99.9
		#10	0.87	0.00	98.6
		#18	2.20	0.00	95.5
		#35	6.66	0.00	85.9
		#40	3.00	0.00	81.6
		#60	14.56	0.00	60.7
		#120	15.48	0.00	38.4
		#200	4.02	0.00	32.7
		#230	0.56	0.00	31.9

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 31.9
Weight of hydrometer sample =35.35
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0380	6.3
5.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0240	6.3
15.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0139	6.3
30.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0098	6.3
60.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0069	6.3
240.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0035	6.3
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	5.5

Fractional Components

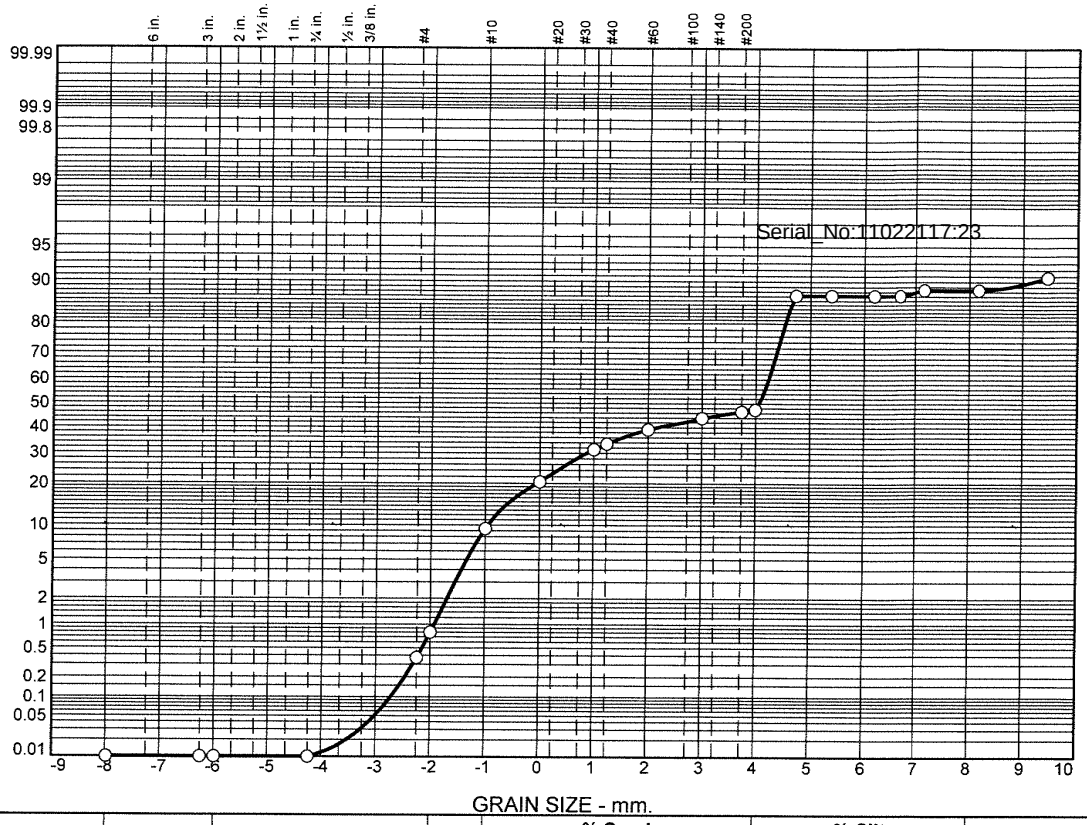
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	1.3	3.1	9.6	25.2	22.3	6.8	67.0	25.3	0.0	0.0		25.3	6.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0432	0.0476	0.0514	0.0601	0.1337	0.1889	0.2460	0.4042	0.4814	0.6210	0.9487

Fineness Modulus	C_u	C_c
1.04	5.69	0.34

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.8	8.5	11.2	10.8	7.8	4.7	3.8	39.6	0.0	0.7	0.5	11.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4601	0.2219	0.0597	0.0482	0.0397	0.0018	5.96	126.67

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|150|SED|01 **Sample No.:** L2151372-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|150|SED|01

Sample Number: L2151372-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 37.64
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
37.64	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.14	0.00	99.6
		#5	0.16	0.00	99.2
		#10	3.21	0.00	90.7
		#18	4.19	0.00	79.5
		#35	4.09	0.00	68.7
		#40	0.79	0.00	66.6
		#60	2.15	0.00	60.9
		#120	1.76	0.00	56.2
		#200	1.04	0.00	53.4
		#230	0.29	0.00	52.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 52.7
Weight of hydrometer sample =35.11
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0377	12.8
5.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0238	12.8
15.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0138	12.8
30.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0097	12.8
60.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0069	11.6
240.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0035	11.6
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	9.2

Fractional Components

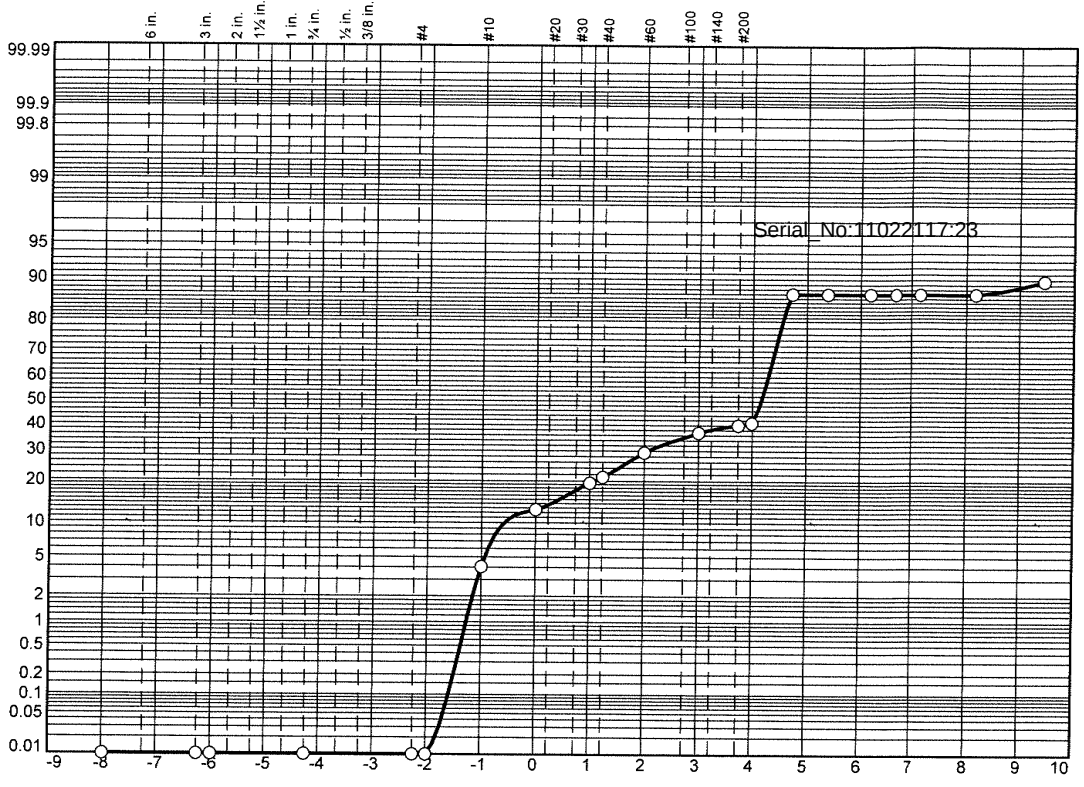
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.8	8.5	11.2	10.8	7.8	4.7	3.8	38.3	39.6	0.0	0.7	0.5	40.8	11.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0018	0.0397	0.0431	0.0482	0.0531	0.0597	0.2219	1.0324	1.4601	1.9322	2.5263

Fineness Modulus	C_u	C_c
1.33	126.67	5.96

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	4.0	8.6	6.8	9.9	7.6	4.3	45.8	0.0	0.0	0.0	13.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7357	0.0750	0.0557	0.0470	0.0396			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|148|SED|01 **Sample No.:** L2151372-04

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|148|SED|01

Sample Number: L2151372-04

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 28.75
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
28.75	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	1.16	0.00	96.0
		#18	2.46	0.00	87.4
		#35	1.96	0.00	80.6
		#40	0.49	0.00	78.9
		#60	2.36	0.00	70.7
		#120	2.19	0.00	63.1
		#200	0.88	0.00	60.0
		#230	0.25	0.00	59.1

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 59.1
Weight of hydrometer sample =35.37
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0379	13.0
5.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0239	13.0
15.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0138	13.0
30.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0098	13.0
60.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0069	13.0
240.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0035	13.0
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	10.3

Fractional Components

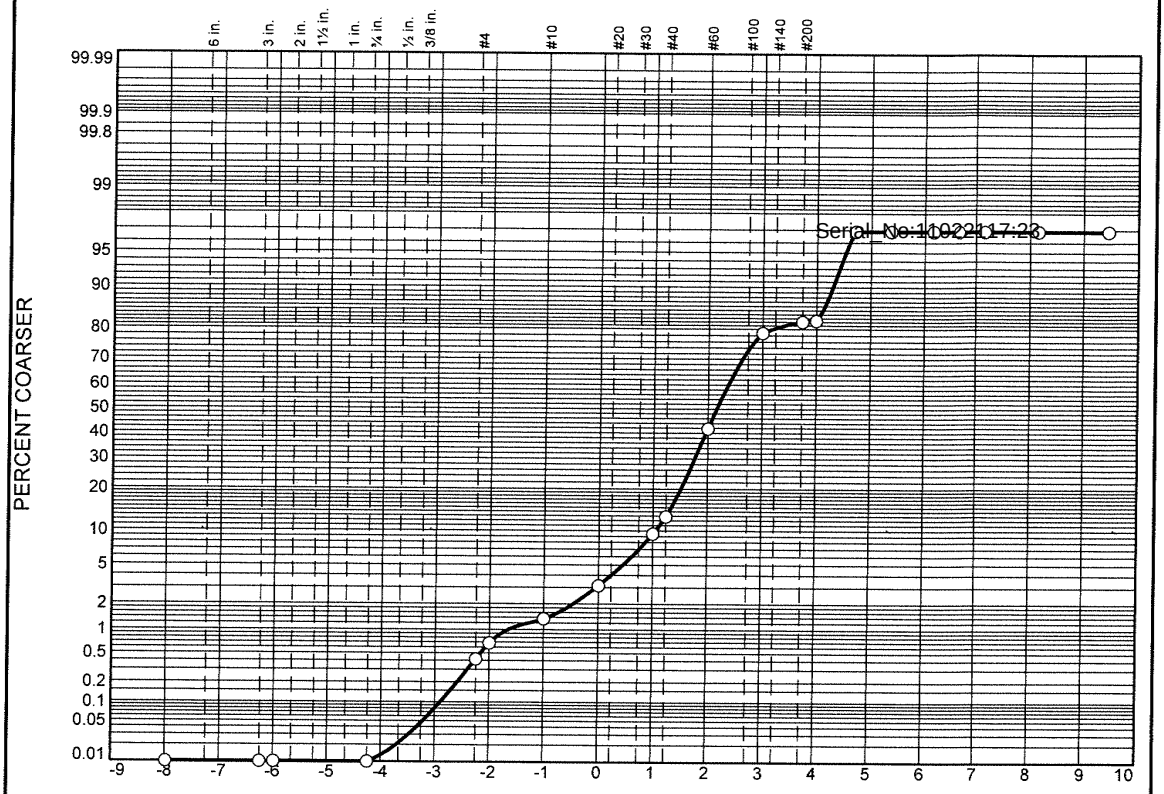
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	4.0	8.6	6.8	9.9	7.6	4.3	37.2	45.8	0.0	0.0	0.0	45.8	13.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0396	0.0426	0.0470	0.0511	0.0557	0.0750	0.4721	0.7357	1.4900	1.9164

Fineness Modulus
0.92

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	0.6	1.8	6.3	32.4	37.0	3.7	14.4	0.0	0.0	0.0	3.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3961	0.2561	0.2235	0.1612	0.0575	0.0508	2.00	5.04

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|146|SED|01 **Sample No.:** L2151372-05

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/22/2021

Location: 3664|2021|ECR-B|146|SED|01

Sample Number: L2151372-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 96.14
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
96.14	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.40	0.00	99.6
		#5	0.25	0.00	99.3
		#10	0.64	0.00	98.7
		#18	1.72	0.00	96.9
		#35	6.07	0.00	90.6
		#40	3.27	0.00	87.2
		#60	27.82	0.00	58.2
		#120	35.56	0.00	21.2
		#200	3.11	0.00	18.0
		#230	0.32	0.00	17.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.7
Weight of hydrometer sample =35.12
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0382	3.1
5.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0242	3.1
15.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0139	3.1
30.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0099	3.1
60.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0070	3.1
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	3.1
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	3.1

Fractional Components

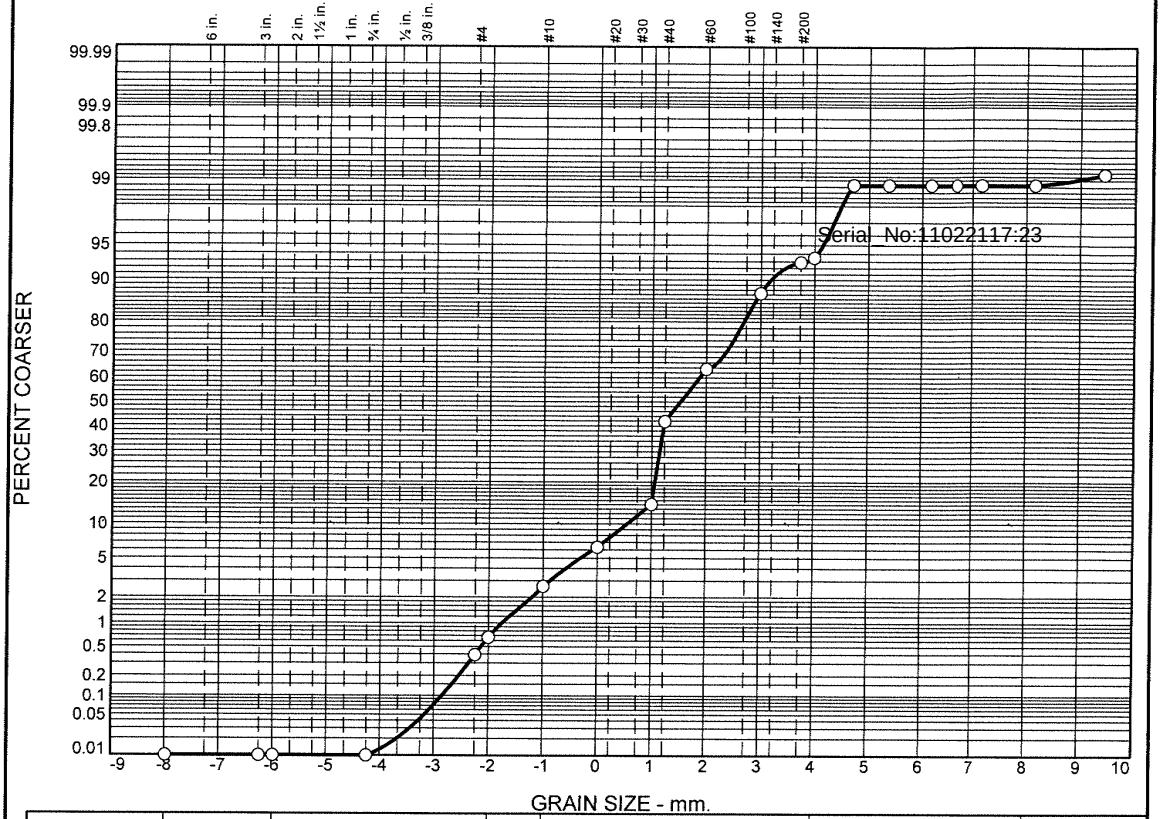
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	0.6	1.8	6.3	32.4	37.0	3.7	81.2	14.4	0.0	0.0	0.0	14.4	3.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0433	0.0508	0.0575	0.1090	0.1612	0.1931	0.2235	0.2561	0.3509	0.3961	0.4842	0.7335

Fineness Modulus	C_u	C_c
1.13	5.04	2.00

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	1.9	3.7	7.8	49.4	23.8	6.3	5.3	0.0	0.0	0.0	1.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.4959	0.4294	0.3467	0.1930	0.1353	0.1094	0.79	3.92

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|144|SED|01 **Sample No.:** L2151372-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|144|SED|01

Sample Number: L2151372-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 69.32
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
69.32	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.27	0.00	99.6
		#5	0.19	0.00	99.3
		#10	1.35	0.00	97.4
		#18	2.58	0.00	93.7
		#35	5.37	0.00	85.9
		#40	19.28	0.00	58.1
		#60	14.97	0.00	36.5
		#120	16.51	0.00	12.7
		#200	3.83	0.00	7.2
		#230	0.45	0.00	6.5

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 6.5
Weight of hydrometer sample =35.14
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0382	1.1
5.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0242	1.1
15.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0139	1.1
30.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0099	1.1
60.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0070	1.1
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	1.1
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	0.8

Fractional Components

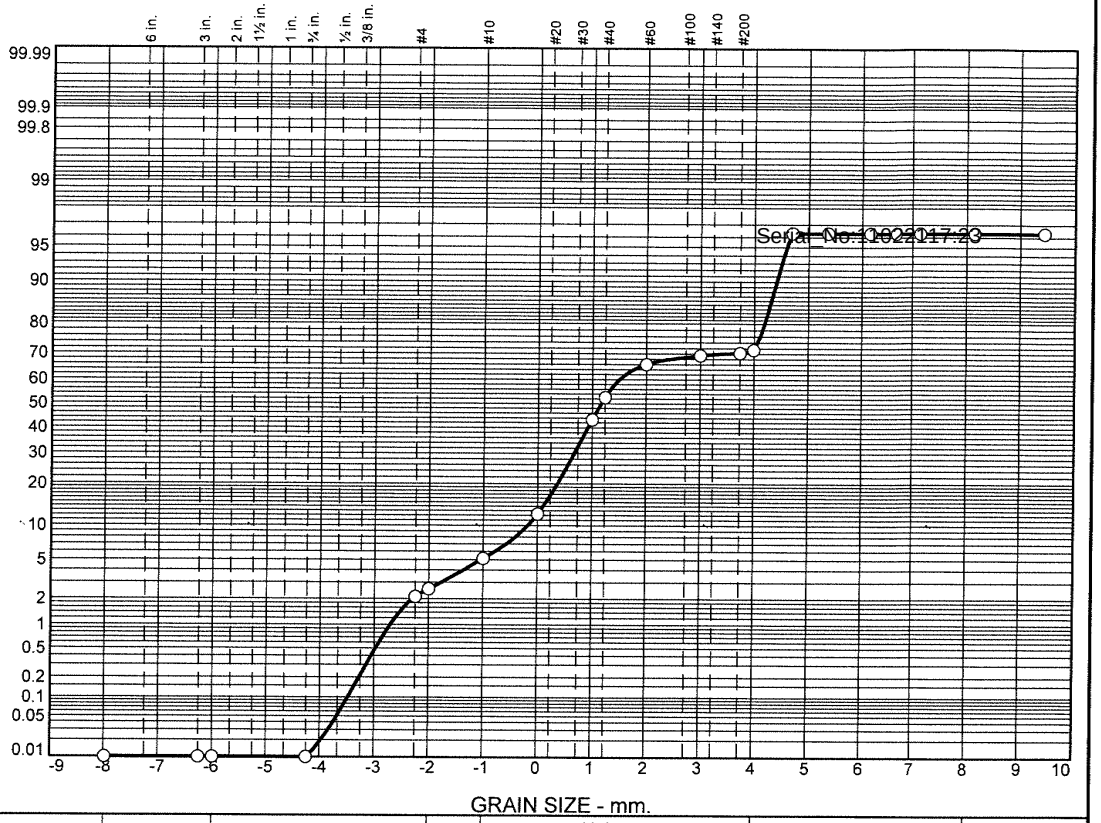
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	1.9	3.7	7.8	49.4	23.8	6.3	91.0	5.3	0.0	0.0	0.0	5.3	1.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0561	0.1094	0.1353	0.1543	0.1930	0.2722	0.3467	0.4294	0.4781	0.4959	0.6804	1.2443

Fineness Modulus	C_u	C_c
1.56	3.92	0.79

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.6	2.6	7.1	30.9	22.8	3.4	2.3	24.6	0.0	0.0		3.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.8973	0.5271	0.4459	0.0964	0.0509	0.0470	0.37	11.22

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|142|SED|01 **Sample No.:** L2151372-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|142|SED|01

Sample Number: L2151372-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 38.81
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.81	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.82	0.00	97.9
		#5	0.17	0.00	97.4
		#10	1.01	0.00	94.8
		#18	2.76	0.00	87.7
		#35	12.01	0.00	56.8
		#40	3.63	0.00	47.4
		#60	5.22	0.00	34.0
		#120	1.31	0.00	30.6
		#200	0.34	0.00	29.7
		#230	0.43	0.00	28.6

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 28.6
Weight of hydrometer sample =35.48
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0385	3.7
5.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0244	3.7
15.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0141	3.7
30.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0099	3.7
60.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0070	3.7
240.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0035	3.7
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	3.7

Fractional Components

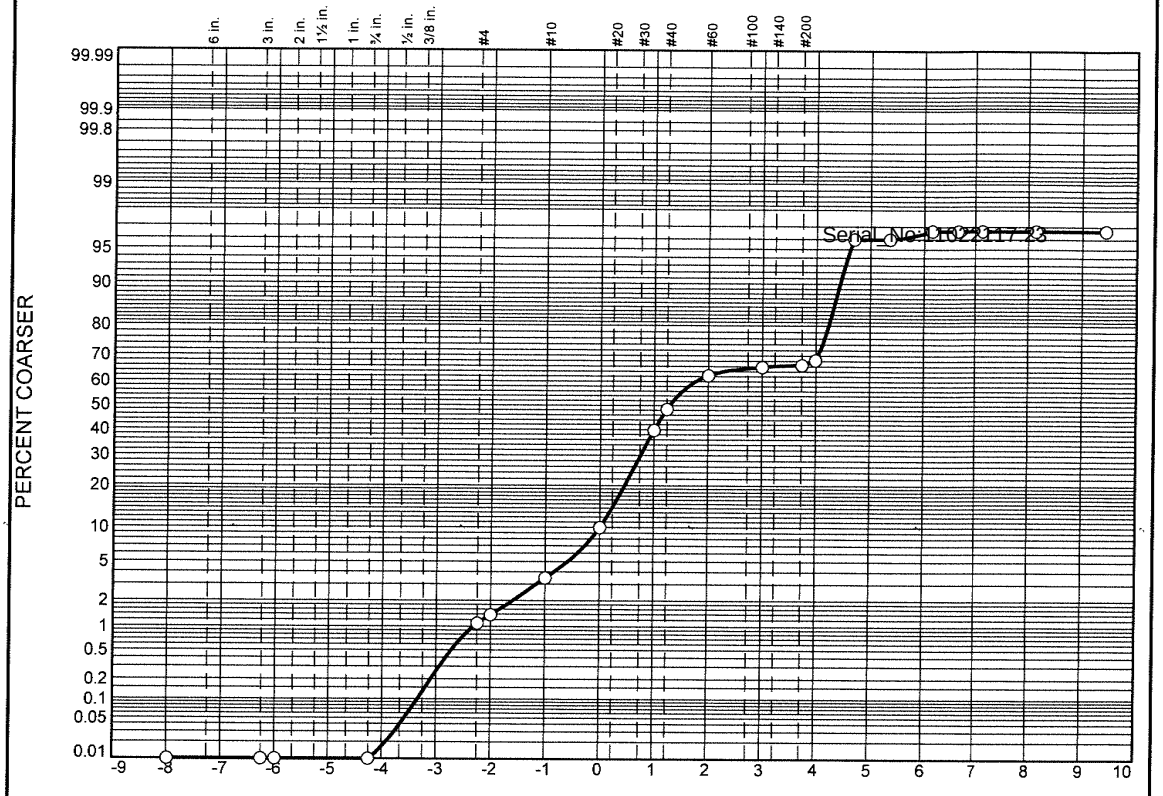
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.6	2.6	7.1	30.9	22.8	3.4	2.3	66.5	24.6	0.0	0.0		24.6	3.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0413	0.0470	0.0509	0.0546	0.0964	0.3520	0.4459	0.5271	0.7752	0.8973	1.1314	2.0614

Fineness Modulus	C_u	C_c
1.81	11.22	0.37

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.4	2.1	6.4	29.8	22.6	3.4	3.0	27.3	0.5	0.2	0.0	3.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8273	0.4973	0.4101	0.0609	0.0499	0.0462	0.16	10.77

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|142|SED|01 **Sample No.:** WG1558187-3

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|142|SED|01

Sample Number: WG1558187-3

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 38.50
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.50	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.42	0.00	98.9
		#5	0.11	0.00	98.6
		#10	0.80	0.00	96.5
		#18	2.49	0.00	90.1
		#35	11.46	0.00	60.3
		#40	3.34	0.00	51.6
		#60	5.37	0.00	37.7
		#120	1.31	0.00	34.3
		#200	0.30	0.00	33.5
		#230	0.70	0.00	31.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 31.7
Weight of hydrometer sample =35.70
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0385	4.0
5.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0244	4.0
15.00	18.9	1.0025	1.0023	0.0138	2.5	15.6	0.0141	3.3
30.00	18.9	1.0025	1.0023	0.0138	2.5	15.6	0.0100	3.3
60.00	18.9	1.0025	1.0023	0.0138	2.5	15.6	0.0071	3.3
240.00	18.9	1.0025	1.0023	0.0138	2.5	15.6	0.0035	3.3
1440.00	18.9	1.0025	1.0023	0.0138	2.5	15.6	0.0014	3.3

Fractional Components

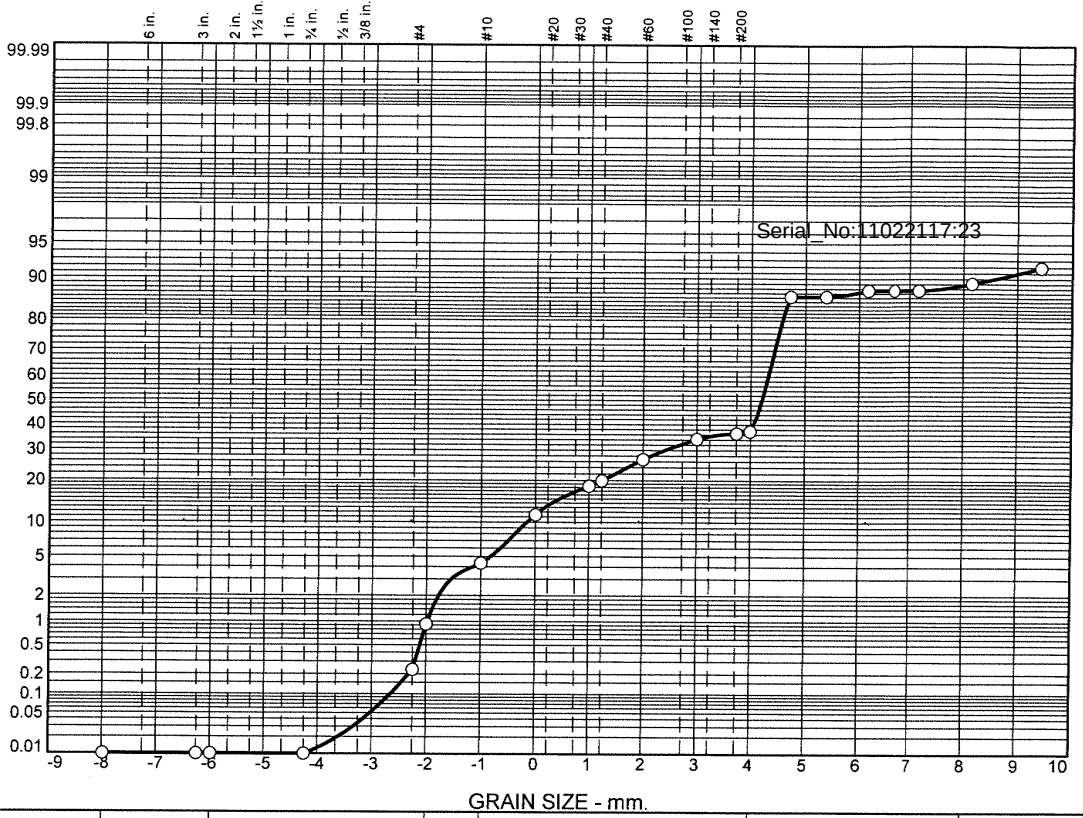
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.4	2.1	6.4	29.8	22.6	3.4	3.0	65.2	27.3	0.5	0.2	0.0	28.0	3.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0405	0.0462	0.0499	0.0532	0.0609	0.2934	0.4101	0.4973	0.7263	0.8273	0.9962	1.5022

Fineness Modulus	C_u	C_c
1.66	10.77	0.16

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.9	3.4	7.1	7.0	8.3	7.6	3.3	48.6	1.0	0.5	1.1	11.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.7316	0.0599	0.0541	0.0462	0.0389	0.0026	13.73	23.12

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|140|SED|01 **Sample No.:** L2151372-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|140|SED|01

Sample Number: L2151372-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 30.35
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
30.35	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.07	0.00	99.8
		#5	0.21	0.00	99.1
		#10	1.03	0.00	95.7
		#18	2.16	0.00	88.6
		#35	2.10	0.00	81.6
		#40	0.47	0.00	80.1
		#60	2.06	0.00	73.3
		#120	2.30	0.00	65.7
		#200	0.68	0.00	63.5
		#230	0.22	0.00	62.8

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 62.8
Weight of hydrometer sample =35.37
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0379	13.8
5.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0239	13.8
15.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0139	12.3
30.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0098	12.3
60.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0069	12.3
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	10.9
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	8.1

Fractional Components

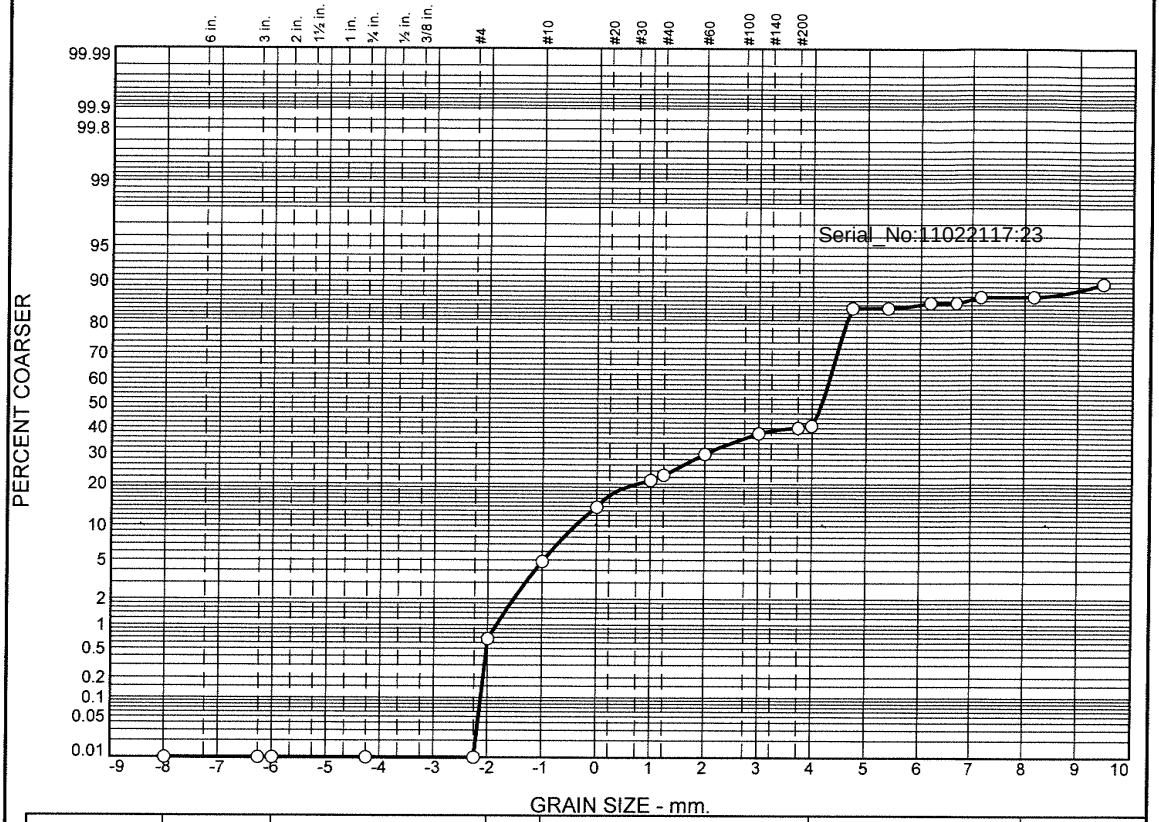
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.9	3.4	7.1	7.0	8.3	7.6	3.3	33.3	48.6	1.0	0.5	1.1	51.2	11.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0026	0.0389	0.0419	0.0462	0.0500	0.0541	0.0599	0.4211	0.7316	1.1117	1.7636

Fineness Modulus	C_u	C_c
0.87	23.12	13.73

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	4.1	9.0	7.3	8.7	7.9	3.5	43.0	1.0	1.2	0.5	13.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.9407	0.0780	0.0551	0.0457	0.0164			

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|140|SED|02 **Sample No.:** L2151372-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|140|SED|02

Sample Number: L2151372-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 31.35
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
31.35	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.21	0.00	99.3
		#10	1.31	0.00	95.2
		#18	2.81	0.00	86.2
		#35	2.27	0.00	78.9
		#40	0.49	0.00	77.4
		#60	2.25	0.00	70.2
		#120	2.49	0.00	62.3
		#200	0.73	0.00	59.9
		#230	0.25	0.00	59.1

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 59.1
Weight of hydrometer sample =35.13
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0375	15.8
5.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0237	15.8
15.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0138	14.4
30.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0097	14.4
60.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0069	13.1
240.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0035	13.1
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	10.4

Fractional Components

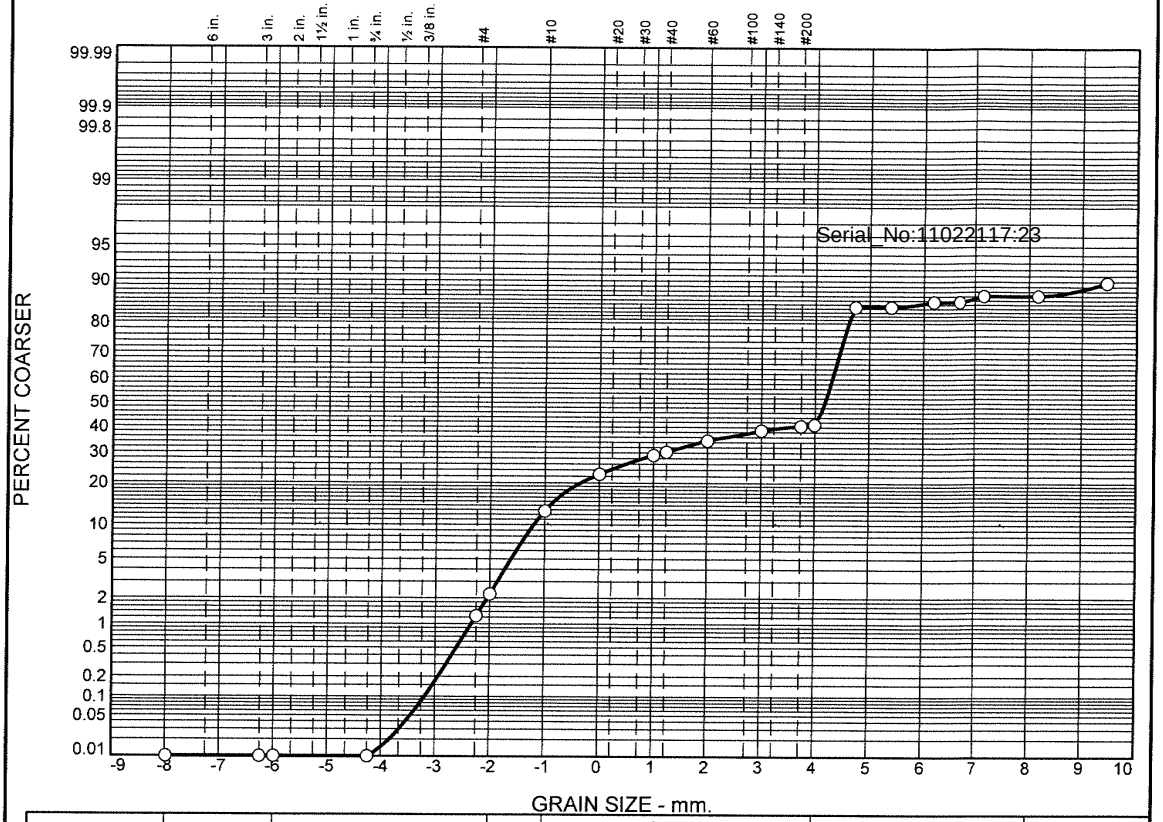
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	4.1	9.0	7.3	8.7	7.9	3.5	36.4	43.0	1.0	1.2	0.5	45.7	13.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0164	0.0407	0.0457	0.0501	0.0551	0.0780	0.5844	0.9407	1.3086	1.9703

Fineness Modulus
0.98

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.2	10.5	9.9	6.5	5.5	4.0	2.7	43.1	0.9	1.2	0.6	12.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			1.7731	0.0883	0.0551	0.0458	0.0172			

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|138|SED|01 **Sample No.:** L2151372-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|138|SED|01

Sample Number: L2151372-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.17
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.17	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.40	0.00	98.8
		#5	0.31	0.00	97.8
		#10	3.39	0.00	87.3
		#18	3.17	0.00	77.4
		#35	2.08	0.00	70.9
		#40	0.40	0.00	69.7
		#60	1.37	0.00	65.4
		#120	1.31	0.00	61.4
		#200	0.59	0.00	59.5
		#230	0.17	0.00	59.0

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 59.0
Weight of hydrometer sample =35.36
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0375	15.6
5.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0237	15.6
15.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0138	14.3
30.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0097	14.3
60.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0069	12.9
240.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0035	12.9
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	10.3

Fractional Components

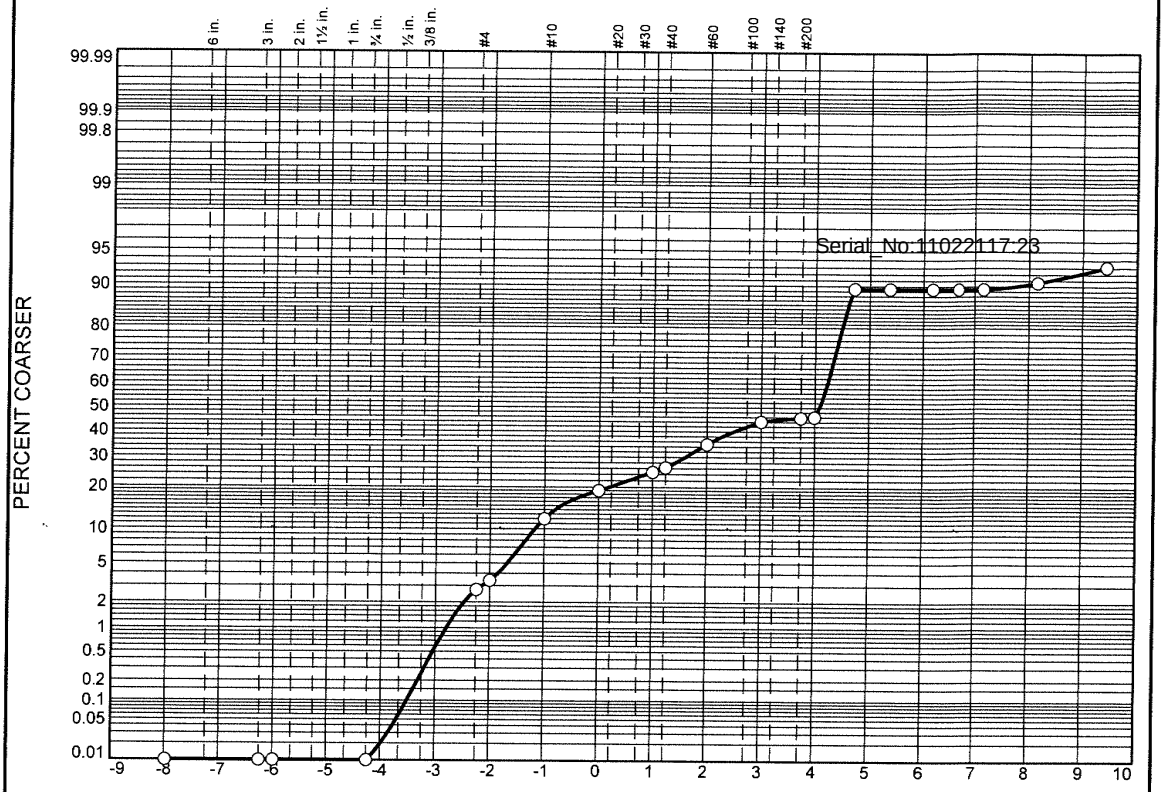
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.2	10.5	9.9	6.5	5.5	4.0	2.7	28.6	43.1	0.9	1.2	0.6	45.8	12.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0172	0.0408	0.0458	0.0502	0.0551	0.0883	1.2663	1.7731	2.2954	3.0610

Fineness Modulus
1.30

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.4	8.5	7.1	5.7	10.2	9.2	2.2	43.1	0.0	0.0	1.0	9.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.6036	0.1766	0.0589	0.0489	0.0416	0.0046	2.93	38.23

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|136|SED|01 **Sample No.:** L2151372-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|136|SED|01

Sample Number: L2151372-11

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 40.11
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
40.11	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.09	0.00	97.3
		#5	0.27	0.00	96.6
		#10	3.43	0.00	88.1
		#18	2.82	0.00	81.0
		#35	2.30	0.00	75.3
		#40	0.62	0.00	73.7
		#60	3.45	0.00	65.1
		#120	3.70	0.00	55.9
		#200	0.65	0.00	54.3
		#230	0.11	0.00	54.0

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 54.0
Weight of hydrometer sample =35.55
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0380	10.6
5.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0240	10.6
15.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0139	10.6
30.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0098	10.6
60.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0069	10.6
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	9.4
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	6.9

Fractional Components

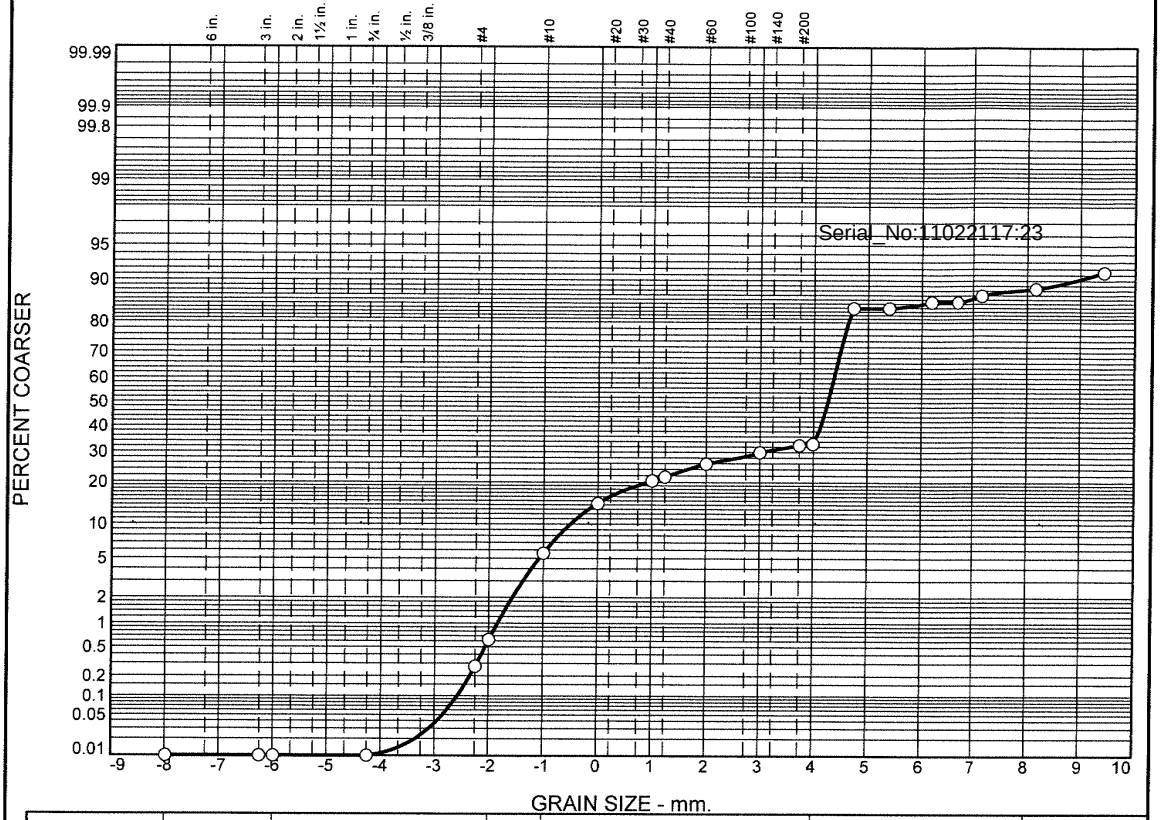
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.4	8.5	7.1	5.7	10.2	9.2	2.2	34.4	43.1	0.0	0.0	1.0	44.1	9.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0046	0.0416	0.0444	0.0489	0.0532	0.0589	0.1766	0.8718	1.6036	2.2475	3.2048

Fineness Modulus	C_u	C_c
1.27	38.23	2.93

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.6	5.0	8.7	6.1	5.4	4.1	3.5	50.5	1.0	1.4	1.9	11.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.9423	0.0569	0.0521	0.0446	0.0152	0.0021	16.80	27.26

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|134|SED|01 **Sample No.:** L2151372-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|134|SED|01

Sample Number: L2151372-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 25.74
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
25.74	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.07	0.00	99.7
		#5	0.09	0.00	99.4
		#10	1.28	0.00	94.4
		#18	2.25	0.00	85.7
		#35	1.56	0.00	79.6
		#40	0.31	0.00	78.4
		#60	1.08	0.00	74.2
		#120	1.05	0.00	70.1
		#200	0.69	0.00	67.4
		#230	0.14	0.00	66.9

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 66.9
Weight of hydrometer sample =35.51
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0377	16.1
5.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0238	16.1
15.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0138	14.6
30.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0098	14.6
60.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0069	13.1
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	11.6
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	8.6

Fractional Components

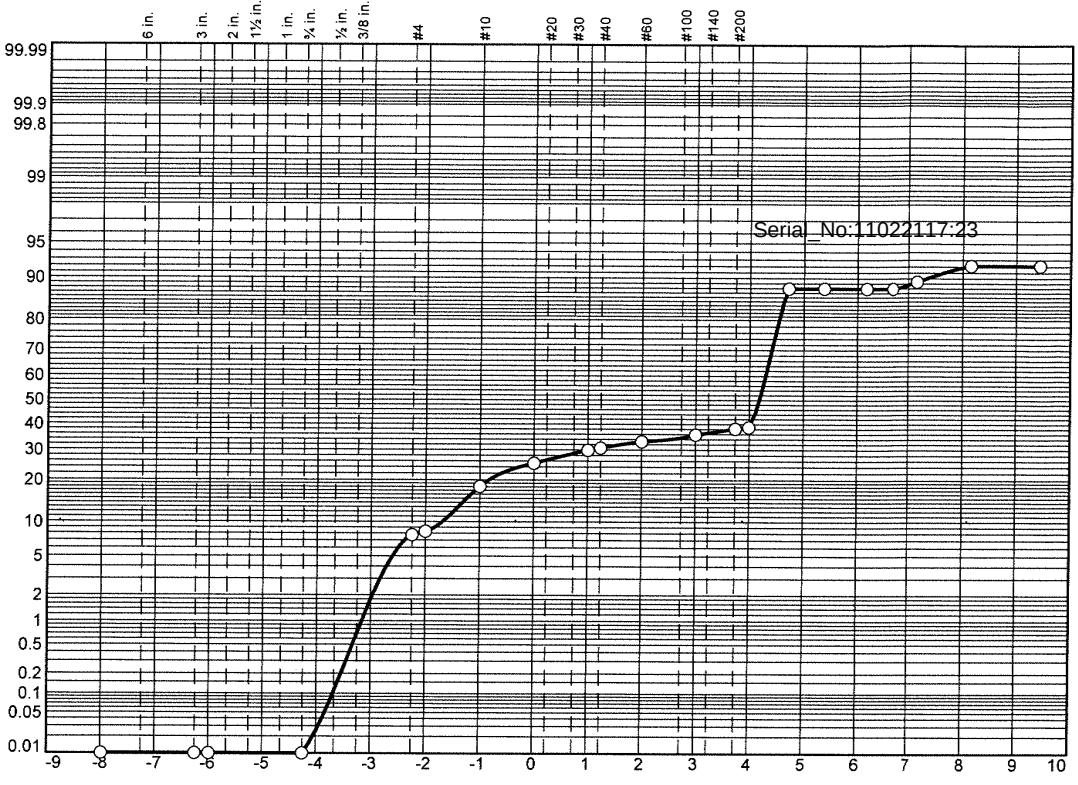
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.6	5.0	8.7	6.1	5.4	4.1	3.5	27.8	50.5	1.0	1.4	1.9	54.8	11.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0021	0.0152	0.0402	0.0446	0.0483	0.0521	0.0569	0.5282	0.9423	1.4113	2.1088

Fineness Modulus	C_u	C_c
0.89	27.26	16.80

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			8.3	9.8	7.1	4.6	3.2	2.8	3.2	49.0	0.0	0.8	3.1	8.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			2.3566	0.0614	0.0550	0.0471	0.0403	0.0061	5.88	9.98

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|132|SED|01 **Sample No.:** L2151372-13

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|132|SED|01

Sample Number: L2151372-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 20.52
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
20.52	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	1.59	0.00	92.3
		#5	0.11	0.00	91.7
		#10	2.01	0.00	81.9
		#18	1.47	0.00	74.8
		#35	0.93	0.00	70.2
		#40	0.18	0.00	69.3
		#60	0.49	0.00	67.0
		#120	0.56	0.00	64.2
		#200	0.48	0.00	61.9
		#230	0.12	0.00	61.3

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 61.3
Weight of hydrometer sample =35.41
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0380	12.0
5.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0240	12.0
15.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0139	12.0
30.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0098	12.0
60.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0070	10.7
240.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0035	7.9
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	7.9

Fractional Components

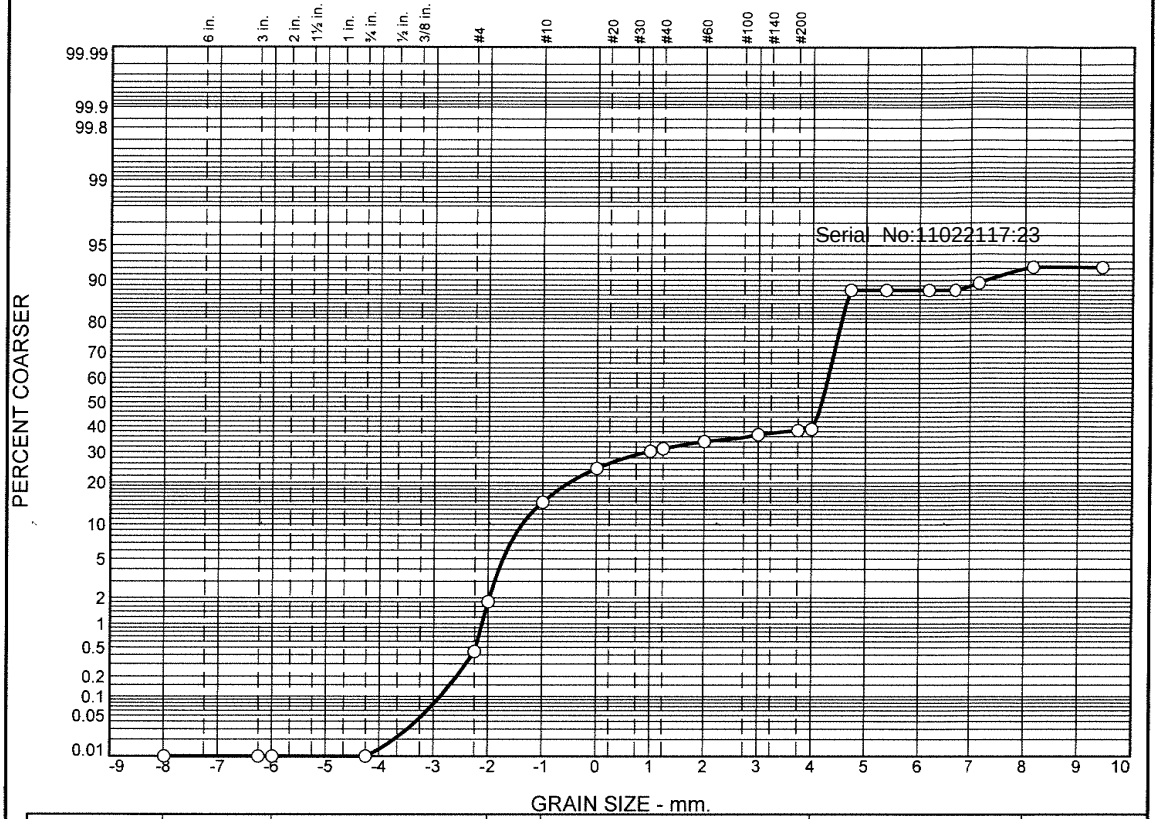
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		8.3	9.8	7.1	4.6	3.2	2.8	3.2	20.9	49.0	0.0	0.8	3.1	52.9	8.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0061	0.0403	0.0430	0.0471	0.0508	0.0550	0.0614	1.7745	2.3566	3.2115	6.1028

Fineness Modulus	C_u	C_c
1.43	9.98	5.88

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	12.9	9.7	6.0	3.6	2.8	2.5	48.8	0.0	0.8	3.1	8.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.9578	0.0616	0.0551	0.0472	0.0404	0.0063	5.75	9.81

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|130\|SED\|01 **Sample No.:** L2151372-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|130|SED|01

Sample Number: L2151372-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 24.84
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
24.84	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.11	0.00	99.6
		#5	0.34	0.00	98.2
		#10	3.19	0.00	85.3
		#18	2.41	0.00	75.6
		#35	1.49	0.00	69.6
		#40	0.24	0.00	68.7
		#60	0.67	0.00	66.0
		#120	0.69	0.00	63.2
		#200	0.40	0.00	61.6
		#230	0.13	0.00	61.1

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 61.1
Weight of hydrometer sample =35.66
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0380	11.9
5.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0240	11.9
15.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0139	11.9
30.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0098	11.9
60.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0070	10.5
240.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0035	7.8
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	7.8

Fractional Components

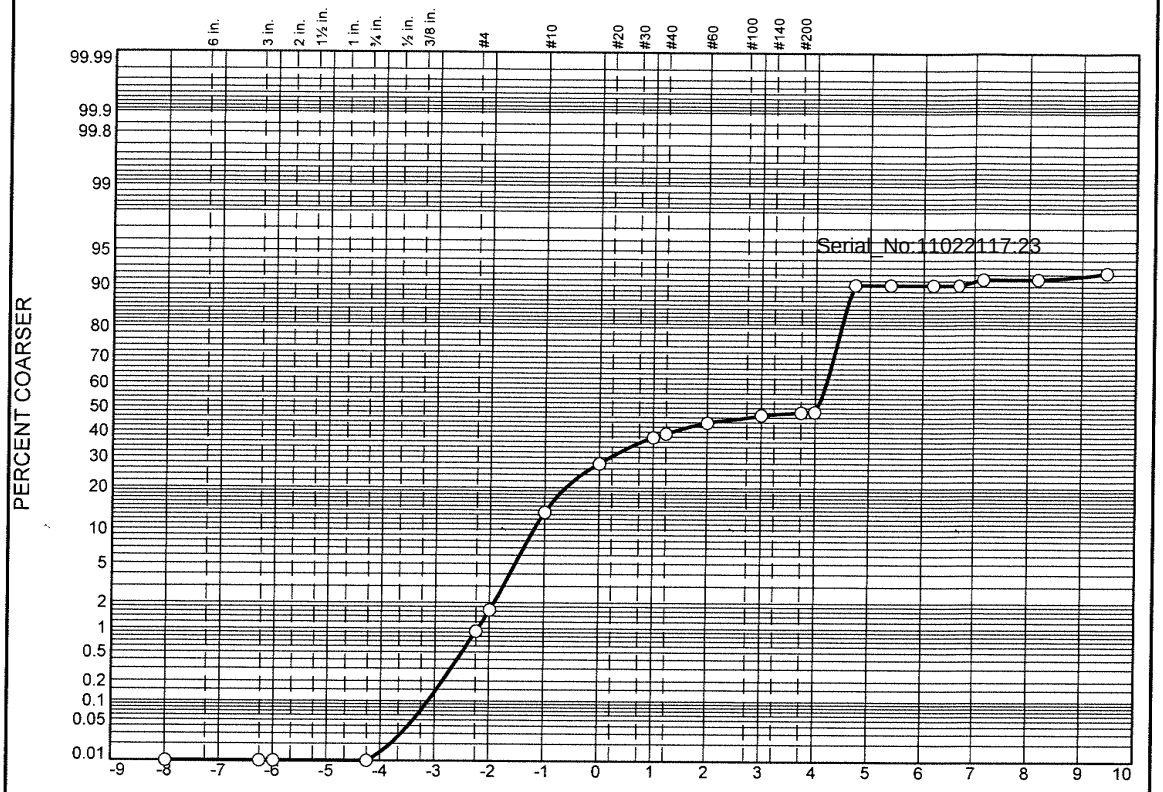
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	12.9	9.7	6.0	3.6	2.8	2.5	24.6	48.8	0.0	0.8	3.1	52.7	8.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0063	0.0404	0.0431	0.0472	0.0509	0.0551	0.0616	1.4106	1.9578	2.6001	3.3124

Fineness Modulus	C_u	C_c
1.33	9.81	5.75

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.6	11.9	14.2	10.0	6.1	3.1	1.8	41.5	0.0	0.7	0.3	8.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8832	0.3916	0.0609	0.0496	0.0422	0.0381	0.16	10.27

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|128|SED|01 **Sample No.:** L2151372-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|128|SED|01

Sample Number: L2151372-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 40.07
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
40.07	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.37	0.00	99.1
		#5	0.29	0.00	98.4
		#10	4.73	0.00	86.5
		#18	5.71	0.00	72.3
		#35	4.00	0.00	62.3
		#40	0.62	0.00	60.8
		#60	1.82	0.00	56.2
		#120	1.26	0.00	53.1
		#200	0.48	0.00	51.9
		#230	0.09	0.00	51.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 51.7
Weight of hydrometer sample =41.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0379	9.8
5.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0239	9.8
15.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0138	9.8
30.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0098	9.8
60.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0069	8.8
240.00	18.9	1.0045	1.0043	0.0138	4.5	15.1	0.0035	8.8
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	7.7

Fractional Components

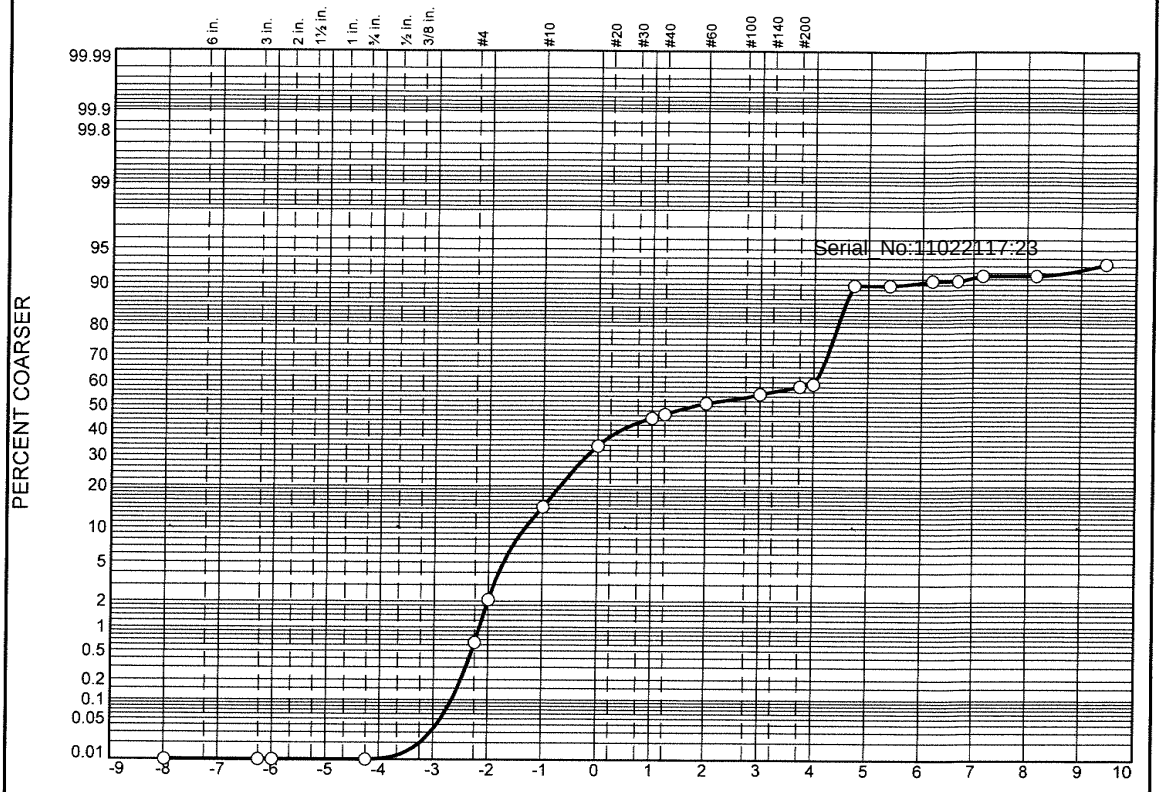
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.6	11.9	14.2	10.0	6.1	3.1	1.8	35.2	41.5	0.0	0.7	0.3	42.5	8.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0381	0.0422	0.0450	0.0496	0.0542	0.0609	0.3916	1.5245	1.8832	2.2868	2.9032

Fineness Modulus	C_u	C_c
1.59	10.27	0.16

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.1	12.2	19.4	11.2	6.2	3.9	4.4	30.4	0.6	0.8	0.3	8.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			1.9418	0.7405	0.2907	0.0527	0.0426	0.0195	0.19	37.98

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|126|SED|01 **Sample No.:** L2151372-16

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|126|SED|01

Sample Number: L2151372-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 37.50
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
37.50	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.24	0.00	99.4
		#5	0.54	0.00	97.9
		#10	4.60	0.00	85.7
		#18	7.25	0.00	66.3
		#35	4.22	0.00	55.1
		#40	0.59	0.00	53.5
		#60	1.72	0.00	48.9
		#120	1.45	0.00	45.0
		#200	1.21	0.00	41.8
		#230	0.35	0.00	40.9

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 40.9
Weight of hydrometer sample =37.50
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0375	10.2
5.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0237	10.2
15.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0138	9.3
30.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0097	9.3
60.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0069	8.5
240.00	18.9	1.0050	1.0048	0.0138	5.0	15.0	0.0035	8.5
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	6.7

Fractional Components

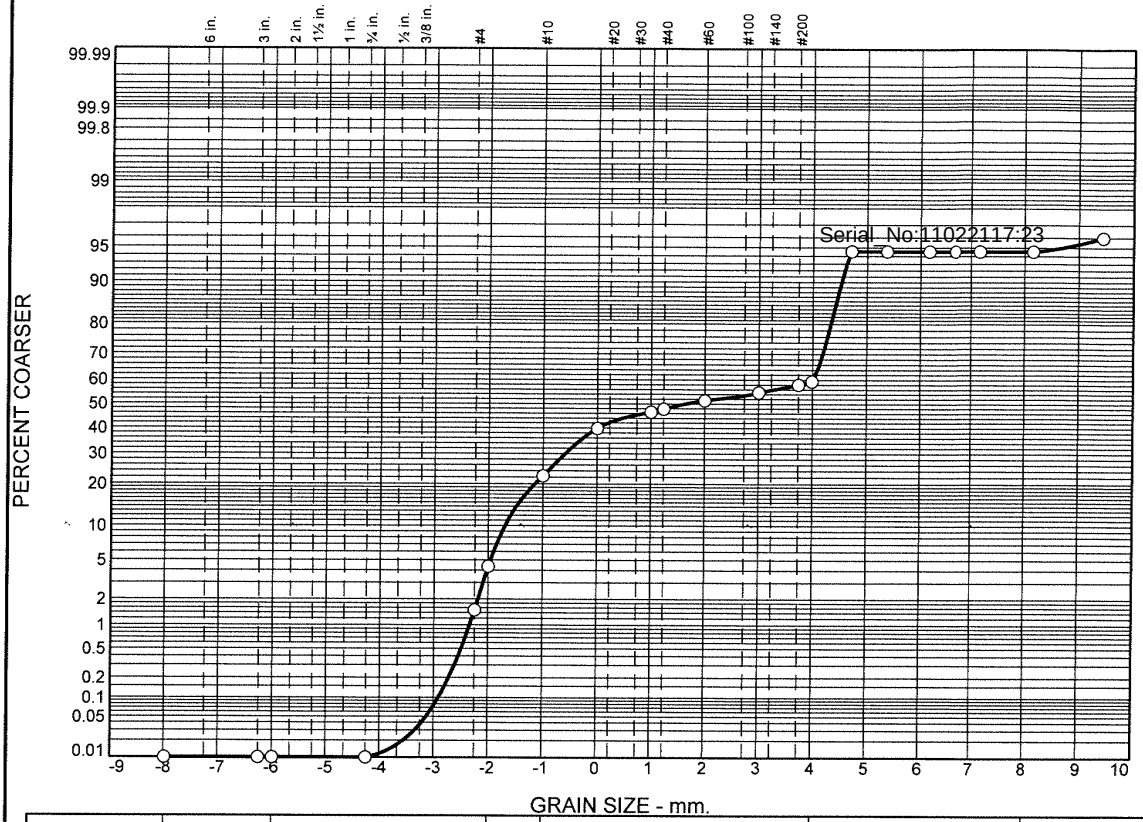
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.1	12.2	19.4	11.2	6.2	3.9	4.4	45.1	30.4	0.6	0.8	0.3	32.1	8.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0195	0.0426	0.0462	0.0527	0.0615	0.2907	0.7405	1.5958	1.9418	2.5017	3.3007

Fineness Modulus	C_u	C_c
1.87	37.98	0.19

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			4.4	18.0	17.4	6.8	4.8	3.4	4.9	34.9	0.0	0.0	0.0	5.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			2.6975	0.9870	0.3178	0.0548	0.0468	0.0434	0.07	22.77

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|124|SED|01 **Sample No.:** L2151372-17

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|124|SED|01

Sample Number: L2151372-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 45.97
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
45.97	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.69	0.00	98.5
		#5	1.31	0.00	95.6
		#10	8.30	0.00	77.6
		#18	7.98	0.00	60.2
		#35	3.12	0.00	53.4
		#40	0.58	0.00	52.2
		#60	1.65	0.00	48.6
		#120	1.58	0.00	45.2
		#200	1.43	0.00	42.0
		#230	0.64	0.00	40.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 40.7
Weight of hydrometer sample =45.97
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0382	5.4
5.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0242	5.4
15.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0139	5.4
30.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0099	5.4
60.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0070	5.4
240.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0035	5.4
1440.00	18.9	1.0030	1.0028	0.0138	3.0	15.5	0.0014	4.0

Fractional Components

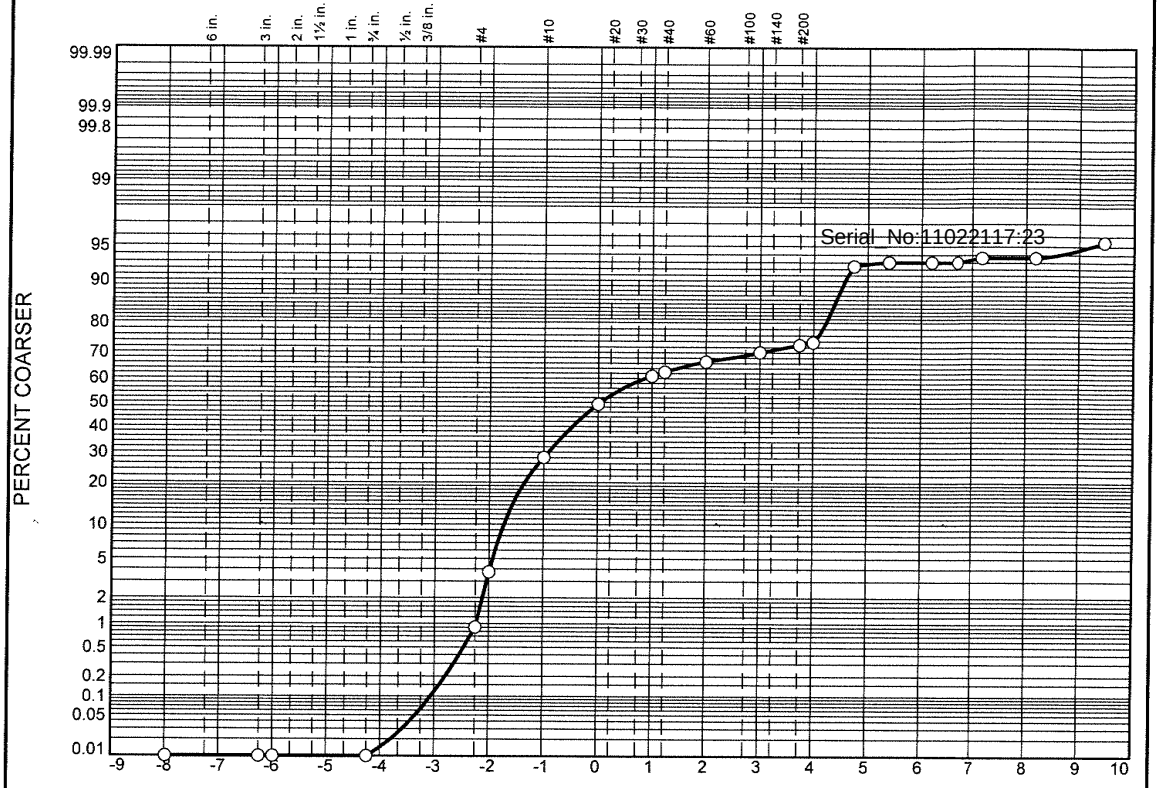
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		4.4	18.0	17.4	6.8	4.8	3.4	4.9	37.3	34.9	0.0	0.0	0.0	34.9	5.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0024	0.0434	0.0468	0.0495	0.0548	0.0621	0.3178	0.9870	2.2075	2.6975	3.2334	3.8913

Fineness Modulus	C_u	C_c
2.05	22.77	0.07

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.7	24.3	21.2	11.7	5.7	3.5	3.7	19.0	0.2	0.4	0.2	6.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			2.9094	1.3822	0.9664	0.1264	0.0477	0.0417	0.28	33.14

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|122|SED|01 **Sample No.:** L2151372-18

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|122|SED|01

Sample Number: L2151372-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.49
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.49	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.32	0.00	99.1
		#5	1.00	0.00	96.3
		#10	8.63	0.00	72.0
		#18	7.50	0.00	50.8
		#35	4.18	0.00	39.1
		#40	0.57	0.00	37.4
		#60	1.43	0.00	33.4
		#120	1.24	0.00	29.9
		#200	0.97	0.00	27.2
		#230	0.29	0.00	26.4

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 26.4
Weight of hydrometer sample =35.49
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0065	1.0063	0.0138	6.5	14.6	0.0373	7.6
5.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0237	7.0
15.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0137	7.0
30.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0097	7.0
60.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0069	6.4
240.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0034	6.4
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	4.6

Fractional Components

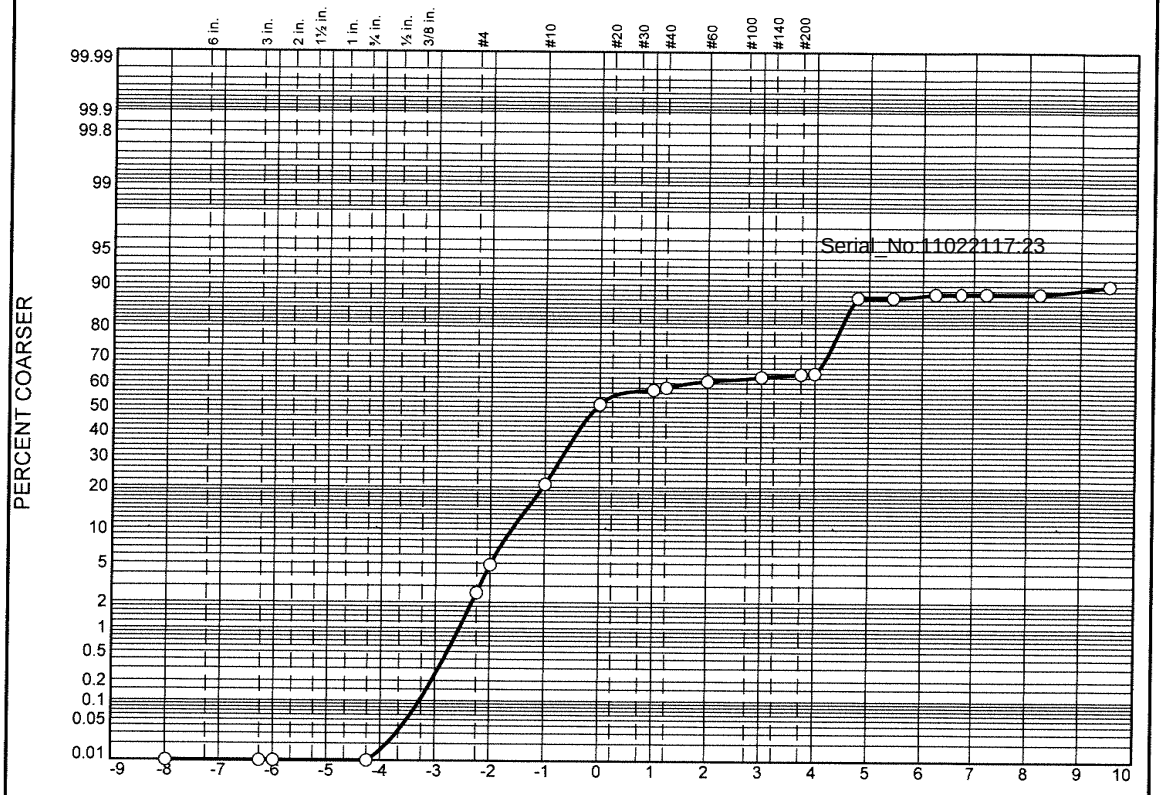
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.7	24.3	21.2	11.7	5.7	3.5	3.7	45.8	19.0	0.2	0.4	0.2	19.8	6.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0017	0.0417	0.0477	0.0531	0.1264	0.5436	0.9664	1.3822	2.5453	2.9094	3.3087	3.8207

Fineness Modulus	C_u	C_c
2.62	33.14	0.28

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			4.9	15.9	30.2	6.1	3.7	1.7	1.6	23.5	0.5	0.3	0.0	11.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.4267	1.3113	1.0330	0.0538	0.0398	0.0014	1.60	948.25

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|120|SED|01 **Sample No.:** L2151372-19

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/26/2021

Location: 3664|2021|ECR-B|120|SED|01

Sample Number: L2151372-19

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 35.21
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
35.21	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.89	0.00	97.5
		#5	0.82	0.00	95.1
		#10	5.61	0.00	79.2
		#18	10.64	0.00	49.0
		#35	2.15	0.00	42.9
		#40	0.36	0.00	41.9
		#60	0.94	0.00	39.2
		#120	0.60	0.00	37.5
		#200	0.40	0.00	36.4
		#230	0.11	0.00	36.0

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 36.0
Weight of hydrometer sample =35.21
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0075	1.0076	0.0135	7.5	14.3	0.0362	12.4
5.00	20.7	1.0075	1.0076	0.0135	7.5	14.3	0.0229	12.4
15.00	20.7	1.0070	1.0071	0.0135	7.0	14.4	0.0133	11.6
30.00	20.7	1.0070	1.0071	0.0135	7.0	14.4	0.0094	11.6
60.00	20.7	1.0070	1.0071	0.0135	7.0	14.4	0.0066	11.6
240.00	20.7	1.0070	1.0071	0.0135	7.0	14.4	0.0033	11.6
1440.00	20.7	1.0060	1.0061	0.0135	6.0	14.7	0.0014	10.0

Frictional Components

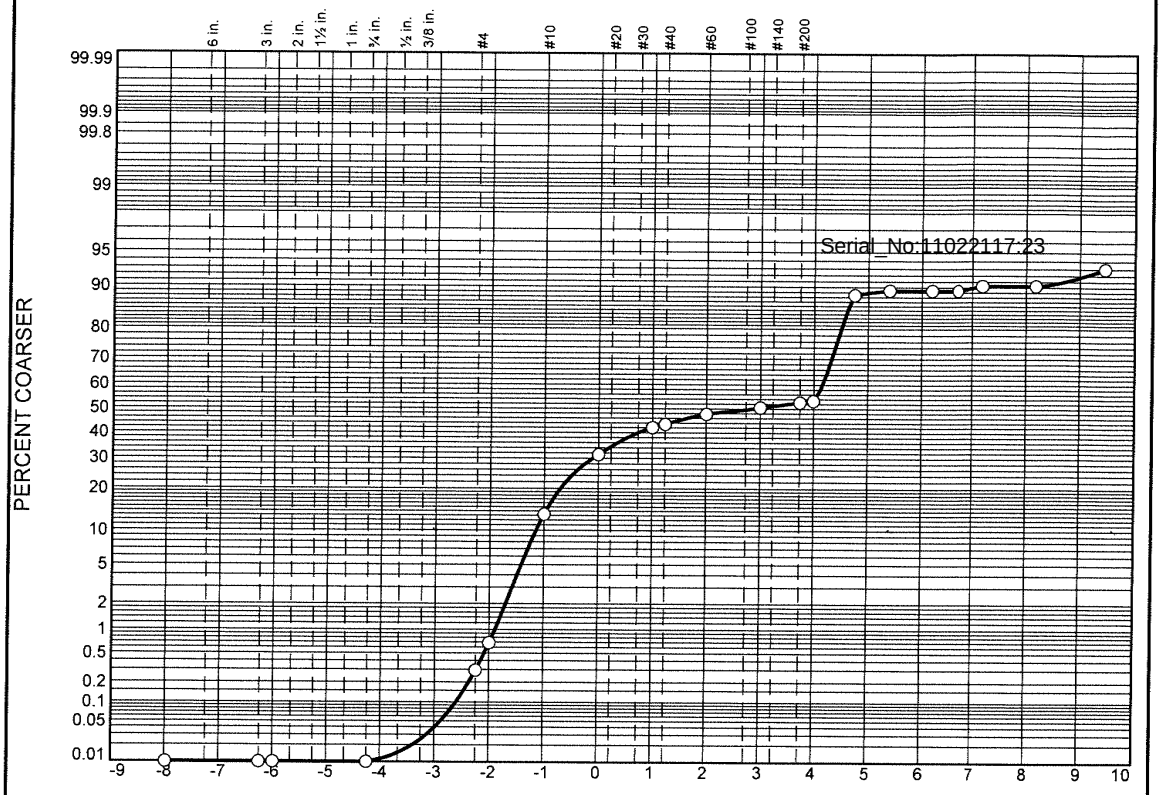
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		4.9	15.9	30.2	6.1	3.7	1.7	1.6	43.3	23.5	0.5	0.3	0.0	24.3	11.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0014	0.0398	0.0448	0.0538	0.3083	1.0330	1.3113	2.0461	2.4267	3.0258	3.9648

Fineness Modulus	C_u	C_c
2.42	948.25	1.60

Serial_No:11022117:23

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	12.6	18.0	10.7	5.7	2.8	3.0	35.4	0.4	0.6	0.3	9.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8976	0.5960	0.1362	0.0498	0.0407	0.0076	0.55	78.76

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|120|SED|02 **Sample No.:** L2151372-20

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/21/2021

Location: 3664|2021|ECR-B|120|SED|02

Sample Number: L2151372-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 41.03
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
41.03	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		0.75	0.00	0.00	100.0
		#4	0.12	0.00	99.7
		#5	0.16	0.00	99.3
		#10	5.16	0.00	86.7
		#18	7.42	0.00	68.7
		#35	4.39	0.00	58.0
		#40	0.59	0.00	56.5
		#60	1.73	0.00	52.3
		#120	1.16	0.00	49.5
		#200	0.86	0.00	47.4
		#230	0.27	0.00	46.7

Serial_No:11022117:23

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 46.7
Weight of hydrometer sample =41.03
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.9	1.0065	1.0063	0.0138	6.5	14.6	0.0373	11.6
5.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0237	10.7
15.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0137	10.7
30.00	18.9	1.0060	1.0058	0.0138	6.0	14.7	0.0097	10.7
60.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0069	9.8
240.00	18.9	1.0055	1.0053	0.0138	5.5	14.8	0.0034	9.8
1440.00	18.9	1.0040	1.0038	0.0138	4.0	15.2	0.0014	7.0

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	12.6	18.0	10.7	5.7	2.8	3.0	40.2	35.4	0.4	0.6	0.3	36.7	9.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0076	0.0407	0.0441	0.0498	0.0559	0.1362	0.5960	1.6205	1.8976	2.2106	2.6680

Fineness Modulus	C_u	C_c
1.72	78.76	0.55

Serial_No:11022117:23

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:11022117:23

9/22/21 L2151372

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab

JOB #: 3664

SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 09/19/2021

	Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
-01	3664|2021|ECR-B|154|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-02	3664|2021|ECR-B|152|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-03	3664|2021|ECR-B|150|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-04	3664|2021|ECR-B|148|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-05	3664|2021|ECR-B|146|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-06	3664|2021|ECR-B|144|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
07	3664|2021|ECR-B|142|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-08	3664|2021|ECR-B|140|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-09	3664|2021|ECR-B|140|Sed|GS|02	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2; QC duplicate
-10	3664|2021|ECR-B|138|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #1
-11	3664|2021|ECR-B|136|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-12	3664|2021|ECR-B|134|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-13	3664|2021|ECR-B|132|Sed|GS|01	9/16/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-14	3664|2021|ECR-B|130|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-15	3664|2021|ECR-B|128|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-16	3664|2021|ECR-B|126|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-17	3664|2021|ECR-B|124|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-18	3664|2021|ECR-B|122|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-19	3664|2021|ECR-B|120|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 18 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/15/21

RELINQUISHED BY: [signature] DATE/TIME: 9/22/21 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

AAC 9/22/21 1220 CSA CONTACT NAME: Jason Clermont 9/22 TELEPHONE NUMBER: 252-258-1626

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[signature] 9/22/21 2000

Joseph C. Bezigfox 9/22/21 2000

Joseph C. Bezigfox 9/22/21 2119

Sam Oldrich 9/22/21 21:19

9/22/21 L2151372

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 09/19/2021

	Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
01	3664|2021|ECR-B|154|Sed|TOC|01	9/15/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
02	3664|2021|ECR-B|152|Sed|TOC|01	9/15/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
03	3664|2021|ECR-B|150|Sed|TOC|01	9/15/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
04	3664|2021|ECR-B|148|Sed|TOC|01	9/15/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
05	3664|2021|ECR-B|146|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
06	3664|2021|ECR-B|144|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
07	3664|2021|ECR-B|142|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
08	3664|2021|ECR-B|140|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
09	3664|2021|ECR-B|140|Sed|TOC|02	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1; QC duplicate
10	3664|2021|ECR-B|138|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
11	3664|2021|ECR-B|136|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1;
12	3664|2021|ECR-B|134|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
13	3664|2021|ECR-B|132|Sed|TOC|01	9/16/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
14	3664|2021|ECR-B|130|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
15	3664|2021|ECR-B|128|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
16	3664|2021|ECR-B|126|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
17	3664|2021|ECR-B|124|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
18	3664|2021|ECR-B|122|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
19	3664|2021|ECR-B|120|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 18 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/18/21

RELINQUISHED BY: [signature] DATE/TIME: 9/22/21 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

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[signature] 9/22/21 2000

[signature] 9/22/21 2119

[signature] 9/22/21 2000

[signature] 9/22/21 2119

Serial_No:11022117:23

9/22/21 La151372

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 09/19/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|120|Sed|GS|02	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2; QC duplicate
3664|2021|ECR-B|118|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
3664|2021|ECR-B|116|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
3664|2021|ECR-B|114|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
3664|2021|ECR-B|112|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
3664|2021|ECR-B|110|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
3664|2021|ECR-C|1101|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
1' 1' ~~#REF!~~ 1' B2	9/11/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|448|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|450|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|452|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|454|Sed|GS|01	9/10/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|456|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|458|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|470|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|472|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|474|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-B|482|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|502|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: TMS

DATE/TIME: 15 Sept 2021

RECEIVED BY:

DATE/TIME: 9/17/21

RELINQUISHED BY:

DATE/TIME: 9/22/21

RECEIVED BY:

DATE/TIME: 9/22/21 1204

ESA CONTACT NAME: Jason Clermont

TELEPHONE NUMBER: 252-258-1626

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9/22/21 2000

9/22/21 2119

9/22/21 2000

9/22/21 2119

ain of Custody Record

Serial_No:11022117:23

9/22/21 ~~L21S1378~~ L21S1372

Chain of Custody Record

DATE: 09/19/2021

DESIGNATED LABORATORY: Alpha Lab

JOB #: 3664

SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|120|Sed|TOC|02	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1; QC duplicate
3664|2021|ECR-B|118|Sed|TOC|01	9/17/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
3664|2021|ECR-B|116|Sed|TOC|01	9/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1;
3664|2021|ECR-B|114|Sed|TOC|01	9/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
3664|2021|ECR-B|112|Sed|TOC|01	9/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
3664|2021|ECR-B|110|Sed|TOC|01	9/18/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
3664|2021|ECR-C|1101|Sed|TOC|01	9/15/2021	SmithMac	125-mL glass	freeze	total organic carbon	1	Cooler #1
3664|2021|ECR-C|1101|Sed|TOC|02	9/11/2021	SmithMac	125-mL glass	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|448|Sed|TOC|01	9/12/2021	SmithMac	125-mL glass	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|450|Sed|TOC|01	9/12/2021	SmithMac	125-mL glass	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|452|Sed|TOC|01	9/12/2021	SmithMac	125-mL glass	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|454|Sed|TOC|01	9/10/2021	SmithMac	125-mL glass	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|456|Sed|TOC|01	9/10/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|458|Sed|TOC|01	9/10/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|470|Sed|TOC|01	9/10/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|472|Sed|TOC|01	9/11/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|474|Sed|TOC|01	9/11/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-B|482|Sed|TOC|01	9/11/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|502|Sed|TOC|01	9/11/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature: ____

RELINQUISHED BY: [signature]

DATE/TIME: 18 Sept 2021

RECEIVED BY: [signature]

DATE/TIME: 9/18/21

RELINQUISHED BY: [signature]

DATE/TIME: 9/22/21

RECEIVED BY: [signature] ACC

DATE/TIME: 9/22/21 DOY

[signature] ACC 9/22/21 1720 CSA CONTACT NAME: Jason Clermont

TELEPHONE NUMBER: 252-258-1626

[signature] 1720

The chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are [illegible] and have sought as evidence in [illegible]. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when applicable at the time of sample receipt. Note: Initials are not acceptable.

[signature] 9/22/21 2000

[signature] 9/22/21 2000

[signature] 9/22/21

Serial_No:11172114:52

ANALYTICAL REPORT

Lab Number:	L2151373
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/17/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151373-01	3664|2021|ECR-B|118|SED|01	SEDIMENT	OFFSHORE MA / NY	09/17/21 00:00	09/22/21
L2151373-02	3664|2021|ECR-B|116|SED|01	SEDIMENT	OFFSHORE MA / NY	09/18/21 00:00	09/22/21
L2151373-03	3664|2021|ECR-B|114|SED|01	SEDIMENT	OFFSHORE MA / NY	09/18/21 00:00	09/22/21
L2151373-04	3664|2021|ECR-B|112|SED|01	SEDIMENT	OFFSHORE MA / NY	09/18/21 00:00	09/22/21
L2151373-05	3664|2021|ECR-B|110|SED|01	SEDIMENT	OFFSHORE MA / NY	09/18/21 00:00	09/22/21
L2151373-06	3664|2021|ECR-C|1101|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151373-07	3664|2021|ECR-C|1101|SED|02	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151373-08	3664|2021|ECR-B|448|SED|01	SEDIMENT	OFFSHORE MA / NY	09/12/21 00:00	09/22/21
L2151373-09	3664|2021|ECR-B|450|SED|01	SEDIMENT	OFFSHORE MA / NY	09/12/21 00:00	09/22/21
L2151373-10	3664|2021|ECR-B|452|SED|01	SEDIMENT	OFFSHORE MA / NY	09/12/21 00:00	09/22/21
L2151373-11	3664|2021|ECR-B|454|SED|01	SEDIMENT	OFFSHORE MA / NY	09/10/21 00:00	09/22/21
L2151373-12	3664|2021|ECR-B|456|SED|01	SEDIMENT	OFFSHORE MA / NY	09/10/21 00:00	09/22/21
L2151373-13	3664|2021|ECR-B|458|SED|01	SEDIMENT	OFFSHORE MA / NY	09/10/21 00:00	09/22/21
L2151373-14	3664|2021|ECR-B|470|SED|01	SEDIMENT	OFFSHORE MA / NY	09/10/21 00:00	09/22/21
L2151373-15	3664|2021|ECR-B|472|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151373-16	3664|2021|ECR-B|474|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151373-17	3664|2021|ECR-B|482|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151373-18	3664|2021|ECR-B|502|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151373-19	3664|2021|ECR-B|504|SED|01	SEDIMENT	OFFSHORE MA / NY	09/14/21 00:00	09/22/21
L2151373-20	3664|2021|ECR-B|506|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2151373-07: A sample identified as "3664|2021|ECR-C|1101|SED|02" was listed on the Chain of Custody, but not received. This was verified by the client.

L2151373-20: A sample container for Total Organic Carbon-EPA 9060A was received for the "3664|2021|ECR-B|506|SED|01" sample, but was not listed on the chain of custody. At the client's request, the analysis was performed.

Grain Size

The WG1560090-1 Laboratory Duplicate RPD for granule (27%), % medium sand (40%), % fine sand (80%), % very fine sand (29%), fines (23%), silt (36%), and sand (41%), performed on L2151373-04, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

The WG1560489-1 Laboratory Duplicate RPD for pebble (25%), granule (21%), % medium sand (31%), % fine sand (40%), % very fine sand (50%), silt (34%) and clay (53%), performed on L2151373-10, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

Total Organic Carbon

The samples were frozen upon receipt in order to arrest the holding time.

L2151373-04, -05, and -15: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG1562350-3 Laboratory Duplicate RPD (Rep2 - 26%), performed on L2151373-10, is outside the

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

Case Narrative (continued)

acceptance criteria of 25%. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/17/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-01
Client ID: 3664|2021|ECR-B|118|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/17/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.93		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	2.90		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	2.92		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.900		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	2.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	2.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	1.50		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	59.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	18.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-02
Client ID: 3664|2021|ECR-B|116|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/18/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.16		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	3.34		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	3.25		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	3.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	2.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	2.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	5.50		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	55.2		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	13.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-03
Client ID: 3664|2021|ECR-B|114|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/18/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.14		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	2.76		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	2.95		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	2.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	1.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	3.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	12.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	58.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.6		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-04
Client ID: 3664|2021|ECR-B|112|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/18/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.811		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	2.29		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	1.55		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.60		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.80		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Coarse Sand	7.40		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Medium Sand	11.0		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Fine Sand	17.8		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
% Very Fine Sand	8.30		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	27.5		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	18.6		%	0.100	NA	1	-	10/18/21 16:29	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-05
Client ID: 3664|2021|ECR-B|110|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/18/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	7.76		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	11.2		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	9.50		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.800		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	1.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	5.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	38.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	21.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	25.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-06
Client ID: 3664|2021|ECR-C|1101|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/15/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.874		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.815		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	0.844		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	10.7		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	30.6		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	25.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	22.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-08
Client ID: 3664|2021|ECR-B|448|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/12/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.373		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.395		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	0.384		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	18.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	42.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	20.7		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	2.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.300		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-09
Client ID: 3664|2021|ECR-B|450|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/12/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.044		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Rep2)	0.058		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Average)	0.051		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	40.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.8		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	15.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	12.2		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	1.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	6.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.700		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-10
Client ID: 3664|2021|ECR-B|452|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/12/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.022		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Rep2)	0.017		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Average)	0.020		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	17.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	27.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	15.1		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	0.900		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.300		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	23.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-11
Client ID: 3664|2021|ECR-B|454|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/10/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.766		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.723		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	0.744		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.300		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	0.800		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	7.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	46.1		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	11.1		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	28.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-12
Client ID: 3664|2021|ECR-B|456|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/10/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.068		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	0.083		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	0.076		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	7.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	18.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	29.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	21.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-13
Client ID: 3664|2021|ECR-B|458|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/10/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.125		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Rep2)	0.121		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Average)	0.123		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	14.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	10.6		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	23.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	23.4		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-14
Client ID: 3664|2021|ECR-B|470|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/10/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.255		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Rep2)	0.232		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Average)	0.244		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	15.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	10.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	16.6		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	24.8		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	9.50		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-15
Client ID: 3664|2021|ECR-B|472|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.144		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.377		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.260		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	0.300		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	5.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.00		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	19.8		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	37.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	12.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-16
Client ID: 3664|2021|ECR-B|474|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.158		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.140		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.149		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.700		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	17.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	32.8		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	25.2		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	5.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.8		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-17
Client ID: 3664|2021|ECR-B|482|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.136		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.118		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.127		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.60		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	17.0		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	29.7		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	15.1		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.50		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.3		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-18
Client ID: 3664|2021|ECR-B|502|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.124		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.120		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.122		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.200		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	2.70		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	29.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	51.6		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	5.80		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-19
Client ID: 3664|2021|ECR-B|504|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/14/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.104		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.117		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.110		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.600		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	16.1		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	61.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	8.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

SAMPLE RESULTS

Lab ID: L2151373-20
Client ID: 3664|2021|ECR-B|506|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.073		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	0.063		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	0.068		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.90		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Coarse Sand	27.9		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Medium Sand	54.5		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Fine Sand	5.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.700		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.40		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.10		%	0.100	NA	1	-	10/19/21 12:44	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151373
Report Date: 11/17/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 09-10,13-14 Batch: WG1562350-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/23/21 14:08	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 01-06,08,11-12 Batch: WG1562351-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/23/21 14:11	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 15-20 Batch: WG1562736-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/25/21 10:24	1,9060A	SP

Lab Control Sample Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 09-10,13-14 Batch: WG1562350-2								
Total Organic Carbon (Rep1)	108		-		75-125	-		25
Total Organic Carbon (Rep2)	102		-		75-125	-		25
Total Organic Carbon (Average)	105		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-06,08,11-12 Batch: WG1562351-2								
Total Organic Carbon (Rep1)	95		-		75-125	-		25
Total Organic Carbon (Rep2)	90		-		75-125	-		25
Total Organic Carbon (Average)	93		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 15-20 Batch: WG1562736-2								
Total Organic Carbon (Rep1)	101		-		75-125	-		25
Total Organic Carbon (Rep2)	111		-		75-125	-		25
Total Organic Carbon (Average)	106		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 09-10,13-14 QC Batch ID: WG1562350-4 QC Sample: L2151373-10 Client ID: 3664|2021|ECR-B|452|SED|01												
Total Organic Carbon (Rep1)	0.022	0.391	0.415	100		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.017	0.366	0.388	101		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-06,08,11-12 QC Batch ID: WG1562351-4 QC Sample: L2151373-11 Client ID: 3664|2021|ECR-B|454|SED|01												
Total Organic Carbon (Rep1)	0.766	0.89	1.50	82		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.723	0.65	1.38	101		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 15-20 QC Batch ID: WG1562736-4 QC Sample: L2151373-20 Client ID: 3664|2021|ECR-B|506|SED|01												
Total Organic Carbon (Rep1)	0.073	0.458	0.527	99		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.063	0.415	0.480	100		-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151373
Report Date: 11/17/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1560090-1 QC Sample: L2151373-04 Client ID: 3664|2021|ECR-B|112|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	1.00	%	NC		20
Granule (2.0-4.0 mm)	1.60	2.10	%	**27**	Q	20
% Very Coarse Sand	7.80	7.30	%	7		20
% Coarse Sand	7.40	6.10	%	19		20
% Medium Sand	11.0	7.30	%	**40**	Q	20
% Fine Sand	17.8	7.60	%	**80**	Q	20
% Very Fine Sand	8.30	6.20	%	**29**	Q	20
Silt - (3.9-62.5 um)	27.5	39.7	%	**36**	Q	20
Clay - (<3.9 um)	18.6	22.7	%	20		20

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151373
Report Date: 11/17/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-03,05-06,08-20 QC Batch ID: WG1560489-1 QC Sample: L2151373-10 Client ID: 3664|2021|ECR-B|452|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	1.80	1.40	%	**25**	Q	20
Granule (2.0-4.0 mm)	10.9	8.80	%	**21**	Q	20
% Very Coarse Sand	17.5	19.3	%	10		20
% Coarse Sand	27.4	30.7	%	11		20
% Medium Sand	15.1	20.6	%	**31**	Q	20
% Fine Sand	0.900	0.600	%	**40**	Q	20
% Very Fine Sand	0.300	0.500	%	**50**	Q	20
Silt - (3.9-62.5 um)	23.0	16.3	%	**34**	Q	20
Clay - (<3.9 um)	3.10	1.80	%	**53**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 09-10,13-14 QC Batch ID: WG1562350-3 QC Sample: L2151373-10 Client ID: 3664|2021|ECR-B|452|SED|01						
Total Organic Carbon (Rep1)	0.022	0.021	%	5		25
Total Organic Carbon (Rep2)	0.017	0.022	%	**26**	Q	25
Total Organic Carbon (Average)	0.020	0.022	%	10		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-06,08,11-12 QC Batch ID: WG1562351-3 QC Sample: L2151373-11 Client ID: 3664|2021|ECR-B|454|SED|01					
Total Organic Carbon (Rep1)	0.766	0.895	%	16	25
Total Organic Carbon (Rep2)	0.723	0.884	%	20	25
Total Organic Carbon (Average)	0.744	0.890	%	18	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 15-20 QC Batch ID: WG1562736-3 QC Sample: L2151373-20 Client ID: 3664|2021|ECR-B|506|SED|01					
Total Organic Carbon (Rep1)	0.073	0.062	%	16	25
Total Organic Carbon (Rep2)	0.063	0.078	%	21	25
Total Organic Carbon (Average)	0.068	0.070	%	3	25

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151373-01A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-01B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-02A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151373-02B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-03A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151373-03B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-04A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151373-04B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151373-05A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151373-05B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-06A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151373-06B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-08A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151373-08B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-09A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-09B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-10A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151373-10B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11172114:52

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151373-11A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-11B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-12A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151373-12B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-13A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-13B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-14A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151373-14B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-15A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-15B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11172114:52

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151373
Report Date: 11/17/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151373-16A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151373-16B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-17A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151373-17B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-18A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151373-18B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-19A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151373-19B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151373-20A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151373-20B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151373
Project Number:	3664	**Report Date:**	11/17/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

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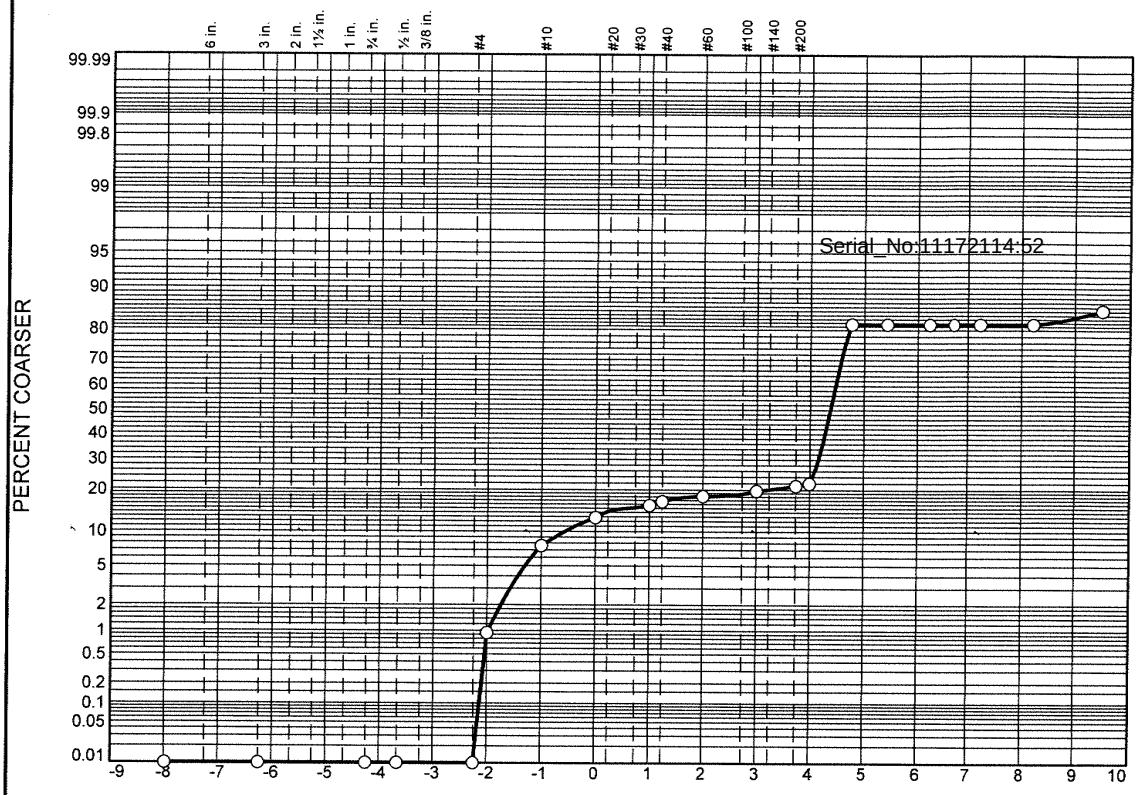
ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.9	6.7	5.2	2.9	2.4	1.5	2.6	59.4	0.0	0.0	0.0	18.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6516	0.0515	0.0482	0.0419	0.0014			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|118|SED|01 **Sample No.:** L2151373-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|118|SED|01

Sample Number: L2151373-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 22.46
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
22.46	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.21	0.00	99.1
		#10	1.49	0.00	92.4
		#18	1.17	0.00	87.2
		#35	0.65	0.00	84.3
		#40	0.23	0.00	83.3
		#60	0.32	0.00	81.9
		#120	0.34	0.00	80.4
		#200	0.36	0.00	78.8
		#230	0.16	0.00	78.0

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Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 78.0
Weight of hydrometer sample =35.14
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	18.4
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	18.4
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	18.4
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	18.4
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	18.4
240.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0034	18.4
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	14.8

Fractional Components

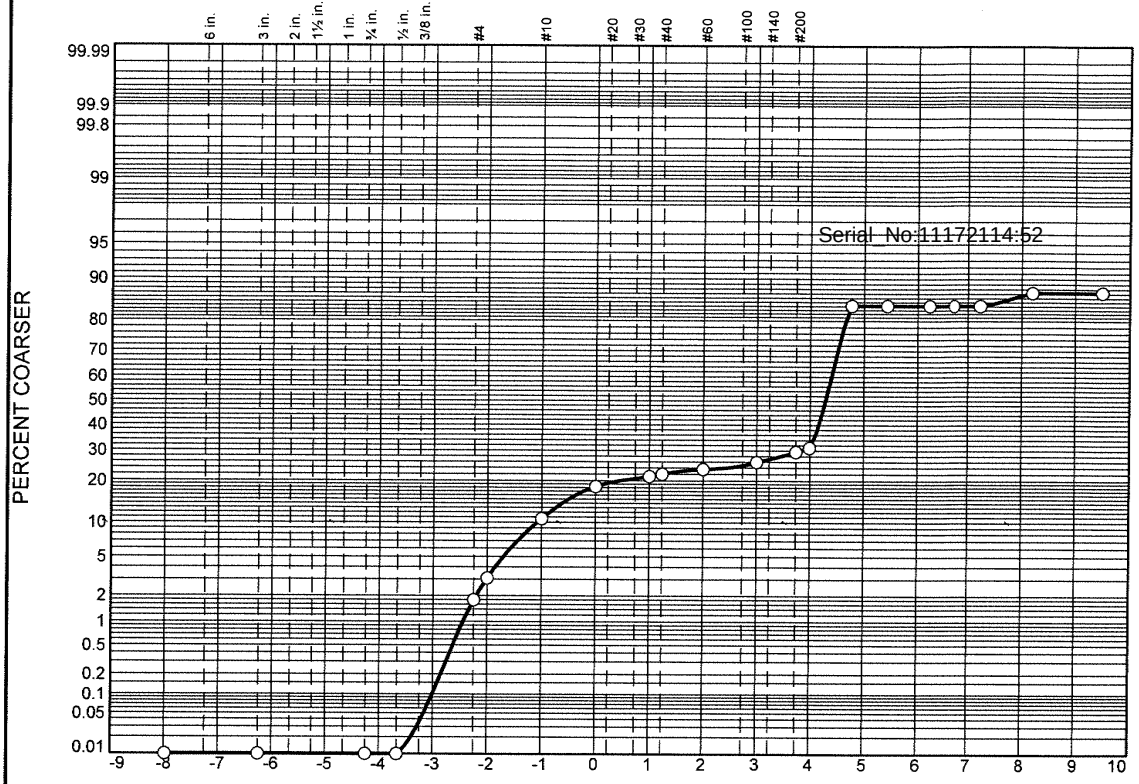
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.9	6.7	5.2	2.9	2.4	1.5	2.6	14.6	59.4	0.0	0.0	0.0	59.4	18.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0014	0.0377	0.0419	0.0451	0.0482	0.0515	0.1098	0.6516	1.4699	2.4626

Fineness Modulus
0.69

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.1	7.6	7.6	3.0	2.2	2.4	5.5	52.8	0.0	0.0	2.4	13.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4052	0.0557	0.0512	0.0438	0.0054			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|116|SED|01 **Sample No.:** L2151373-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|116|SED|01

Sample Number: L2151373-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 25.68
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
25.68	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.46	0.00	98.2
		#5	0.33	0.00	96.9
		#10	1.95	0.00	89.3
		#18	1.96	0.00	81.7
		#35	0.76	0.00	78.7
		#40	0.19	0.00	78.0
		#60	0.39	0.00	76.5
		#120	0.62	0.00	74.1
		#200	0.92	0.00	70.5
		#230	0.40	0.00	68.9

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 68.9
Weight of hydrometer sample =35.97
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0367	15.8
5.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0232	15.8
15.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0134	15.8
30.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0095	15.8
60.00	21.3	1.0050	1.0051	0.0134	5.0	15.0	0.0067	15.8
240.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0034	12.8
1440.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0014	12.8

Fractional Components

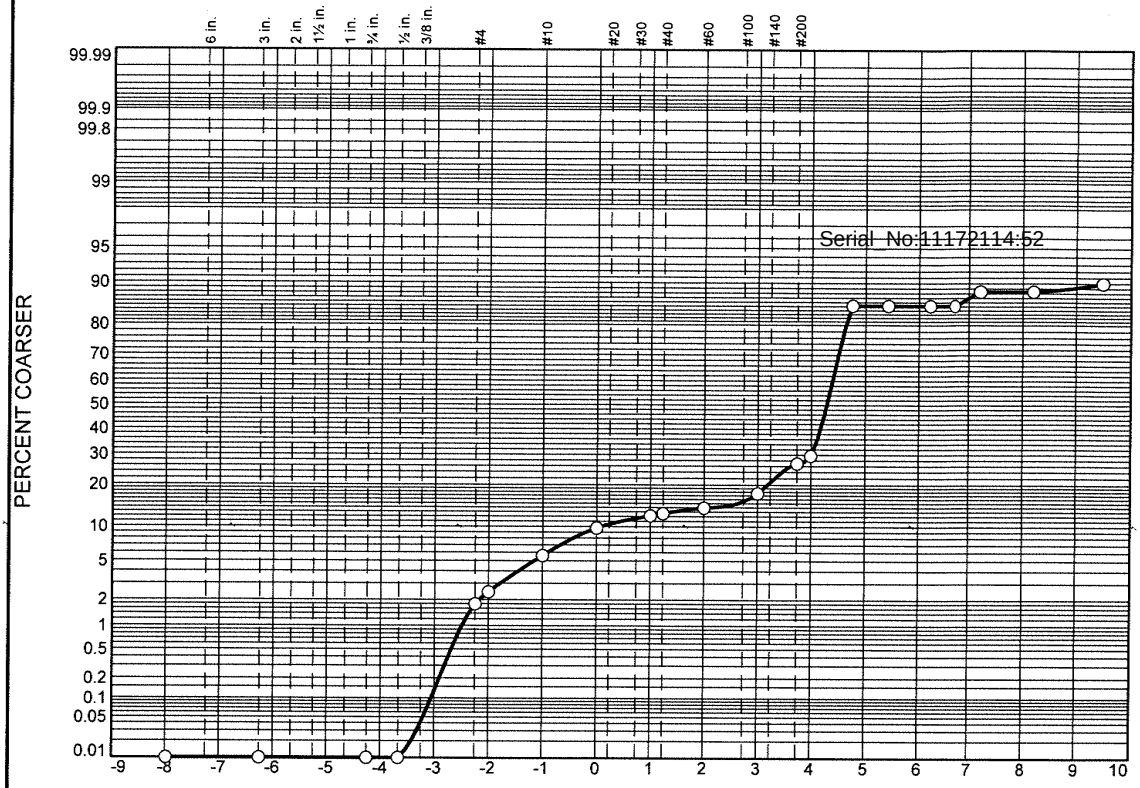
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.1	7.6	7.6	3.0	2.2	2.4	5.5	20.7	52.8	0.0	0.0	2.4	55.2	13.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0054	0.0395	0.0438	0.0475	0.0512	0.0557	0.7211	1.4052	2.1112	3.2576

Fineness Modulus
0.96

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.4	3.2	4.1	2.4	1.8	3.7	12.4	55.2	0.0	1.8	1.4	11.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1610	0.0554	0.0512	0.0443	0.0370			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|114|SED|01 **Sample No.:** L2151373-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|114|SED|01

Sample Number: L2151373-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 28.03
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
28.03	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.50	0.00	98.2
		#5	0.18	0.00	97.6
		#10	0.89	0.00	94.4
		#18	1.15	0.00	90.3
		#35	0.68	0.00	87.9
		#40	0.14	0.00	87.4
		#60	0.36	0.00	86.1
		#120	1.02	0.00	82.4
		#200	2.62	0.00	73.1
		#230	0.77	0.00	70.4

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 70.4
Weight of hydrometer sample =35.42
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0369	14.8
5.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0233	14.8
15.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0135	14.8
30.00	21.3	1.0045	1.0046	0.0134	4.5	15.1	0.0095	14.8
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	11.6
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	11.6
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	10.0

Fractional Components

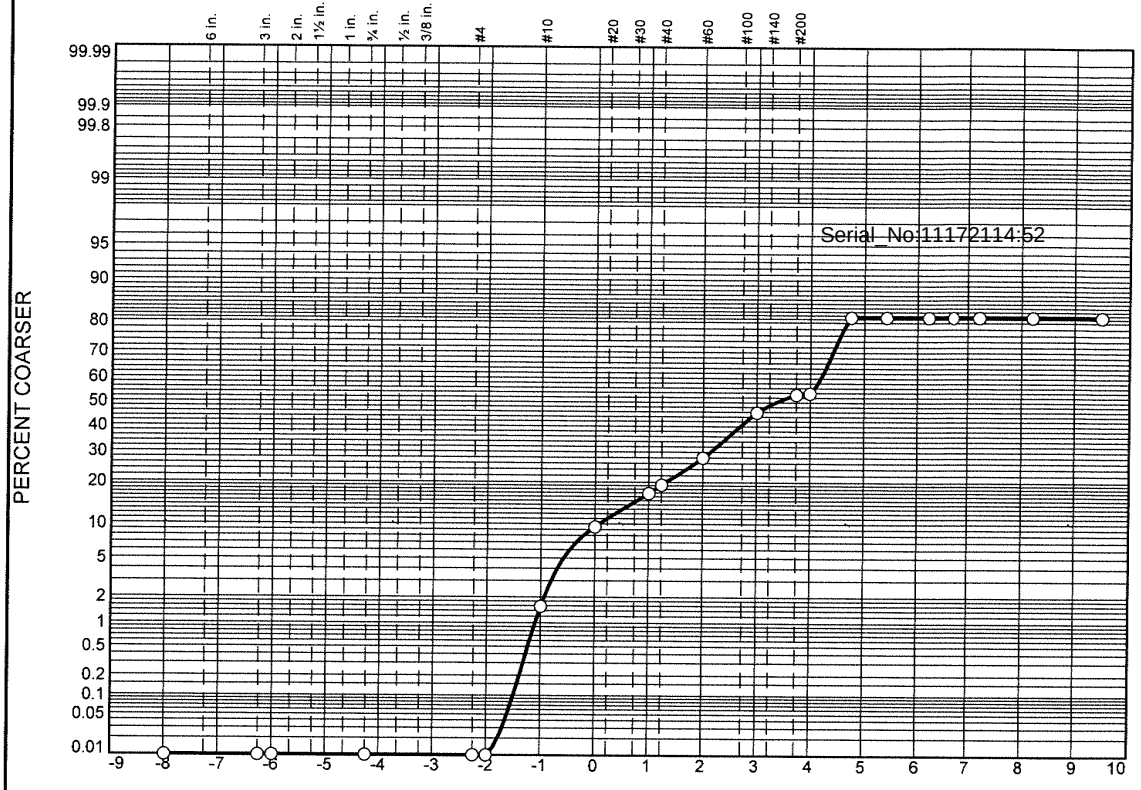
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.4	3.2	4.1	2.4	1.8	3.7	12.4	24.4	55.2	0.0	1.8	1.4	58.4	11.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0370	0.0401	0.0443	0.0477	0.0512	0.0554	0.1096	0.1610	0.9403	2.2294

Fineness Modulus
0.56

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.6	7.8	7.4	11.0	17.8	8.3	27.5	0.0	0.0		18.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5803	0.1544	0.0974	0.0468				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|112|SED|01 **Sample No.:** L2151373-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/26/2021

Location: 3664|2021|ECR-B|112|SED|01

Sample Number: L2151373-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 16.63
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
16.63	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.26	0.00	98.4
		#18	1.31	0.00	90.6
		#35	1.23	0.00	83.2
		#40	0.38	0.00	80.9
		#60	1.45	0.00	72.2
		#120	2.96	0.00	54.4
		#200	1.25	0.00	46.8
		#230	0.10	0.00	46.2

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 46.2
Weight of hydrometer sample =20.27
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0370	18.6
5.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0234	18.6
15.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0135	18.6
30.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0096	18.6
60.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0068	18.6
240.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0034	18.6
1440.00	20.7	1.0050	1.0051	0.0135	5.0	15.0	0.0014	18.6

Fractional Components

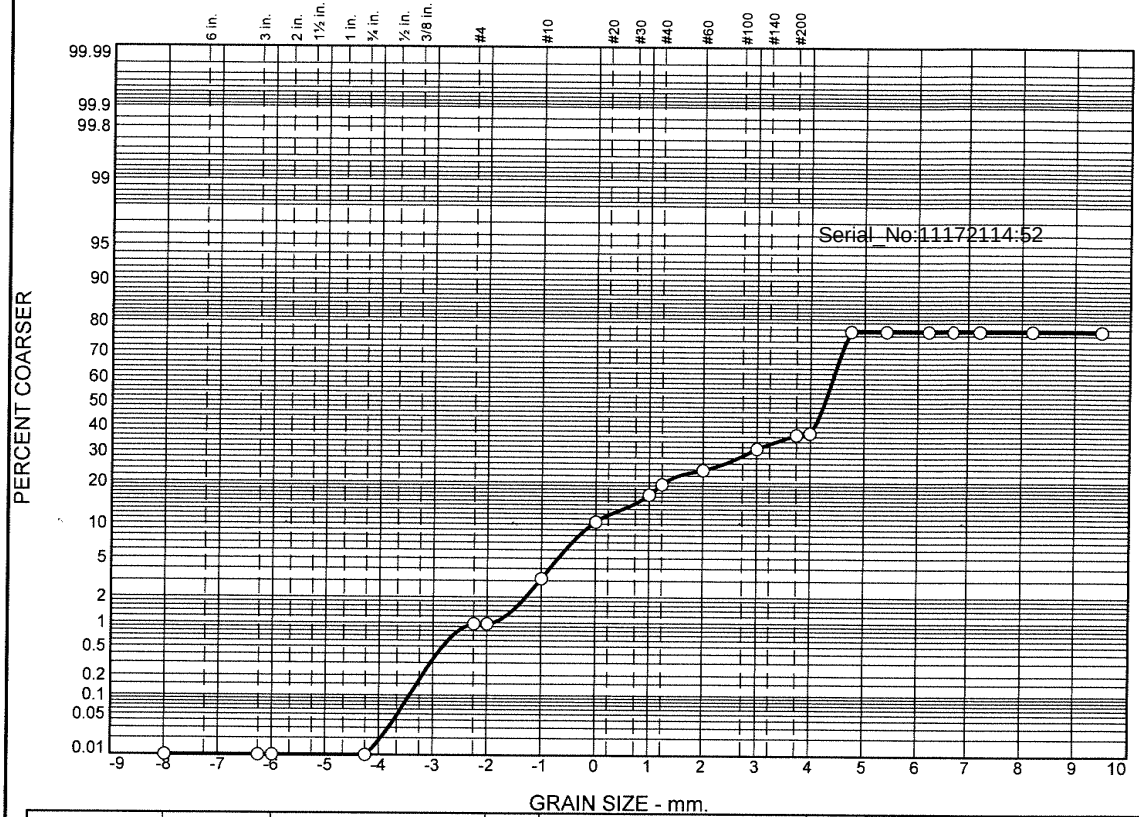
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.6	7.8	7.4	11.0	17.8	8.3	52.3	27.5	0.0	0.0		27.5	18.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0387	0.0468	0.0545	0.0974	0.1544	0.4000	0.5803	0.9442	1.4919

Fineness Modulus
0.88

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.0	2.1	7.3	6.1	7.3	7.6	6.2	39.7	0.0	0.0		22.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5575	0.0592	0.0520	0.0420				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|112|SED|01 **Sample No.:** WG1560090-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

10/26/2021

Location: 3664|2021|ECR-B|112|SED|01

Sample Number: WG1560090-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 16.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
16.51	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.16	0.00	99.0
		#5	0.00	0.00	99.0
		#10	0.36	0.00	96.9
		#18	1.19	0.00	89.6
		#35	1.01	0.00	83.5
		#40	0.48	0.00	80.6
		#60	0.73	0.00	76.2
		#120	1.25	0.00	68.6
		#200	0.88	0.00	63.3
		#230	0.11	0.00	62.6

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 62.6
Weight of hydrometer sample =20.21
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0372	22.7
5.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0235	22.7
15.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0136	22.7
30.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0096	22.7
60.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0068	22.7
240.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0034	22.7
1440.00	20.7	1.0045	1.0046	0.0135	4.5	15.1	0.0014	22.7

Fractional Components

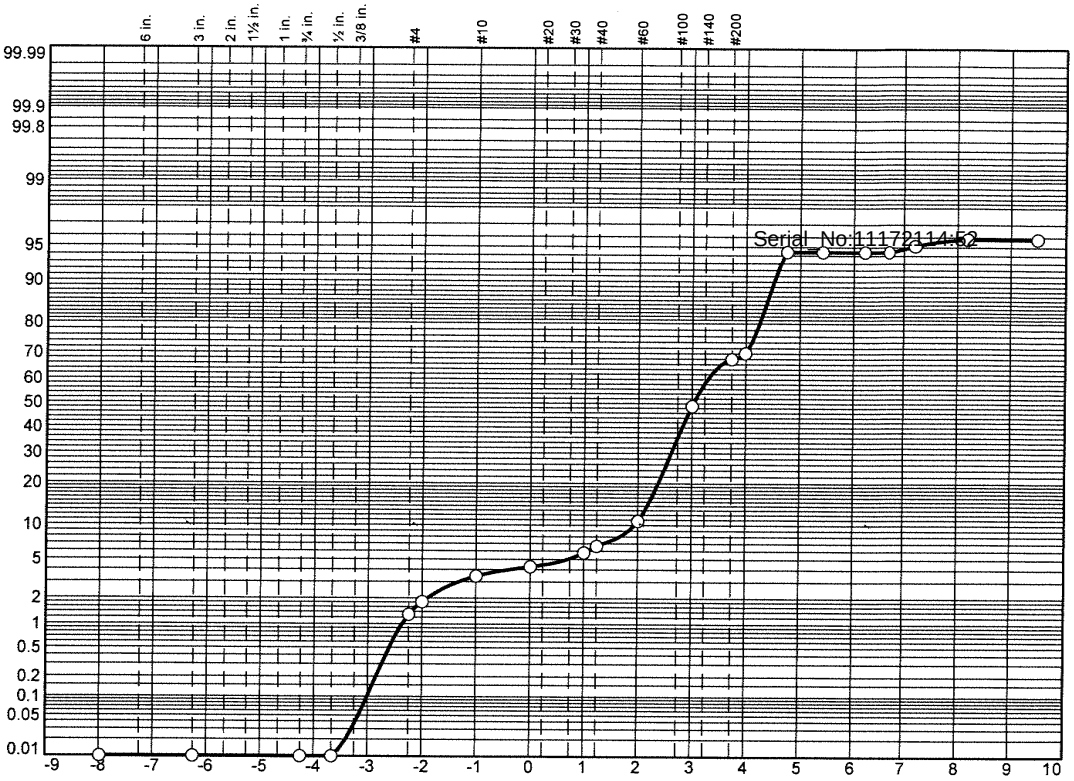
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.0	2.1	7.3	6.1	7.3	7.6	6.2	34.5	39.7	0.0	0.0		39.7	22.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0420	0.0469	0.0520	0.0592	0.4089	0.5575	1.0362	1.6151

Fineness Modulus
0.78

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	1.6	0.8	1.6	5.0	38.0	21.6	24.1	0.0	0.3	0.9	4.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2152	0.1416	0.1226	0.0632	0.0483	0.0437	0.65	3.24

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|110|SED|01 **Sample No.:** L2151373-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|110|SED|01
Sample Number: L2151373-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 67.79
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
67.79	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.88	0.00	98.7
		#5	0.35	0.00	98.2
		#10	1.09	0.00	96.6
		#18	0.56	0.00	95.8
		#35	1.04	0.00	94.2
		#40	0.57	0.00	93.4
		#60	2.80	0.00	89.2
		#120	25.76	0.00	51.2
		#200	13.03	0.00	32.0
		#230	1.45	0.00	29.9

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 29.9
Weight of hydrometer sample =35.93
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0371	5.5
5.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0234	5.5
15.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0135	5.5
30.00	21.3	1.0040	1.0041	0.0134	4.0	15.2	0.0096	5.5
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	4.9
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	4.2
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	4.2

Fractional Components

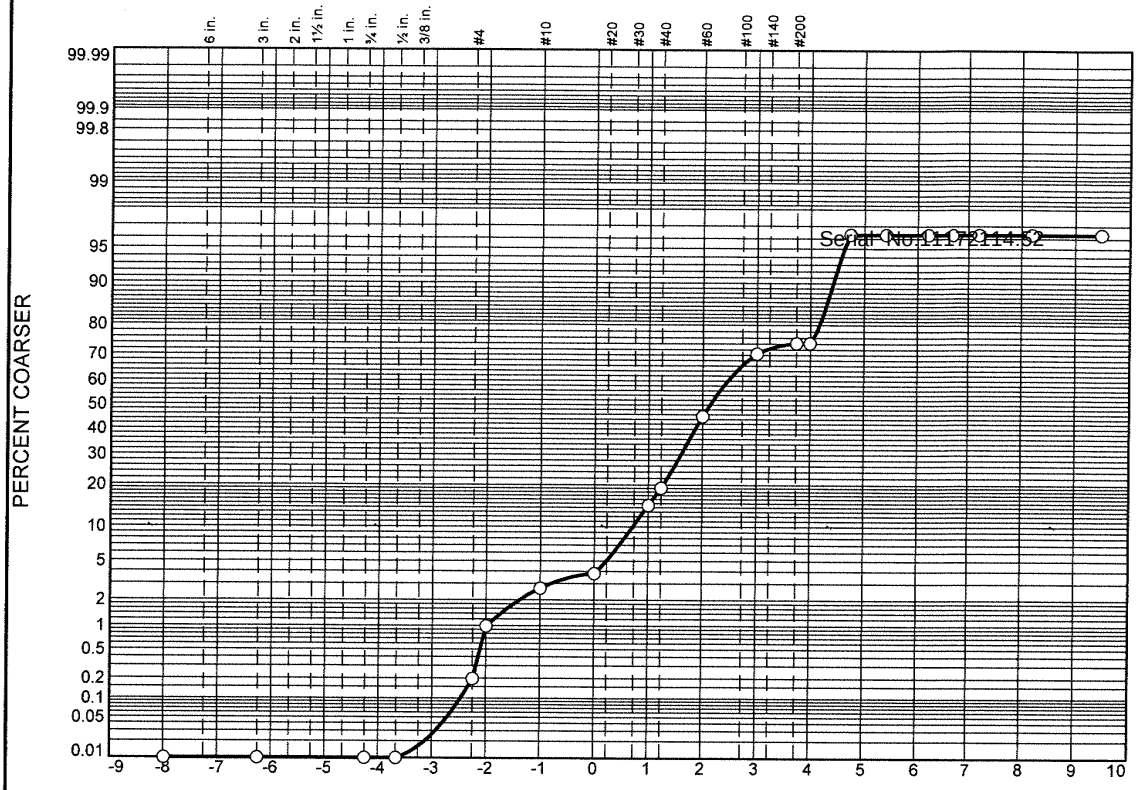
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	1.6	0.8	1.6	5.0	38.0	21.6	67.0	24.1	0.0	0.3	0.9	25.3	4.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0072	0.0437	0.0483	0.0524	0.0632	0.1021	0.1226	0.1416	0.1922	0.2152	0.2605	0.6204

Fineness Modulus	C_u	C_c
0.58	3.24	0.65

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.0	1.7	1.1	10.7	30.6	25.4	3.9	21.9	0.0	0.0	0.0	3.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4903	0.2742	0.2275	0.1283	0.0511	0.0466	1.29	5.88

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1101|SED|01 **Sample No.:** L2151373-06

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-C|1101|SED|01

Sample Number: L2151373-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 81.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
81.90	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.16	0.00	99.8
		#5	0.65	0.00	99.0
		#10	1.37	0.00	97.3
		#18	0.92	0.00	96.2
		#35	8.78	0.00	85.5
		#40	3.73	0.00	80.9
		#60	21.33	0.00	54.9
		#120	20.83	0.00	29.5
		#200	2.98	0.00	25.8
		#230	0.03	0.00	25.8

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 25.8
Weight of hydrometer sample =35.48
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0374	3.7
5.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0236	3.7
15.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0137	3.7
30.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0097	3.7
60.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0068	3.7
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	3.7
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	3.7

Fractional Components

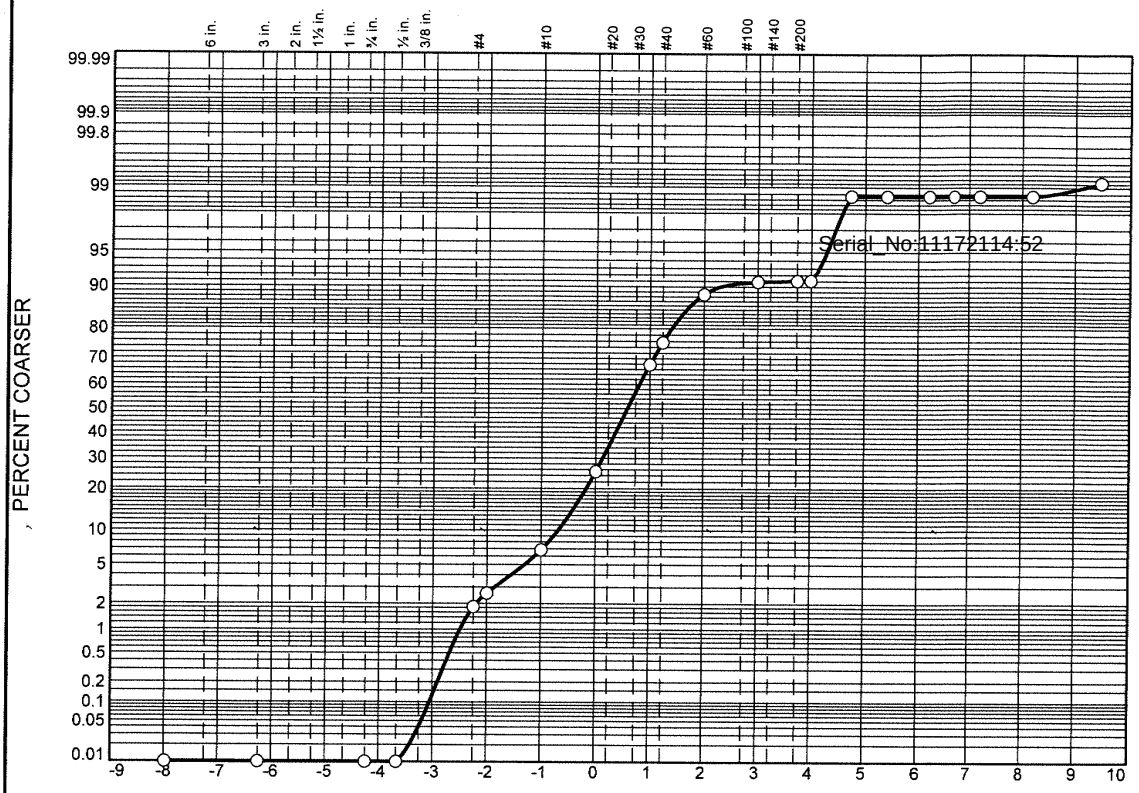
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.0	1.7	1.1	10.7	30.6	25.4	3.9	71.7	21.9	0.0	0.0	0.0	21.9	3.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0404	0.0466	0.0511	0.0554	0.1283	0.1810	0.2275	0.2742	0.4134	0.4903	0.6098	0.8569

Fineness Modulus	C_u	C_c
1.18	5.88	1.29

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.6	4.2	18.5	42.5	20.7	2.3	0.3	7.6	0.0	0.0		1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.3030	0.7747	0.6661	0.4793	0.3129	0.2017	1.47	3.84

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|448|SED|01 **Sample No.:** L2151373-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|448|SED|01

Sample Number: L2151373-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 122.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
122.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	2.25	0.00	98.2
		#5	0.91	0.00	97.4
		#10	5.16	0.00	93.2
		#18	22.58	0.00	74.7
		#35	51.91	0.00	32.2
		#40	9.51	0.00	24.4
		#60	15.80	0.00	11.5
		#120	2.88	0.00	9.2
		#200	0.22	0.00	9.0
		#230	0.03	0.00	8.9

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 8.9
Weight of hydrometer sample =35.29
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0374	1.3
5.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0236	1.3
15.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0137	1.3
30.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0097	1.3
60.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0068	1.3
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	1.3
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	0.9

Fractional Components

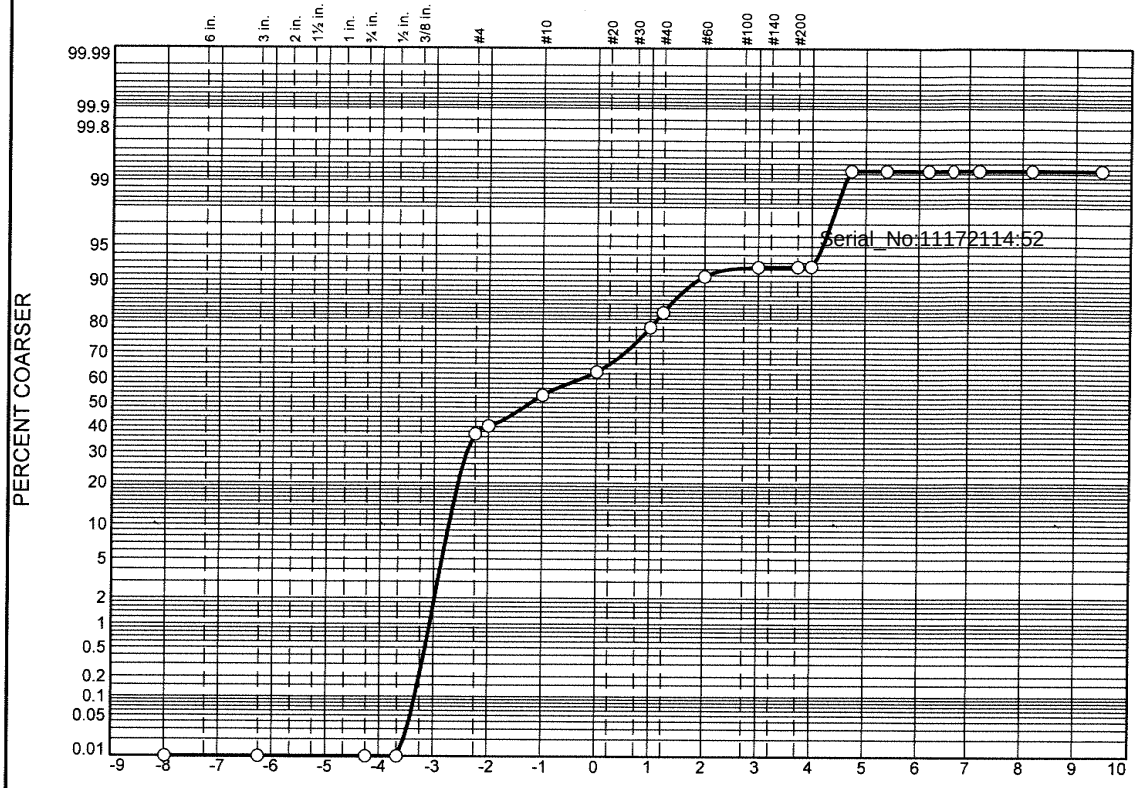
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.6	4.2	18.5	42.5	20.7	2.3	0.3	84.3	7.6	0.0	0.0		7.6	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0511	0.2017	0.3129	0.3772	0.4793	0.5712	0.6661	0.7747	1.1273	1.3030	1.6064	2.4639

Fineness Modulus	C_u	C_c
2.59	3.84	1.47

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			40.3	12.8	9.6	15.9	12.2	1.6	0.1	6.8	0.0	0.0	0.7	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			6.2149	4.1669	2.3266	0.6967	0.3863	0.2759	0.42	15.10

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|450|SED|01 **Sample No.:** L2151373-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|450|SED|01

Sample Number: L2151373-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 107.20
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
107.20	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	39.77	0.00	62.9
		#5	3.44	0.00	59.7
		#10	13.66	0.00	46.9
		#18	10.36	0.00	37.3
		#35	17.03	0.00	21.4
		#40	4.57	0.00	17.1
		#60	8.52	0.00	9.2
		#120	1.66	0.00	7.6
		#200	0.04	0.00	7.6
		#230	0.01	0.00	7.6

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.6
Weight of hydrometer sample =35.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0377	0.7
5.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0238	0.7
15.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0138	0.7
30.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0097	0.7
60.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0069	0.7
240.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0034	0.7
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	0.7

Fractional Components

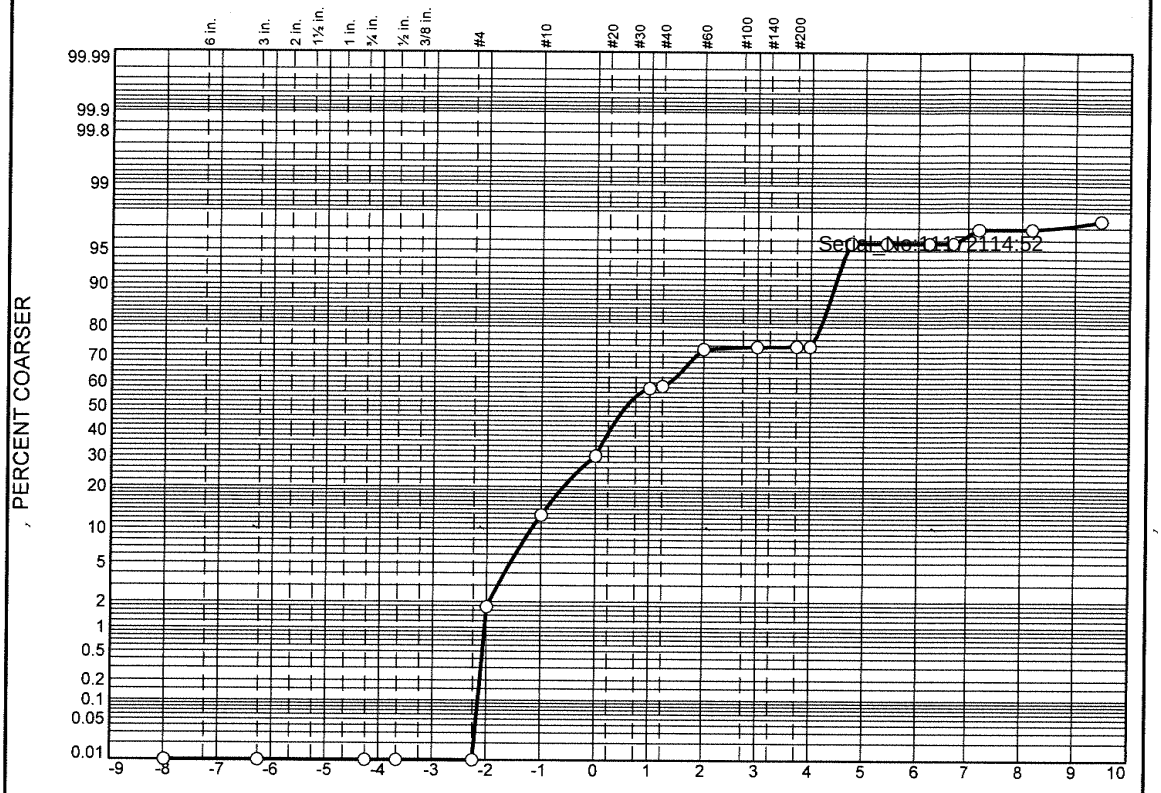
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		40.3	12.8	9.6	15.9	12.2	1.6	0.1	39.4	6.8	0.0	0.0		6.8	0.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0544	0.2759	0.3863	0.4749	0.6967	1.2093	2.3266	4.1669	5.8860	6.2149	6.6143	7.2041

Fineness Modulus	C_u	C_c
4.02	15.10	0.42

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	10.9	17.5	27.4	15.1	0.9	0.4	21.7	0.0	0.8	0.4	3.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8185	0.8370	0.6788	0.2798	0.0503	0.0457	2.04	18.30

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|452|SED|01 **Sample No.:** L2151373-10

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|452|SED|01

Sample Number: L2151373-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 42.15
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
42.15	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.74	0.00	98.2
		#10	4.60	0.00	87.3
		#18	7.38	0.00	69.8
		#35	11.57	0.00	42.4
		#40	3.36	3.00	41.5
		#60	6.01	0.00	27.3
		#120	0.36	0.00	26.4
		#200	0.06	0.00	26.3
		#230	0.02	0.00	26.2

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 26.2
Weight of hydrometer sample =35.98
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0372	4.3
5.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0235	4.3
15.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0136	4.3
30.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0096	4.3
60.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0069	3.1
240.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0034	3.1
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	2.5

Fractional Components

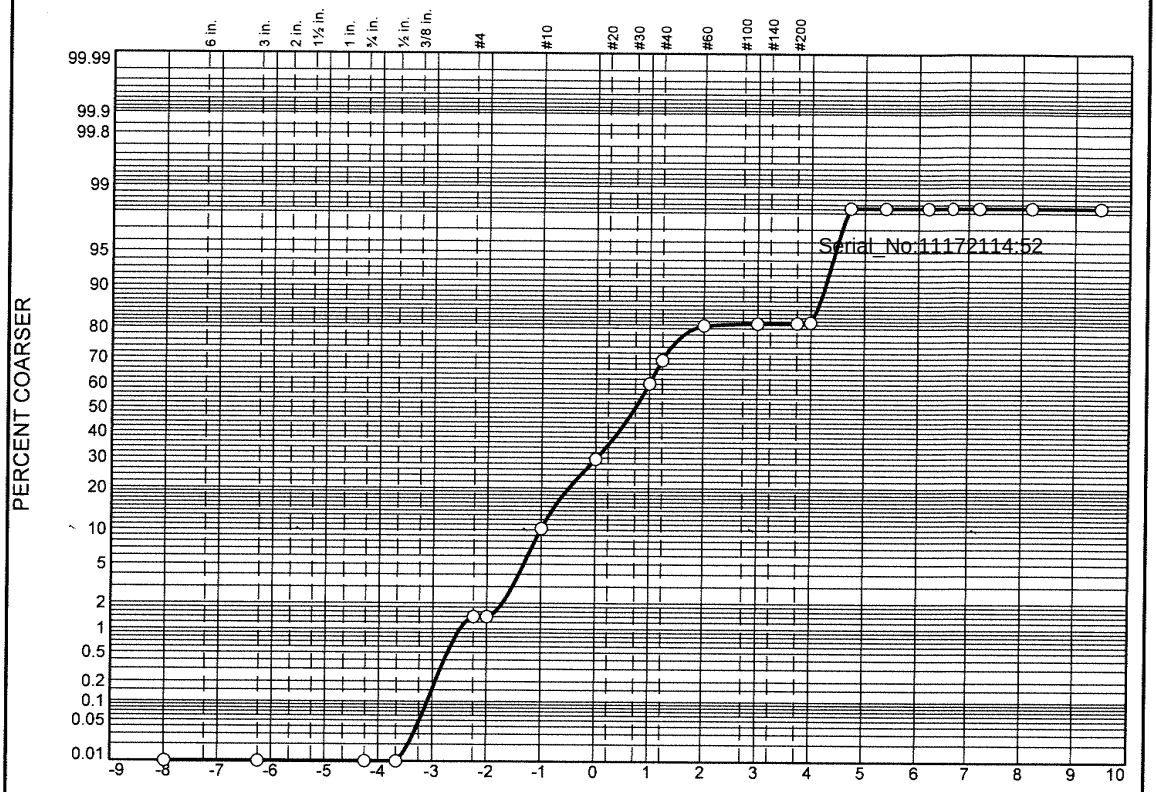
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	10.9	17.5	27.4	15.1	0.9	0.4	61.3	21.7	0.0	0.8	0.4	22.9	3.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0390	0.0457	0.0503	0.0548	0.2798	0.3886	0.6788	0.8370	1.4992	1.8185	2.2492	2.9578

Fineness Modulus	C_u	C_c
2.31	18.30	2.04

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.4	8.8	19.3	30.7	20.6	0.6	0.6	16.2	0.0	0.0		1.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.6857	0.7451	0.6009	0.4189	0.0576	0.0519	4.54	14.35

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|452|SED|01 **Sample No.:** WG1560489-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|452|SED|01

Sample Number: WG1560489-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 42.89
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
42.89	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.60	0.00	98.6
		#5	0.00	0.00	98.6
		#10	3.79	0.00	89.8
		#18	8.26	0.00	70.5
		#35	13.17	0.00	39.8
		#40	3.91	0.00	30.7
		#60	4.93	0.00	19.2
		#120	0.24	0.00	18.6
		#200	0.06	0.00	18.5
		#230	0.11	0.00	18.2

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 18.2
Weight of hydrometer sample =35.80
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0377	1.8
5.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0238	1.8
15.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0138	1.8
30.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0097	1.8
60.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0069	1.8
240.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0034	1.8
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	1.8

Fractional Components

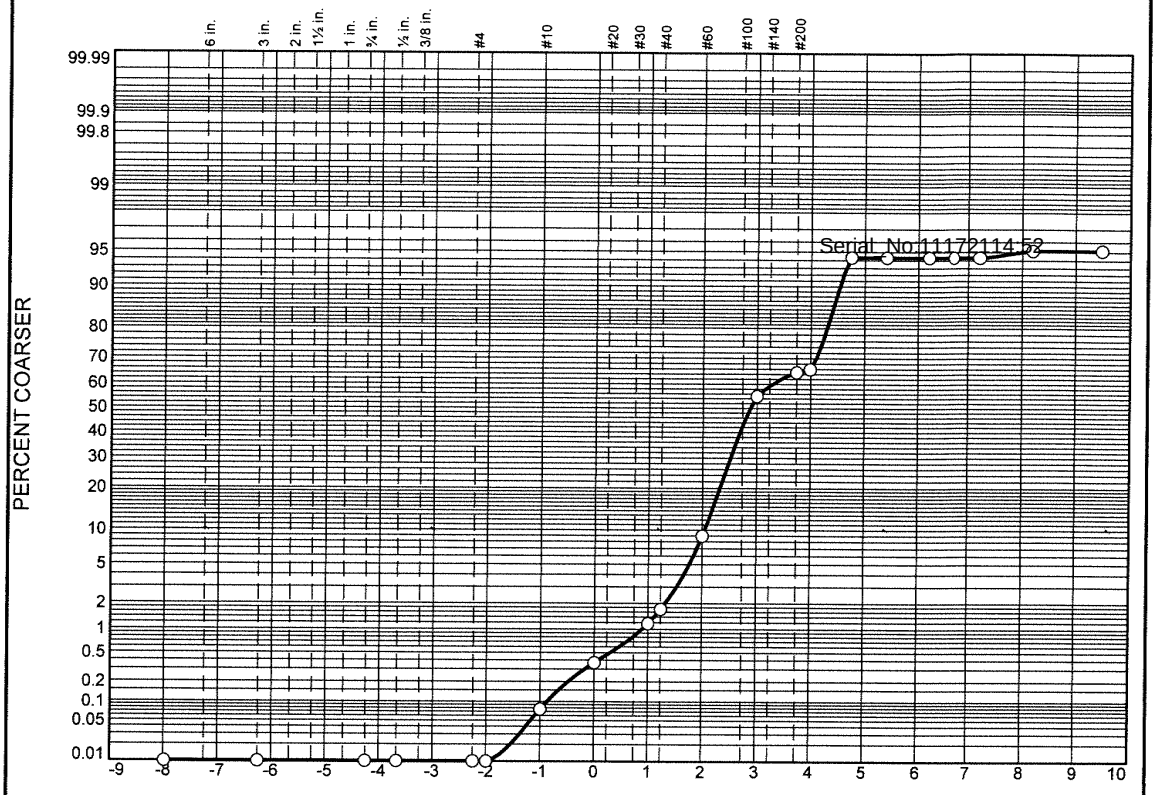
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.4	8.8	19.3	30.7	20.6	0.6	0.6	71.8	16.2	0.0	0.0		16.2	1.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0457	0.0519	0.0576	0.2786	0.4189	0.5017	0.6009	0.7451	1.4056	1.6857	2.0173	2.5001

Fineness Modulus	C_u	C_c
2.43	14.35	4.54

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.3	0.8	7.7	46.1	11.2	28.2	0.0	0.0	0.6	5.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2171	0.1546	0.1355	0.0580	0.0471	0.0430	0.51	3.59

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|454|SED|01 **Sample No.:** L2151373-11

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|454|SED|01

Sample Number: L2151373-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 78.82
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
78.82	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.06	0.00	99.9
		#18	0.23	0.00	99.6
		#35	0.63	0.00	98.8
		#40	0.43	0.00	98.3
		#60	5.70	0.00	91.1
		#120	36.28	0.00	45.0
		#200	7.64	0.00	35.3
		#230	0.98	0.00	34.1

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 34.1
Weight of hydrometer sample =35.44
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0372	5.6
5.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0235	5.6
15.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0136	5.6
30.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0096	5.6
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	5.6
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	4.9
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	4.9

Fractional Components

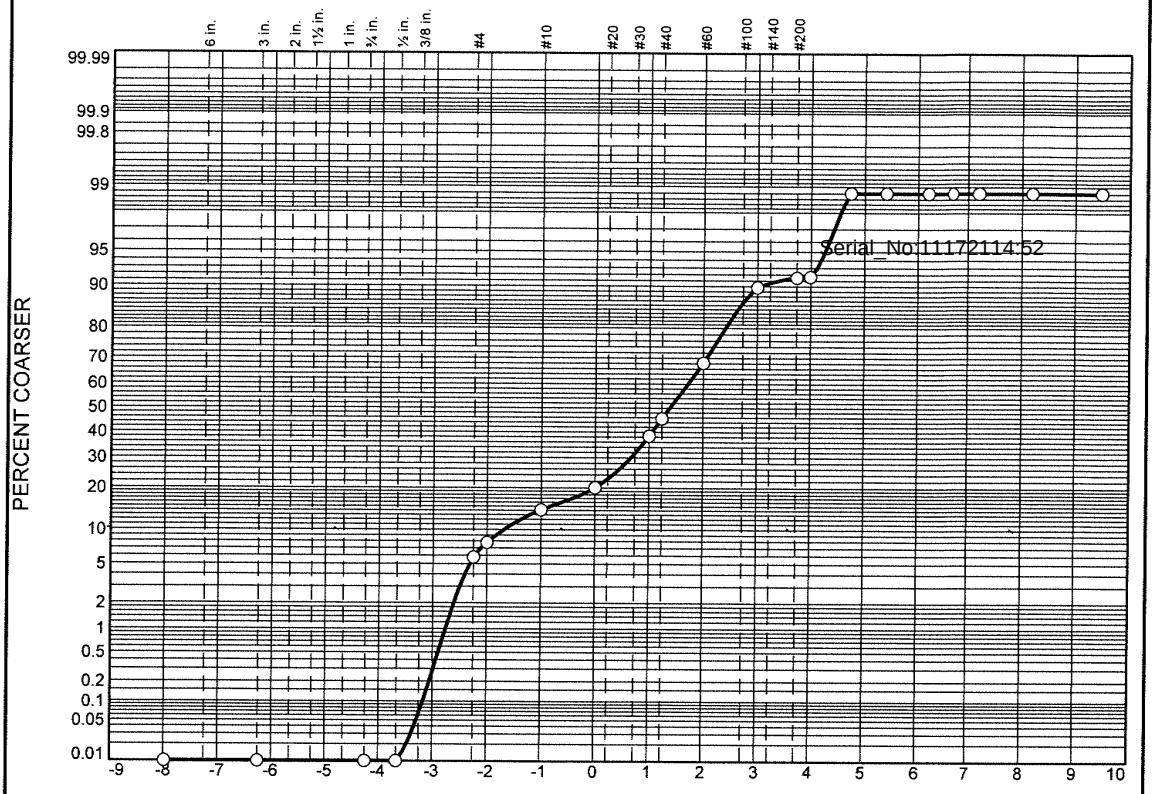
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.3	0.8	7.7	46.1	11.2	66.1	28.2	0.0	0.0	0.6	28.8	5.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0039	0.0430	0.0471	0.0506	0.0580	0.1018	0.1355	0.1546	0.1998	0.2171	0.2425	0.2949

Fineness Modulus	C_u	C_c
0.48	3.59	0.51

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			7.8	6.3	5.9	18.4	29.9	21.5	1.9	7.1	0.0	0.0		1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.7664	0.4817	0.3834	0.2402	0.1601	0.1207	0.99	3.99

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|456|SED|01 **Sample No.:** L2151373-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|456|SED|01

Sample Number: L2151373-12

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 116.55
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.55	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	6.73	0.00	94.2
		#5	2.35	0.00	92.2
		#10	7.37	0.00	85.9
		#18	6.90	0.00	80.0
		#35	21.44	0.00	61.6
		#40	8.26	0.00	54.5
		#60	26.51	0.00	31.7
		#120	25.11	0.00	10.2
		#200	1.98	0.00	8.5
		#230	0.13	0.00	8.4

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 8.4
Weight of hydrometer sample =35.46
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0374	1.2
5.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0236	1.2
15.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0137	1.2
30.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0097	1.2
60.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0068	1.2
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	1.2
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	1.2

Fractional Components

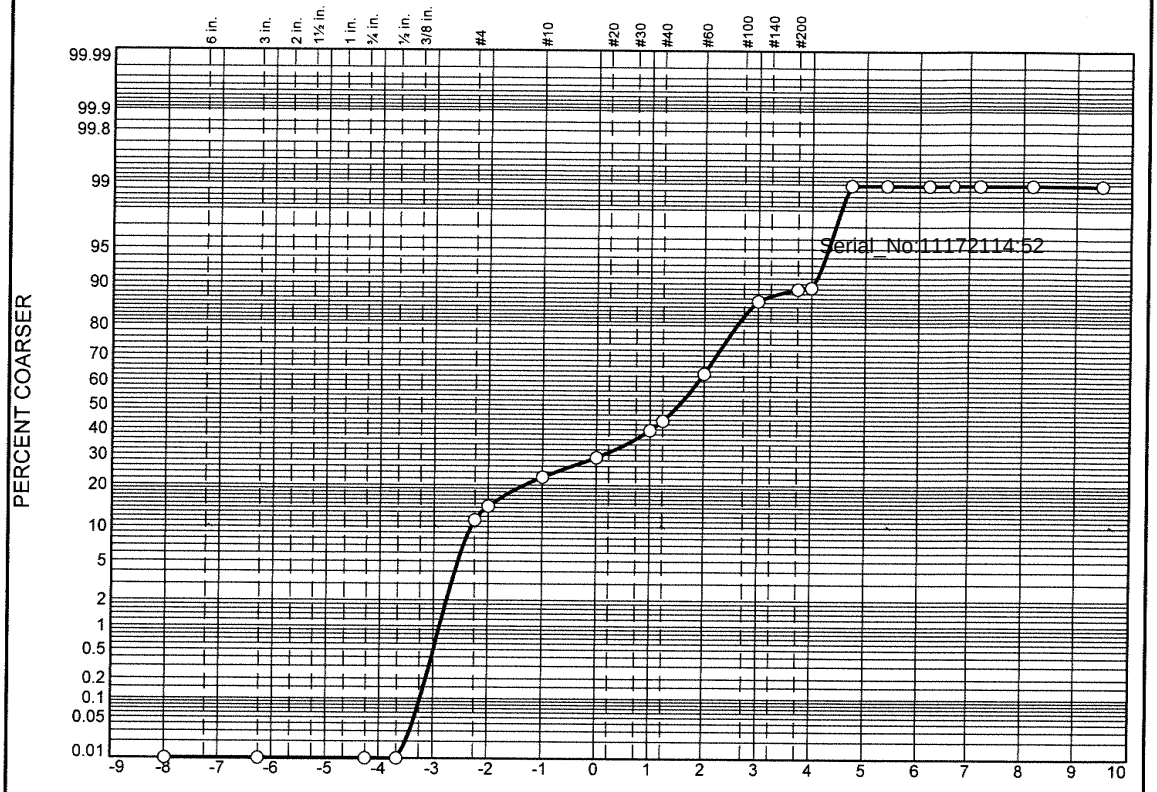
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		7.8	6.3	5.9	18.4	29.9	21.5	1.9	77.6	7.1	0.0	0.0		7.1	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0520	0.1207	0.1601	0.1878	0.2402	0.3031	0.3834	0.4817	1.0025	1.7664	3.2021	4.9915

Fineness Modulus	C_u	C_c
2.15	3.99	0.99

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			14.3	8.1	6.7	10.6	23.3	23.4	3.0	9.6	0.0	0.0		1.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.7915	0.4922	0.3460	0.2132	0.1351	0.0606	1.52	8.12

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|458|SED|01 **Sample No.:** L2151373-13

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|458|SED|01

Sample Number: L2151373-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.75
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.75	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	12.47	0.00	88.7
		#5	3.36	0.00	85.7
		#10	8.95	0.00	77.6
		#18	7.43	0.00	70.9
		#35	11.71	0.00	60.3
		#40	4.34	0.00	56.4
		#60	21.55	0.00	37.0
		#120	25.87	0.00	13.6
		#200	2.81	0.00	11.1
		#230	0.38	0.00	10.7

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.7
Weight of hydrometer sample =35.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0377	1.0
5.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0238	1.0
15.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0138	1.0
30.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0097	1.0
60.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0069	1.0
240.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0034	1.0
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	1.0

Fractional Components

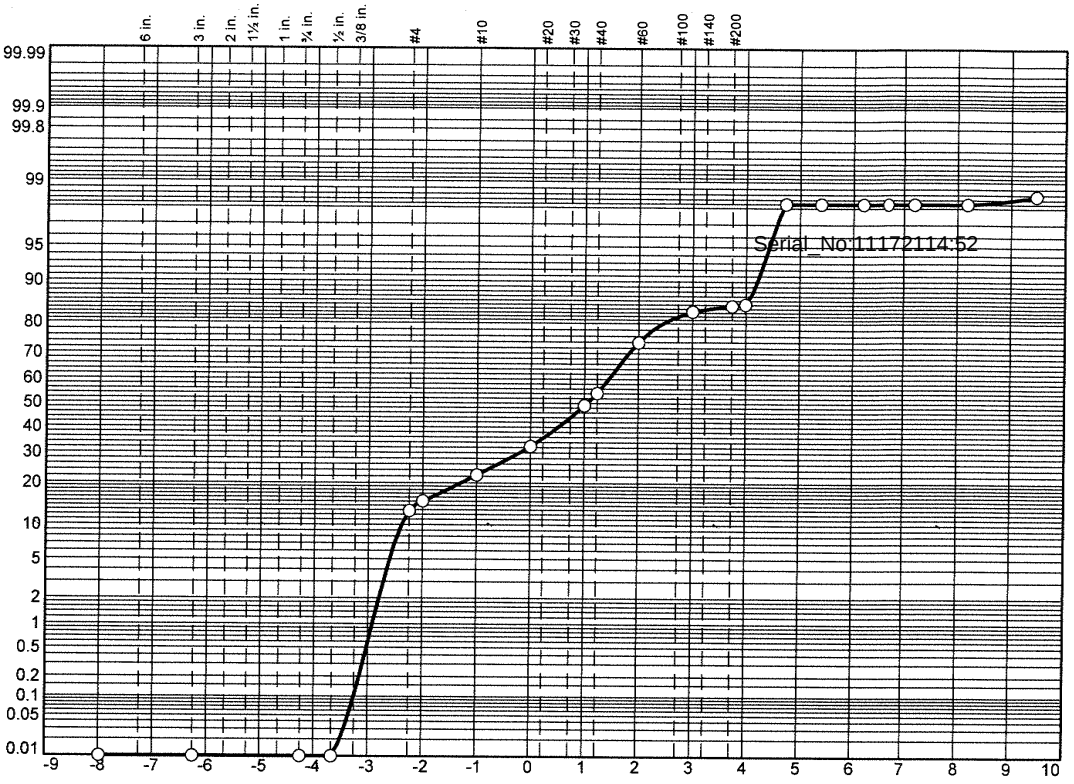
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		14.3	8.1	6.7	10.6	23.3	23.4	3.0	67.0	9.6	0.0	0.0		9.6	1.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0506	0.0606	0.1351	0.1638	0.2132	0.2682	0.3460	0.4922	2.5092	3.7915	4.9730	5.8699

Fineness Modulus	C_u	C_c
2.33	8.12	1.52

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			15.0	7.4	10.0	16.6	24.8	9.5	2.0	12.9	0.0	0.0	0.0	1.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.0177	0.6981	0.4834	0.2822	0.0666	0.0540	2.11	12.93

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|470|SED|01 **Sample No.:** L2151373-14

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|470|SED|01

Sample Number: L2151373-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 104.29
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
104.29	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	13.35	0.00	87.2
		#5	2.33	0.00	85.0
		#10	7.68	0.00	77.6
		#18	10.38	0.00	67.6
		#35	17.36	0.00	51.0
		#40	5.36	0.00	45.9
		#60	20.53	0.00	26.2
		#120	9.86	0.00	16.7
		#200	1.53	0.00	15.3
		#230	0.38	0.00	14.9

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.9
Weight of hydrometer sample =35.23
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0375	1.8
5.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0237	1.8
15.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0137	1.8
30.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0097	1.8
60.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0069	1.8
240.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0034	1.8
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	1.5

Fractional Components

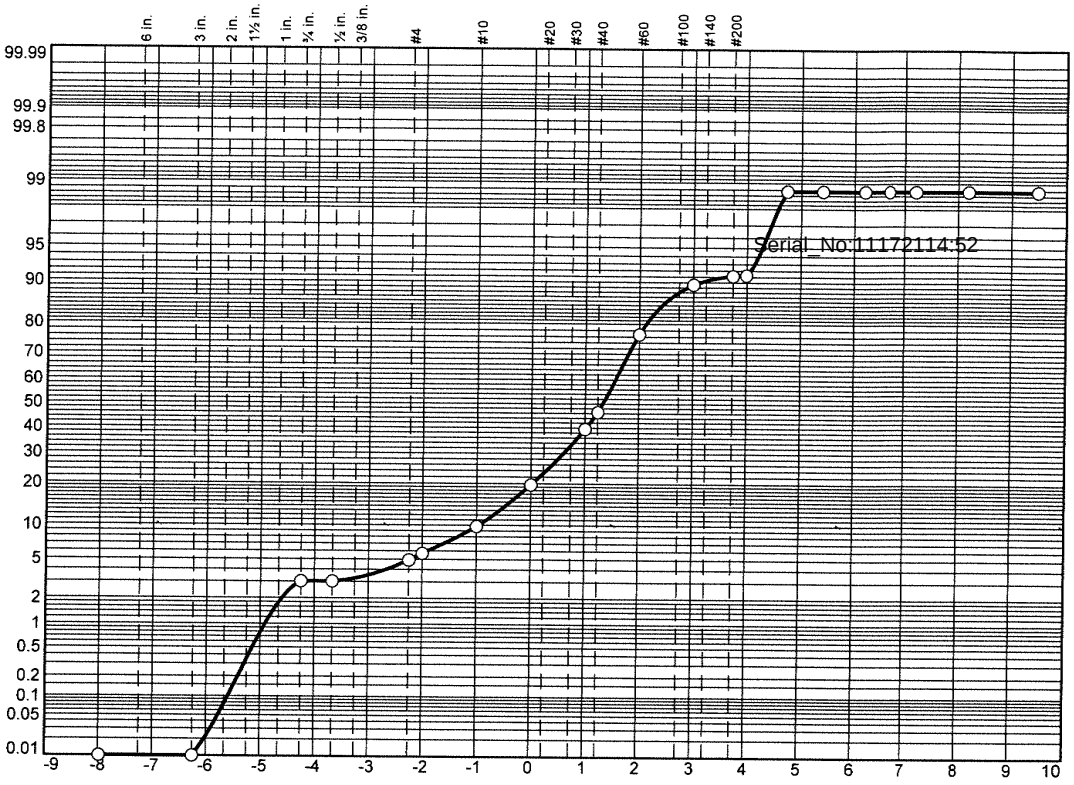
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		15.0	7.4	10.0	16.6	24.8	9.5	2.0	62.9	12.9	0.0	0.0	0.0	12.9	1.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0465	0.0540	0.0666	0.1810	0.2822	0.3646	0.4834	0.6981	2.4391	4.0177	5.2286	6.0861

Fineness Modulus	C_u	C_c
2.56	12.93	2.11

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			5.7	4.0	9.9	19.8	37.3	12.9	1.7	7.4	0.0	0.0		1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2916	0.4926	0.3980	0.2867	0.1865	0.1141	1.46	4.32

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|472|SED|01 **Sample No.:** L2151373-15

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|472|SED|01

Sample Number: L2151373-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 135.41
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
135.41	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	4.08	0.00	97.0
		3/4"	0.00	0.00	97.0
		#4	2.61	0.00	95.1
		#5	1.01	0.00	94.3
		#10	5.48	0.00	90.3
		#18	13.39	0.00	80.4
		#35	26.81	0.00	60.6
		#40	9.53	0.00	53.5
		#60	40.95	0.00	23.3
		#120	17.42	0.00	10.4
		#200	2.12	0.00	8.9
		#230	0.13	0.00	8.8

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 8.8
Weight of hydrometer sample =35.42
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0374	1.3
5.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0236	1.3
15.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0137	1.3
30.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0097	1.3
60.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0068	1.3
240.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0034	1.3
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	1.3

Fractional Components

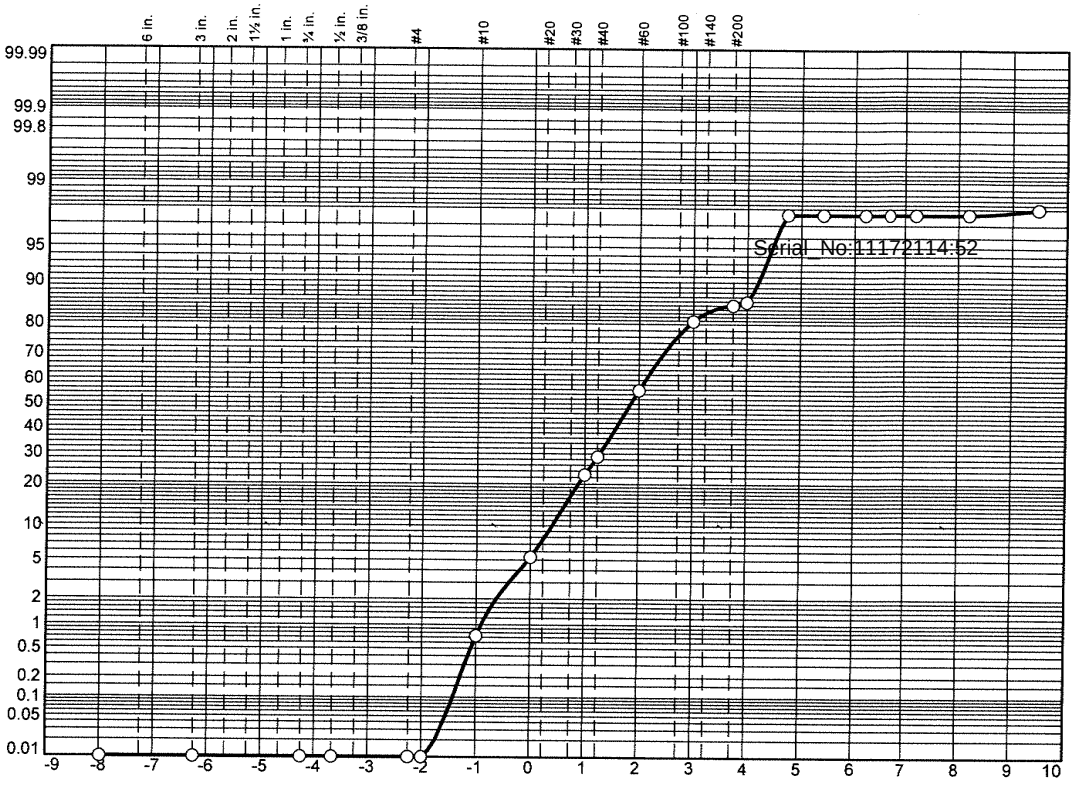
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		5.7	4.0	9.9	19.8	37.3	12.9	1.7	81.6	7.4	0.0	0.0		7.4	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0514	0.1141	0.1865	0.2286	0.2867	0.3382	0.3980	0.4926	0.9818	1.2916	1.9408	4.6824

Fineness Modulus	C_u	C_c
2.25	4.32	1.46

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.7	4.6	17.5	32.8	25.2	5.2	11.7	0.0	0.0		2.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6287	0.3350	0.2779	0.1828	0.0772	0.0541	1.85	6.20

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|474|SED|01 **Sample No.:** L2151373-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|474|SED|01

Sample Number: L2151373-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 94.44
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
94.44	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.69	0.00	99.3
		#18	4.33	0.00	94.7
		#35	16.48	0.00	77.2
		#40	5.75	0.00	71.1
		#60	25.29	0.00	44.4
		#120	23.74	0.00	19.2
		#200	4.02	0.00	15.0
		#230	0.75	0.00	14.2

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.2
Weight of hydrometer sample =35.83
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0372	2.3
5.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0235	2.3
15.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0136	2.3
30.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0096	2.3
60.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0068	2.3
240.00	21.3	1.0035	1.0036	0.0134	3.5	15.4	0.0034	2.3
1440.00	21.3	1.0030	1.0031	0.0134	3.0	15.5	0.0014	2.0

Fractional Components

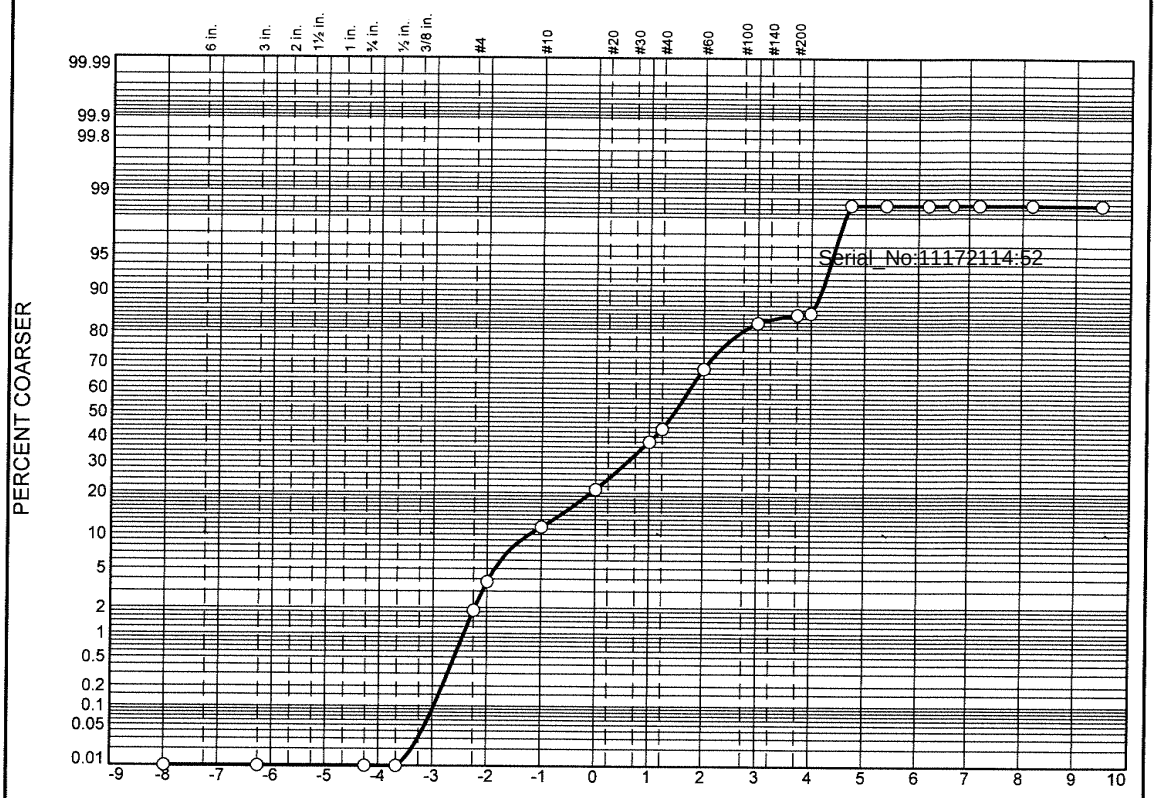
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.7	4.6	17.5	32.8	25.2	5.2	85.3	11.7	0.0	0.0		11.7	2.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0454	0.0541	0.0772	0.1300	0.1828	0.2294	0.2779	0.3350	0.5405	0.6287	0.7574	1.0290

Fineness Modulus	C_u	C_c
1.43	6.20	1.85

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.7	7.7	9.6	17.0	29.7	15.1	2.6	13.2	0.0	0.0	0.0	1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4571	0.4682	0.3633	0.2354	0.0722	0.0546	2.17	8.58

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|482|SED|01 **Sample No.:** L2151373-17

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|482|SED|01

Sample Number: L2151373-17

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 75.74
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
75.74	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	1.41	0.00	98.1
		#5	1.43	0.00	96.3
		#10	5.80	0.00	88.6
		#18	7.25	0.00	79.0
		#35	12.92	0.00	62.0
		#40	3.95	0.00	56.7
		#60	18.54	0.00	32.3
		#120	11.43	0.00	17.2
		#200	1.58	0.00	15.1
		#230	0.26	0.00	14.7

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.7
Weight of hydrometer sample =35.17
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0377	1.4
5.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0238	1.4
15.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0138	1.4
30.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0097	1.4
60.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0069	1.4
240.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0034	1.4
1440.00	21.3	1.0020	1.0021	0.0134	2.0	15.8	0.0014	1.4

Fractional Components

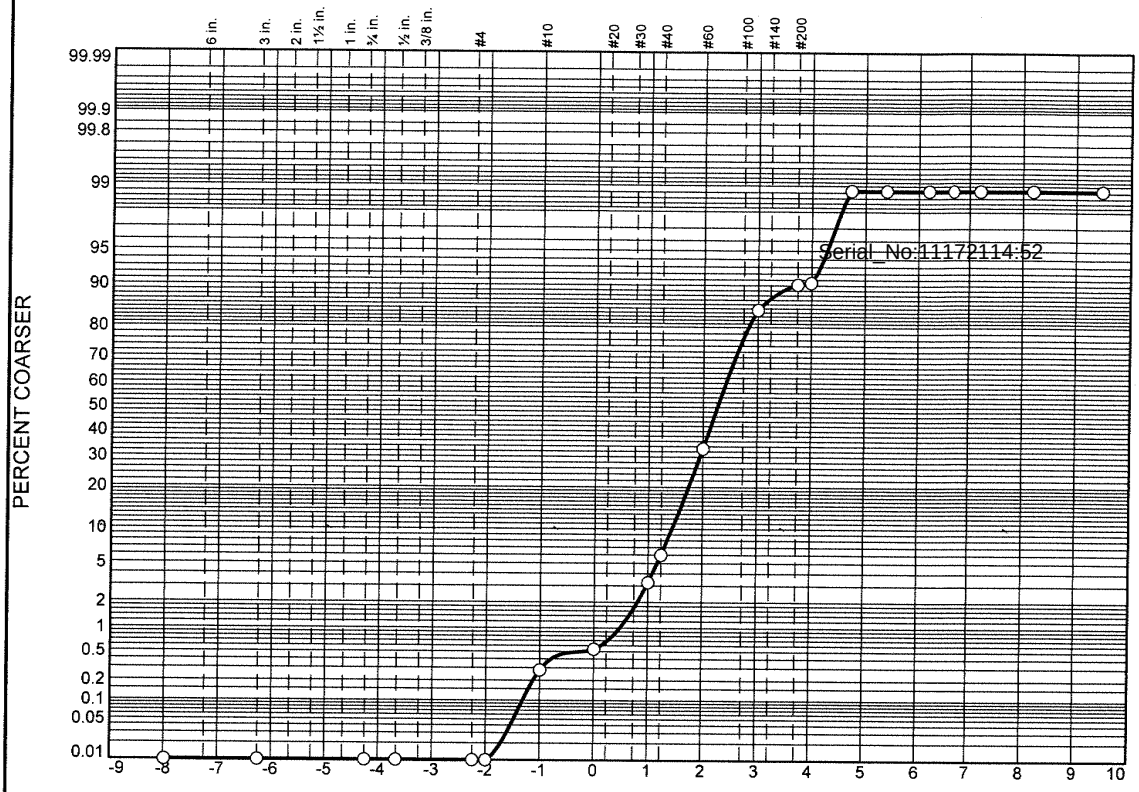
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.7	7.7	9.6	17.0	29.7	15.1	2.6	74.0	13.2	0.0	0.0	0.0	13.2	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0475	0.0546	0.0722	0.1557	0.2354	0.2968	0.3633	0.4682	1.0545	1.4571	2.3244	3.6299

Fineness Modulus	C_u	C_c
2.03	8.58	2.17

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	0.2	2.7	29.9	51.6	5.8	8.4	0.0	0.0	0.0	1.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3272	0.2312	0.2080	0.1655	0.1228	0.0770	1.54	3.00

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|502|SED|01 **Sample No.:** L2151373-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|502|SED|01

Sample Number: L2151373-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 103.82
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
103.82	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.29	0.00	99.7
		#18	0.27	0.00	99.5
		#35	2.81	0.00	96.8
		#40	2.84	0.00	94.0
		#60	28.11	0.00	66.9
		#120	53.57	0.00	15.3
		#200	5.66	0.00	9.9
		#230	0.34	0.00	9.6

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.6
Weight of hydrometer sample =35.63
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0375	1.1
5.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0237	1.1
15.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0137	1.1
30.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0097	1.1
60.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0069	1.1
240.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0034	1.1
1440.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0014	1.1

Fractional Components

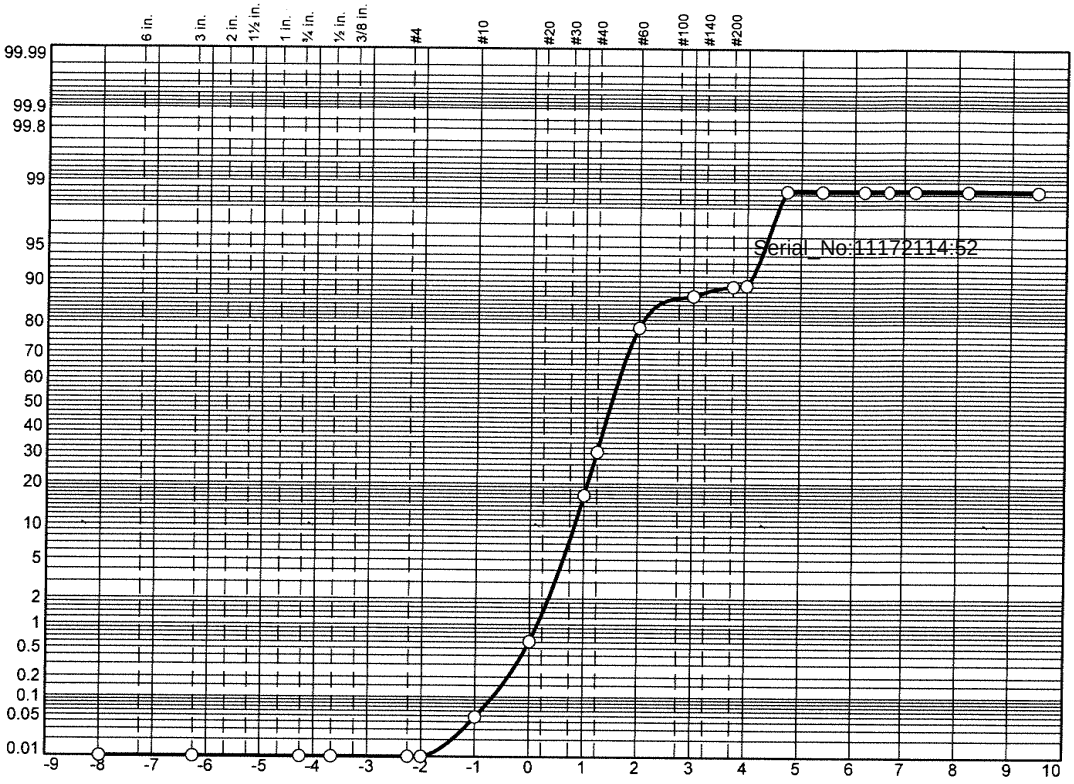
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	0.2	2.7	29.9	51.6	5.8	90.2	8.4	0.0	0.0	0.0	8.4	1.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0511	0.0770	0.1228	0.1406	0.1655	0.1868	0.2080	0.2312	0.2988	0.3272	0.3688	0.4458

Fineness Modulus	C_u	C_c
0.99	3.00	1.54

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.0	0.6	16.1	61.9	8.4	2.4	9.3	0.0	0.0	0.0	1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5131	0.3885	0.3550	0.2883	0.1964	0.0602	3.55	6.45

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|504|SED|01 **Sample No.:** L2151373-19

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|504|SED|01

Sample Number: L2151373-19

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 82.84
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
82.84	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.04	0.00	100.0
		#18	0.47	0.00	99.4
		#35	13.32	0.00	83.3
		#40	11.43	0.00	69.5
		#60	39.89	0.00	21.4
		#120	6.96	0.00	13.0
		#200	1.66	0.00	10.9
		#230	0.16	0.00	10.8

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.8
Weight of hydrometer sample =35.54
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0375	1.3
5.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0237	1.3
15.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0137	1.3
30.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0097	1.3
60.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0069	1.3
240.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0034	1.3
1440.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0014	1.3

Fractional Components

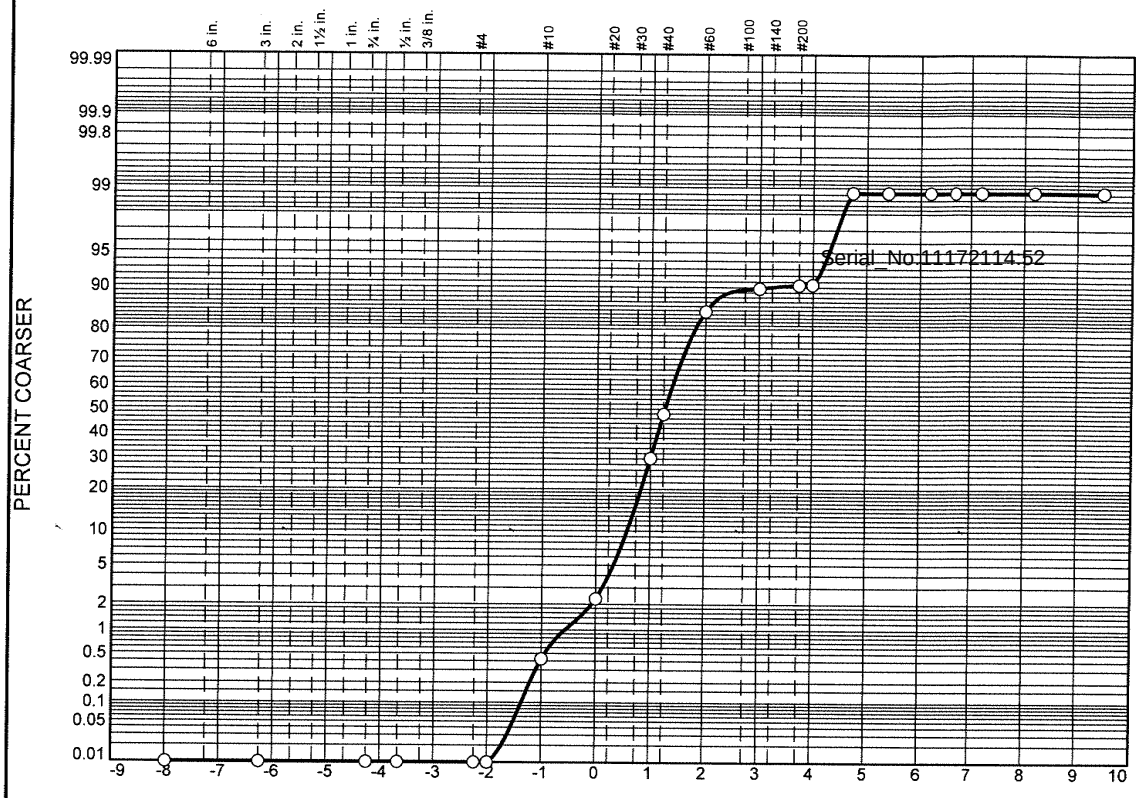
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.0	0.6	16.1	61.9	8.4	2.4	89.4	9.3	0.0	0.0	0.0	9.3	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0497	0.0602	0.1964	0.2420	0.2883	0.3229	0.3550	0.3885	0.4779	0.5131	0.5631	0.6523

Fineness Modulus	C_U	C_C
1.61	6.45	3.55

Serial_No:11172114:52

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	1.9	27.9	54.5	5.1	0.7	8.4	0.0	0.0	0.0	1.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6062	0.4559	0.4166	0.3365	0.2471	0.1084	2.29	4.21

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|506|SED|01 **Sample No.:** L2151373-20

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/4/2021

Location: 3664|2021|ECR-B|506|SED|01

Sample Number: L2151373-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 91.95
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
91.95	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		1/2	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.39	0.00	99.6
		#18	1.71	0.00	97.7
		#35	25.67	0.00	69.8
		#40	16.20	0.00	52.2
		#60	33.90	0.00	15.3
		#120	4.66	0.00	10.2
		#200	0.57	0.00	9.6
		#230	0.05	0.00	9.6

Serial_No:11172114:52

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.6
Weight of hydrometer sample =35.67
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0375	1.1
5.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0237	1.1
15.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0137	1.1
30.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0097	1.1
60.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0069	1.1
240.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0034	1.1
1440.00	21.3	1.0025	1.0026	0.0134	2.5	15.6	0.0014	1.1

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	1.9	27.9	54.5	5.1	0.7	90.1	8.4	0.0	0.0	0.0	8.4	1.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0509	0.1084	0.2471	0.2848	0.3365	0.3781	0.4166	0.4559	0.5623	0.6062	0.6710	0.7974

Fineness Modulus	C_u	C_c
1.84	4.21	2.29

Serial_No:11172114:52

Alpha Analytical

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:11172114:52

9/22/21 L2151373

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab

JOB #: 3664

SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 09/19/2021

	Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
	3664|2021|ECR-B|120|Sed|GS|02	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2; QC duplicate
-01	3664|2021|ECR-B|118|Sed|GS|01	9/17/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-02	3664|2021|ECR-B|116|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-03	3664|2021|ECR-B|114|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-04	3664|2021|ECR-B|112|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-05	3664|2021|ECR-B|110|Sed|GS|01	9/18/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-06	3664|2021|ECR-C|1101|Sed|GS|01	9/15/2021	SmithMac	125-mL glass	freeze	grain size	1	Cooler #2
-07	" " ~~#REF!~~ " 02	9/11/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
-08	3664|2021|ECR-B|448|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
-09	3664|2021|ECR-B|450|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
-10	3664|2021|ECR-B|452|Sed|GS|01	9/12/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
-11	3664|2021|ECR-B|454|Sed|GS|01	9/10/2021	SmithMac	125-mL glass	freeze	grain size	4	Cooler #2
-12	3664|2021|ECR-B|456|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
-13	3664|2021|ECR-B|458|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
-14	3664|2021|ECR-B|470|Sed|GS|01	9/10/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
-15	3664|2021|ECR-B|472|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
-16	3664|2021|ECR-B|474|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
-17	3664|2021|ECR-B|482|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
18	3664|2021|ECR-B|502|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2

Shipper: FEDEX UPS USPS OHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 18 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/18/21

RELINQUISHED BY: [signature] DATE/TIME: 9/22/21 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

[signature] 9/22/21 1720 CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are [illegible] and [illegible] weight as evidence [illegible]. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date and record the time on all accompanying forms when applicable at the time of sample receipt. Note: Initials are not acceptable.

[signature] 9/22/21 2000

[signature] 9/22/21 2000

[signature] 9/22/21 2119

[signature] 9/22/21 2119

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Serial_No:11172114:52

L2151373

9/22/21

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 09/19/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|504|Sed|GS|01	9/14/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|506|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|508|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|510|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|512|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2; QC duplicate
3664|2021|ECR-B|514|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-C|1215|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	2	Cooler #2
3664|2021|ECR-C|1429|Sed|GS|01	9/15/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-C|1430|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 15 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/15/21

RELINQUISHED BY: [signature] 9/22/21 1726 DATE/TIME: 9/22/21 1726 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and given weight as evidence in litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, when accepting at the time of sample receipt. Note: Initials are not acceptable.

[signature] 9/22/21 2000

[signature] 9/22/2000

[signature] 9/22/21 2110

Sam Aldrich 9/22/21 21:19

Serial_No:11142111:41

ANALYTICAL REPORT

Lab Number:	L2151376
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/14/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151376-01	3664|2021|ECR-B|508|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21
L2151376-02	3664|2021|ECR-B|510|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21
L2151376-03	3664|2021|ECR-B|512|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21
L2151376-04	3664|2021|ECR-B|514|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21
L2151376-05	3664|2021|ECR-C|1215|SED|01	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21
L2151376-06	3664|2021|ECR-C|1429|SED|01	SEDIMENT	OFFSHORE MA / NY	09/15/21 00:00	09/22/21
L2151376-07	3664|2021|ECR-C|1430|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151376-08	3664|2021|ECR-B|312|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 02:33	09/22/21
L2151376-09	3664|2021|ECR-B|314|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 03:39	09/22/21
L2151376-10	3664|2021|ECR-B|316|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 08:07	09/22/21
L2151376-11	3664|2021|ECR-B|318|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 13:03	09/22/21
L2151376-12	3664|2021|ECR-B|320|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 15:01	09/22/21
L2151376-13	3664|2021|ECR-B|322|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 18:50	09/22/21
L2151376-14	3664|2021|ECR-B|322|SED|02	SEDIMENT	OFFSHORE MA / NY	08/31/21 18:50	09/22/21
L2151376-15	3664|2021|ECR-B|324|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 20:59	09/22/21
L2151376-16	3664|2021|ECR-B|326|SED|01	SEDIMENT	OFFSHORE MA / NY	08/31/21 23:29	09/22/21
L2151376-17	3664|2021|ECR-B|328|SED|01	SEDIMENT	OFFSHORE MA / NY	09/01/21 02:31	09/22/21
L2151376-19	3664|2021|ECR-B|484|SED|01	SEDIMENT	OFFSHORE MA / NY	09/11/21 00:00	09/22/21
L2151376-20	3664|2021|ECR-B|510|SED|02	SEDIMENT	OFFSHORE MA / NY	09/13/21 00:00	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2151376-06: The sample identified as "3664|2021|ECR-C|1429|SED|01" on the chain of custody was identified as "3664|2021|ECR-C|1430|SED|01" on the container label. At the client's request, the sample is reported as "3664|2021|ECR-C|1429|SED|01".

L2151376-19: Sample containers were received for the "3664|2021|ECR-B|484|SED|01" sample, but were not listed on the chain of custody. At the client's request, the analysis was performed.

L2151376-20: Sample containers were received for the "3664|2021|ECR-B|510|SED|02" sample, but were not listed on the chain of custody. At the client's request, the analysis was performed.

Grain Size

The WG1565739-1 Laboratory Duplicate RPD for % granule (111%) and clay (27%), performed on L2151376-02, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2151376-14 and -17: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG1568669-4 MS recovery (Rep2 - 134%) performed on L2151376-11, is outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria, indicating the sample batch was in control, and all sample results were accepted.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/14/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-01
Client ID: 3664|2021|ECR-B|508|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.193		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.149		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.171		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.500		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	7.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	33.8		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	40.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	10.1		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-02
Client ID: 3664|2021|ECR-B|510|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.087		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.087		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.087		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.30		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	8.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	45.4		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	26.4		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-03
Client ID: 3664|2021|ECR-B|512|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.073		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.082		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.078		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	4.60		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	43.2		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	39.8		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.60		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-04
Client ID: 3664|2021|ECR-B|514|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.130		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.103		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.116		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	25.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	33.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	13.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	7.80		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	4.80		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.700		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-05
Client ID: 3664|2021|ECR-C|1215|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.38		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	1.12		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	1.25		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.30		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	10.1		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	16.1		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	9.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	41.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	7.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-06
Client ID: 3664|2021|ECR-C|1429|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/15/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.212		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.222		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.217		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	6.30		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	15.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	39.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	13.6		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-07
Client ID: 3664|2021|ECR-C|1430|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.095		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.072		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.084		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	59.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	13.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	6.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	10.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	1.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	0.500		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-08
Client ID: 3664|2021|ECR-B|312|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 02:33
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.437		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.443		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.440		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	0.600		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	9.60		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	50.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	33.6		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-09
Client ID: 3664|2021|ECR-B|314|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 03:39
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.422		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.387		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.404		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.300		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.600		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	27.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	43.6		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	22.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-10
Client ID: 3664|2021|ECR-B|316|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 08:07
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.281		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.320		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.300		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	1.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	53.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	27.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	15.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-11
Client ID: 3664|2021|ECR-B|318|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 13:03
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.242		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.222		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.232		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	1.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	66.2		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	17.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	12.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-12
Client ID: 3664|2021|ECR-B|320|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 15:01
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.656		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.781		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.718		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.900		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	13.2		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	62.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	9.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.6		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-13
Client ID: 3664|2021|ECR-B|322|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 18:50
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.064		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.065		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.065		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.300		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.100		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	71.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	16.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.60		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-14
Client ID: 3664|2021|ECR-B|322|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 18:50
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.074		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.046		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.060		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	1.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	73.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	14.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-15
Client ID: 3664|2021|ECR-B|324|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 20:59
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.067		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.084		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.076		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	20.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	42.1		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	13.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-16
Client ID: 3664|2021|ECR-B|326|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/31/21 23:29
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.446		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.425		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.436		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	6.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	4.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	8.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	18.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	6.90		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	12.6		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	31.2		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	6.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-17
Client ID: 3664|2021|ECR-B|328|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/01/21 02:31
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.229		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.090		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.160		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.600		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	14.9		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	59.8		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	9.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.800		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.70		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-19
Client ID: 3664|2021|ECR-B|484|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/11/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.316		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.343		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.330		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.200		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	0.300		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	1.00		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	19.4		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	47.5		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	25.8		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.60		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

SAMPLE RESULTS

Lab ID: L2151376-20
Client ID: 3664|2021|ECR-B|510|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/13/21 00:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.117		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.136		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	0.126		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.10		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Coarse Sand	7.50		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Medium Sand	44.7		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Fine Sand	30.0		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.20		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.3		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	11/01/21 17:47	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151376
Report Date: 11/14/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-10 Batch: WG1568668-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 11-17,19-20 Batch: WG1568669-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/09/21 12:50	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 Batch: WG1568668-2								
Total Organic Carbon (Rep1)	109		-		75-125	-		25
Total Organic Carbon (Rep2)	97		-		75-125	-		25
Total Organic Carbon (Average)	103		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-17,19-20 Batch: WG1568669-2								
Total Organic Carbon (Rep1)	107		-		75-125	-		25
Total Organic Carbon (Rep2)	113		-		75-125	-		25
Total Organic Carbon (Average)	110		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1568668-4 QC Sample: L2151376-01 Client ID: 3664|2021|ECR-B|508|SED|01												
Total Organic Carbon (Rep1)	0.193	0.652	0.821	96		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.149	0.691	0.855	102		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1568668-5 QC Sample: L2151381-14 Client ID: MS Sample												
Total Organic Carbon (Rep1)	0.132	0.576	1.60	**255**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.135	1.05	2.34	**209**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-17,19-20 QC Batch ID: WG1568669-4 QC Sample: L2151376-11 Client ID: 3664|2021|ECR-B|318|SED|01												
Total Organic Carbon (Rep1)	0.242	0.513	0.756	100		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.222	0.988	1.55	**134**	Q	-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-17,19-20 QC Batch ID: WG1568669-5 QC Sample: L2157361-03 Client ID: MS Sample												
Total Organic Carbon (Rep1)	0.225	0.705	1.08	121		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.200	0.636	0.870	105		-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151376
Report Date: 11/14/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-17,19-20 QC Batch ID: WG1565739-1 QC Sample: L2151376-02 Client ID: 3664|2021|ECR-B|510|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	0.400	ND	%	NC		20
Granule (2.0-4.0 mm)	2.10	0.600	%	**111**	Q	20
% Very Coarse Sand	1.30	1.20	%	8		20
% Coarse Sand	8.90	7.60	%	16		20
% Medium Sand	45.4	45.3	%	0		20
% Fine Sand	26.4	28.5	%	8		20
% Very Fine Sand	1.90	1.80	%	5		20
Silt - (3.9-62.5 um)	11.5	13.4	%	15		20
Clay - (<3.9 um)	2.10	1.60	%	**27**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1568668-3 QC Sample: L2151376-01 Client ID: 3664|2021|ECR-B|508|SED|01						
Total Organic Carbon (Rep1)	0.193	0.170	%	13		25
Total Organic Carbon (Rep2)	0.149	0.167	%	11		25
Total Organic Carbon (Average)	0.171	0.168	%	2		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151376
Report Date: 11/14/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-17,19-20 QC Batch ID: WG1568669-3 QC Sample: L2151376-11 Client ID: 3664|2021|ECR-B|318|SED|01					
Total Organic Carbon (Rep1)	0.242	0.224	%	8	25
Total Organic Carbon (Rep2)	0.222	0.235	%	6	25
Total Organic Carbon (Average)	0.232	0.230	%	1	25

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151376-01A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-01B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-02A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-02B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-03A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-03B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-04A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151376-04B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151376-05A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151376-05B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-06A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151376-06B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-07A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151376-07B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-08A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151376-08B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-09A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151376-09B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151376-10A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-10B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-11A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151376-11B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-12A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151376-12B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-13A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151376-13B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-14A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151376-14B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151376
Report Date: 11/14/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151376-15A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151376-15B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-16A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-16B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-17A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151376-17B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-19A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-19B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)
L2151376-20A	Plastic 8oz unpreserved for Grain Size	B	NA		20.9	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151376-20B	Glass 120ml/4oz unpreserved	A	NA		5.8	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151376
Project Number:	3664	**Report Date:**	11/14/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

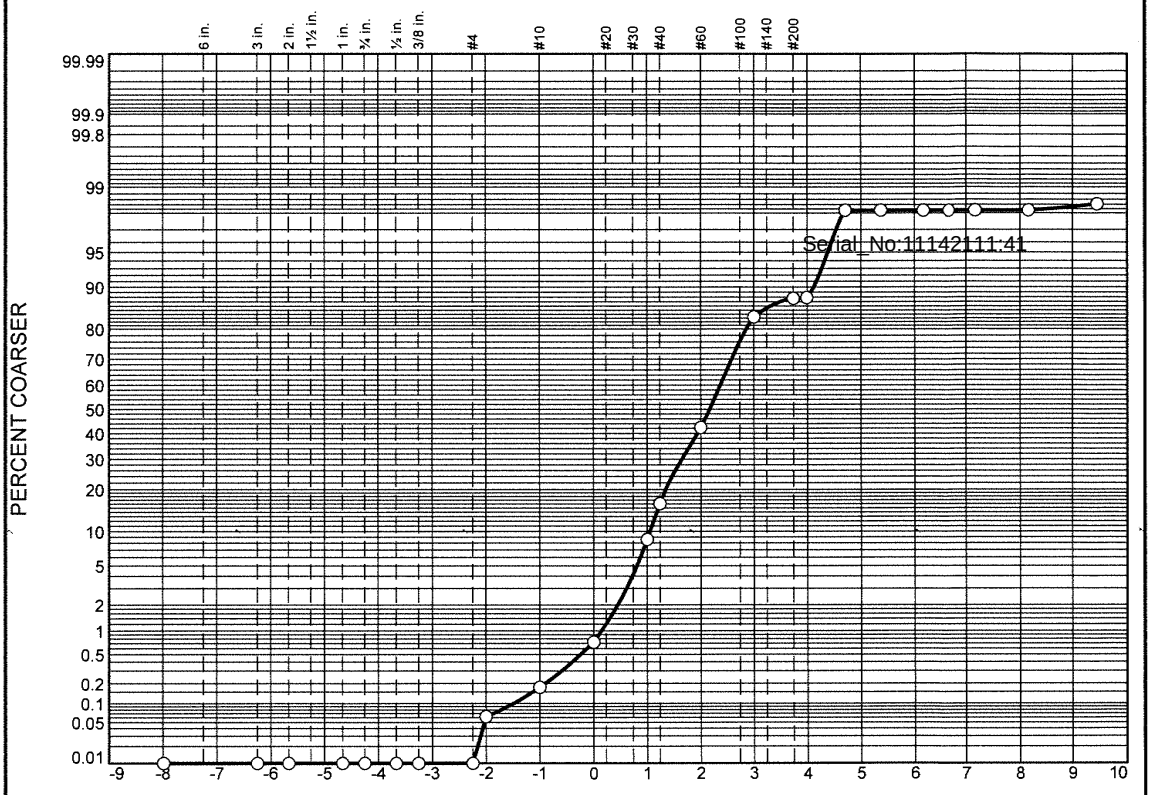
LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928
GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.1	0.5	7.9	33.8	40.9	4.7	10.1	0.0	0.0		1.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4340	0.2607	0.2225	0.1671	0.1110	0.0572	1.87	4.56

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|508|SED|01 **Sample No.:** L2151376-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|508|SED|01

Sample Number: L2151376-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 80.15
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
80.15	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.05	0.00	99.9
		#10	0.09	0.00	99.8
		#18	0.44	0.00	99.3
		#35	6.31	0.00	91.4
		#40	6.00	0.00	83.9
		#60	21.10	0.00	57.6
		#120	32.81	0.00	16.7
		#200	3.53	0.00	12.3
		#230	0.11	0.00	12.1

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.1
Weight of hydrometer sample =35.44
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	1.9
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	1.9
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	1.9
30.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0099	1.9
60.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0070	1.9
240.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0035	1.9
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	1.6

Fractional Components

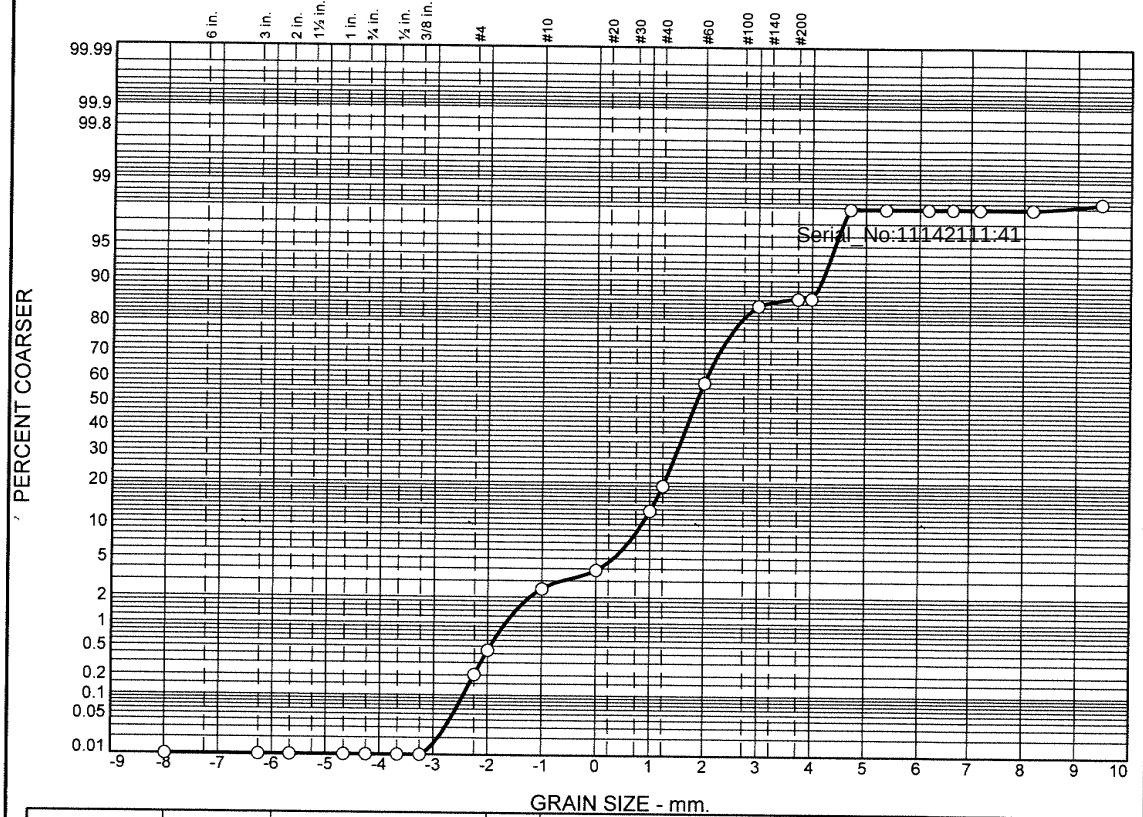
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.1	0.5	7.9	33.8	40.9	4.7	87.8	10.1	0.0	0.0		10.1	1.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0479	0.0572	0.1110	0.1378	0.1671	0.1936	0.2225	0.2607	0.3938	0.4340	0.4821	0.5713

Fineness Modulus	C_u	C_c
1.14	4.56	1.87

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	2.1	1.3	8.9	45.4	26.4	1.9	11.5	0.0	0.0	0.0	2.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4666	0.3128	0.2774	0.2063	0.1150	0.0549	2.48	5.69

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|510|SED|01 **Sample No.:** L2151376-02

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|510|SED|01

Sample Number: L2151376-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 54.06
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
54.06	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.11	0.00	99.8
		#5	0.13	0.00	99.6
		#10	1.09	0.00	97.5
		#18	0.75	0.00	96.2
		#35	4.78	0.00	87.3
		#40	3.39	0.00	81.0
		#60	21.17	0.00	41.9
		#120	14.28	0.00	15.5
		#200	0.94	0.00	13.7
		#230	0.02	0.00	13.7

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.7
Weight of hydrometer sample =35.57
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	2.1
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	2.1
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	2.1
30.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0099	2.1
60.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0070	2.1
240.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0035	2.1
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	1.8

Fractional Components

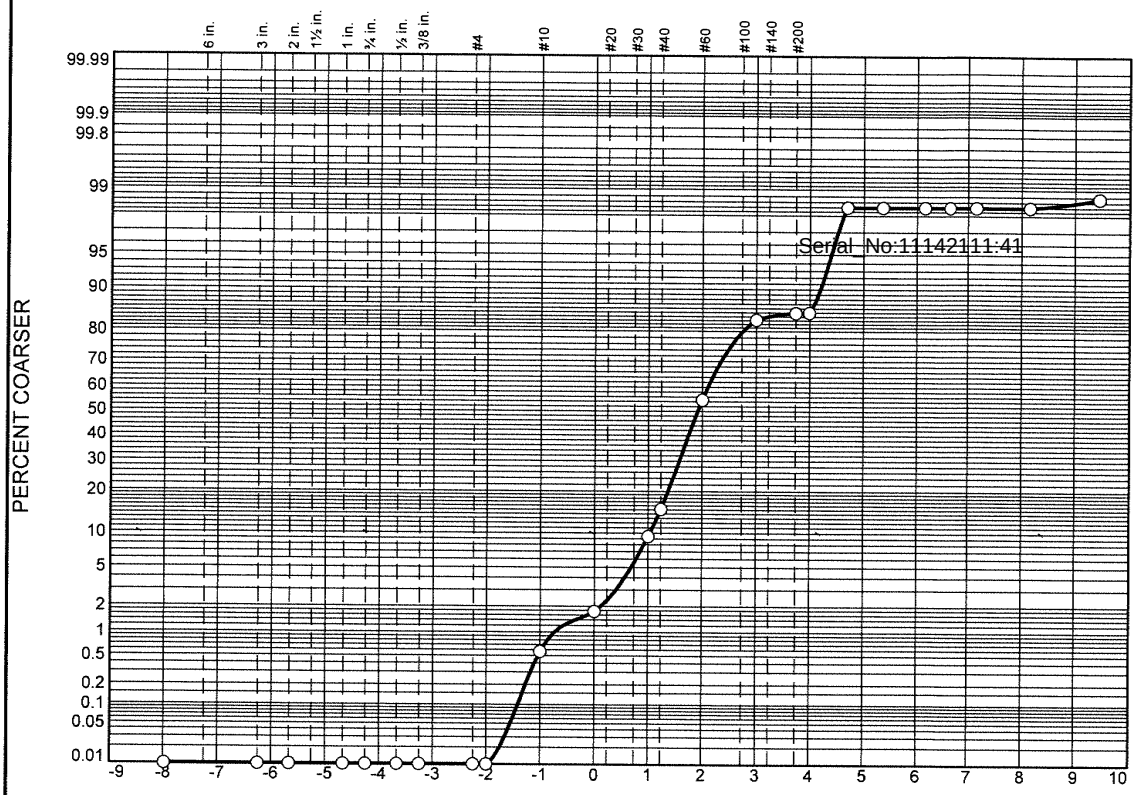
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	2.1	1.3	8.9	45.4	26.4	1.9	83.9	11.5	0.0	0.0	0.0	11.5	2.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0467	0.0549	0.1150	0.1582	0.2063	0.2435	0.2774	0.3128	0.4163	0.4666	0.5543	0.8016

Fineness Modulus	C_U	C_C
1.39	5.69	2.48

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.6	1.2	7.6	45.3	28.5	1.9	13.3	0.0	0.0		1.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4258	0.2976	0.2650	0.1963	0.0628	0.0544	2.38	5.47

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|510|SED|01 **Sample No.:** WG1565739-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|510|SED|01

Sample Number: WG1565739-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 54.68
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
54.68	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.31	0.00	99.4
		#18	0.65	0.00	98.2
		#35	4.18	0.00	90.6
		#40	3.11	0.00	84.9
		#60	21.66	0.00	45.3
		#120	15.56	0.00	16.8
		#200	0.96	0.00	15.1
		#230	0.02	0.00	15.1

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 15.1
Weight of hydrometer sample =35.60
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0385	1.6
5.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0244	1.6
15.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0141	1.6
30.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0099	1.6
60.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0070	1.6
240.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0035	1.6
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	1.3

Fractional Components

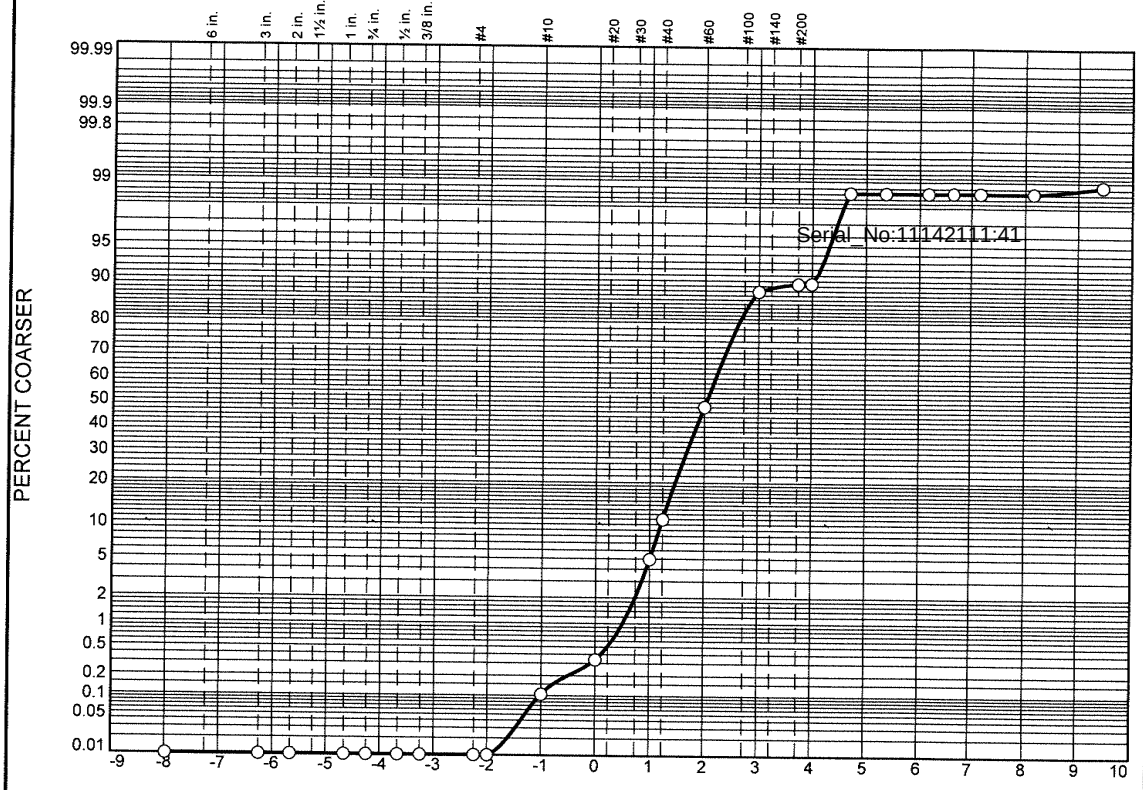
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.6	1.2	7.6	45.3	28.5	1.9	84.5	13.3	0.0	0.0		13.3	1.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0475	0.0544	0.0628	0.1479	0.1963	0.2326	0.2650	0.2976	0.3868	0.4258	0.4894	0.6228

Fineness Modulus	C_u	C_c
1.26	5.47	2.38

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.2	4.6	43.2	39.8	1.6	9.1	0.0	0.0		1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3929	0.2757	0.2446	0.1904	0.1408	0.0609	2.16	4.53

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|512|SED|01 **Sample No.:** L2151376-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|512|SED|01

Sample Number: L2151376-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 85.86
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
85.86	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.09	0.00	99.9
		#18	0.20	0.00	99.7
		#35	3.96	0.00	95.1
		#40	5.12	0.00	89.1
		#60	31.97	0.00	51.9
		#120	34.10	0.00	12.1
		#200	1.31	0.00	10.6
		#230	0.04	0.00	10.6

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.6
Weight of hydrometer sample =35.58
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0384	1.4
5.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0243	1.4
15.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0140	1.4
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	1.4
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	1.4
240.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0035	1.4
1440.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0014	1.1

Fractional Components

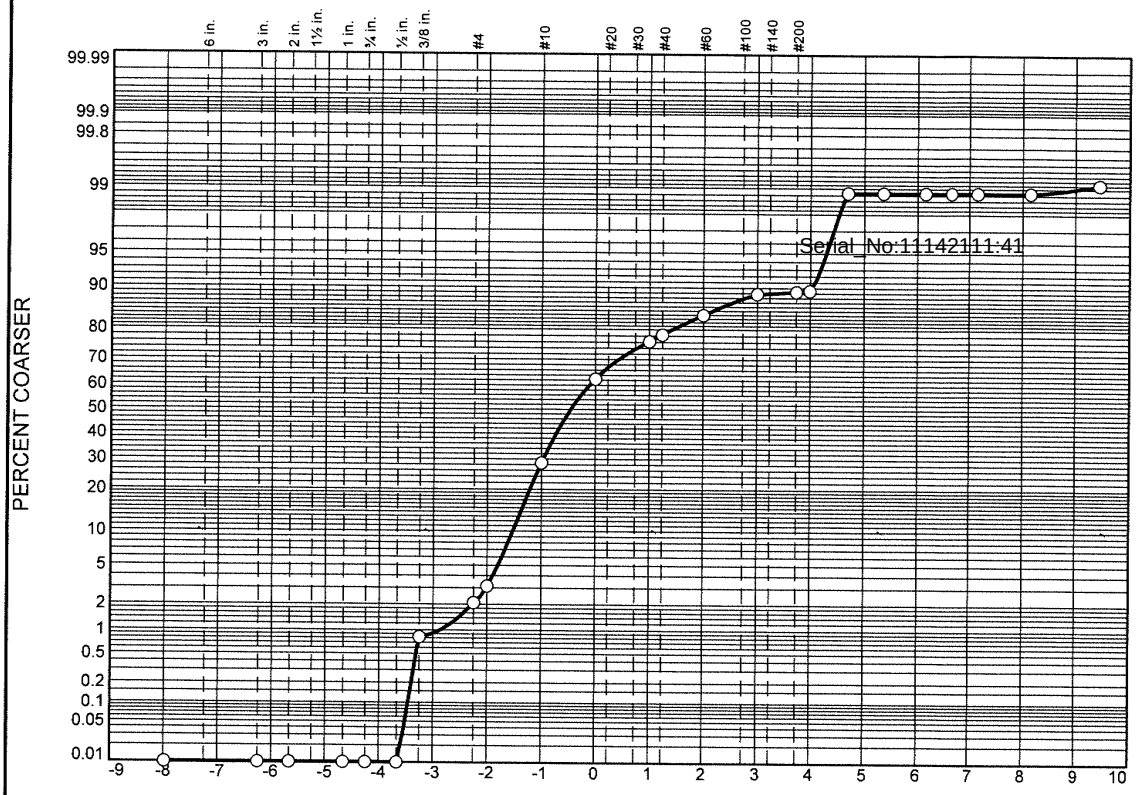
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.2	4.6	43.2	39.8	1.6	89.4	9.1	0.0	0.0		9.1	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0501	0.0609	0.1408	0.1603	0.1904	0.2171	0.2446	0.2757	0.3616	0.3929	0.4334	0.4990

Fineness Modulus	C_u	C_c
1.19	4.53	2.16

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.1	25.5	33.9	13.7	7.8	4.8	0.8	9.3	0.0	0.0		1.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.5505	1.6523	1.3691	0.7410	0.2221	0.0611	5.44	27.05

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|514|SED|01 **Sample No.:** L2151376-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|514|SED|01

Sample Number: L2151376-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 93.41
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
93.41	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.77	0.00	99.2
		#4	1.17	0.00	97.9
		#5	0.98	0.00	96.9
		#10	23.77	0.00	71.4
		#18	31.69	0.00	37.5
		#35	12.84	0.00	23.8
		#40	1.97	0.00	21.6
		#60	5.24	0.00	16.0
		#120	4.50	0.00	11.2
		#200	0.45	0.00	10.7
		#230	0.18	0.00	10.5

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.5
Weight of hydrometer sample =35.36
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0385	1.1
5.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0244	1.1
15.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0141	1.1
30.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0099	1.1
60.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0070	1.1
240.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0035	1.1
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	0.9

Fractional Components

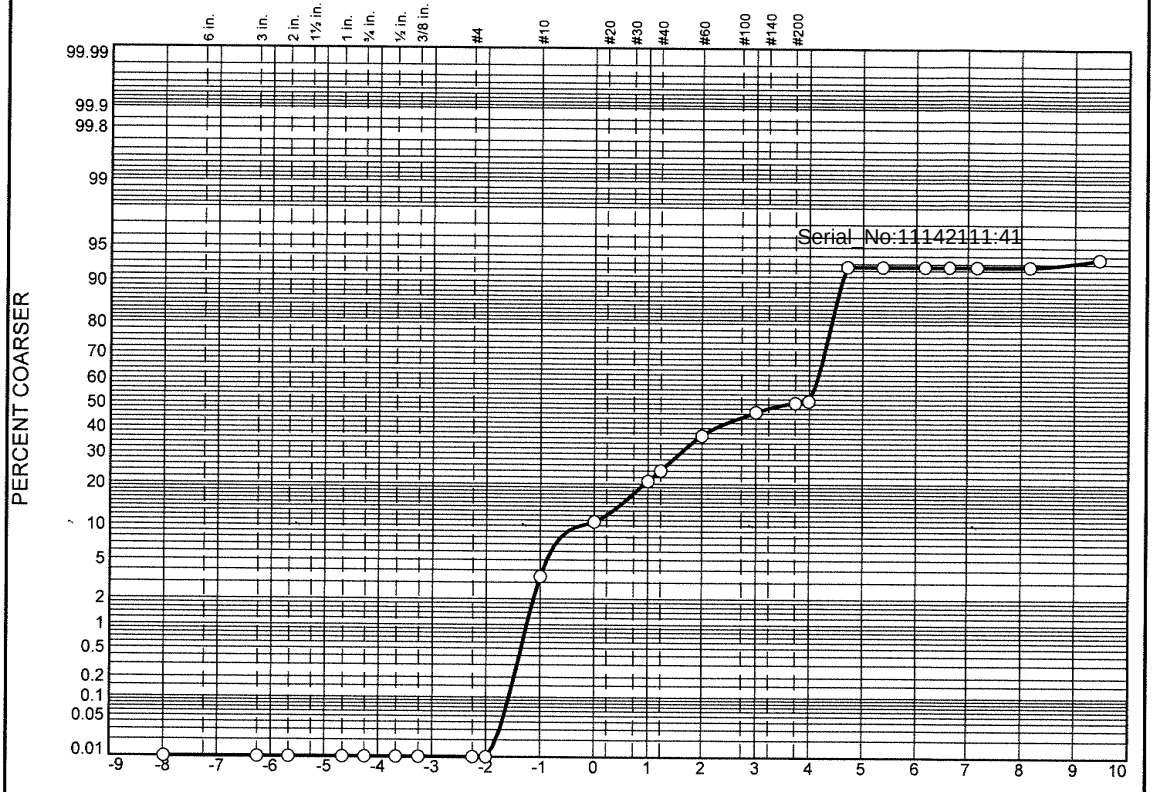
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.1	25.5	33.9	13.7	7.8	4.8	0.8	61.0	9.3	0.0	0.0		9.3	1.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0509	0.0611	0.2221	0.3699	0.7410	1.0779	1.3691	1.6523	2.3136	2.5505	2.8815	3.4929

Fineness Modulus	C_u	C_c
3.22	27.05	5.44

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	3.4	7.3	10.1	16.1	9.7	5.0	40.9	0.0	0.0	0.0	7.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.6826	0.2102	0.0830	0.0514	0.0443	0.0409	0.31	5.14

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1215|SED|01 **Sample No.:** L2151376-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-C|1215|SED|01

Sample Number: L2151376-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.61
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.61	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	1.12	0.00	96.6
		#18	2.37	0.00	89.3
		#35	3.30	0.00	79.2
		#40	1.08	0.00	75.9
		#60	4.16	0.00	63.1
		#120	3.18	0.00	53.4
		#200	1.27	0.00	49.5
		#230	0.22	0.00	48.8

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 48.8
Weight of hydrometer sample =35.36
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	7.5
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	7.5
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	7.5
30.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0099	7.5
60.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0070	7.5
240.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0035	7.5
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	6.4

Fractional Components

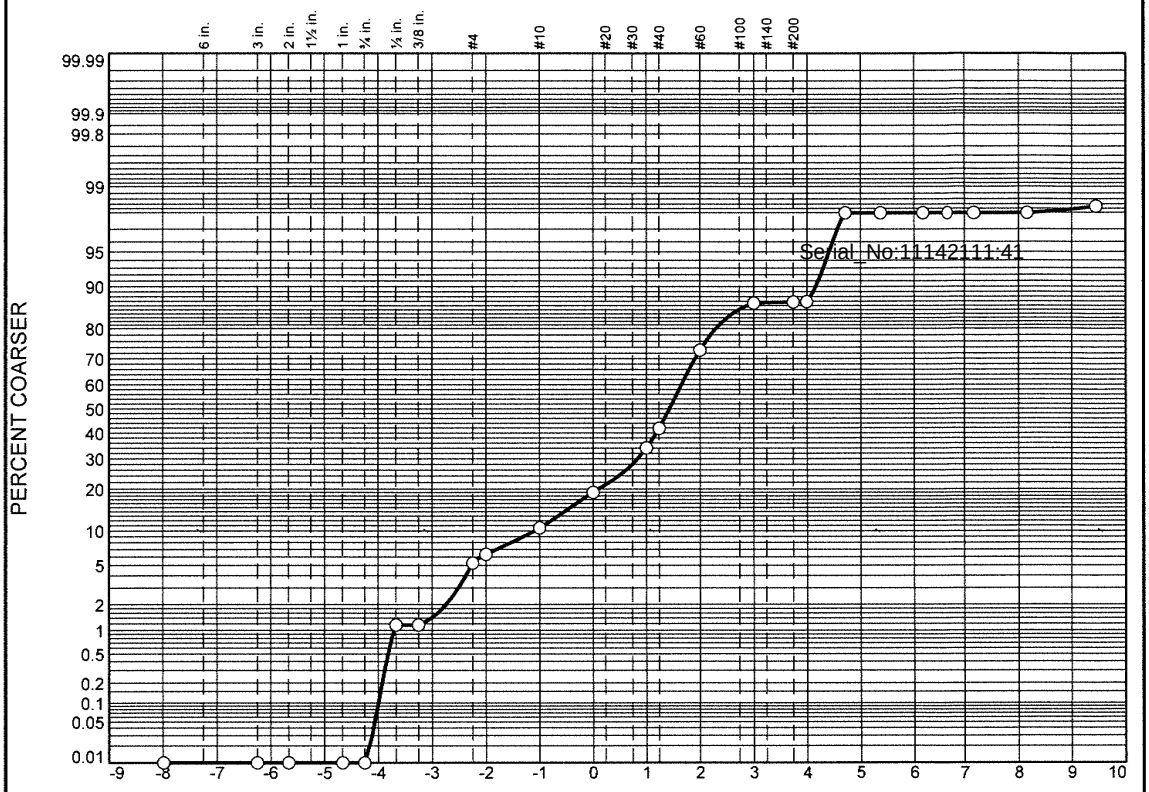
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	3.4	7.3	10.1	16.1	9.7	5.0	48.2	40.9	0.0	0.0	0.0	40.9	7.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0409	0.0443	0.0469	0.0514	0.0561	0.0830	0.2102	0.5211	0.6826	1.1765	1.8416

Fineness Modulus	C_u	C_c
1.05	5.14	0.31

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			6.3	4.2	8.5	15.0	39.0	13.6	0.4	11.0	0.0	0.0	0.0	2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.3388	0.4401	0.3715	0.2668	0.1520	0.0557	2.91	7.90

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-C|1429|SED|01 **Sample No.:** L2151376-06

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-C|1429|SED|01

Sample Number: L2151376-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 85.99
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
85.99	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	1.00	0.00	98.8
		3/8"	0.00	0.00	98.8
		#4	3.53	0.00	94.7
		#5	0.91	0.00	93.7
		#10	3.63	0.00	89.5
		#18	7.27	0.00	81.0
		#35	12.92	0.00	66.0
		#40	6.76	0.00	58.1
		#60	26.79	0.00	27.0
		#120	11.65	0.00	13.4
		#200	0.23	0.00	13.1
		#230	0.04	0.00	13.1

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.1
Weight of hydrometer sample =35.27
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	2.0
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	2.0
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	2.0
30.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0099	2.0
60.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0070	2.0
240.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0035	2.0
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	1.7

Fractional Components

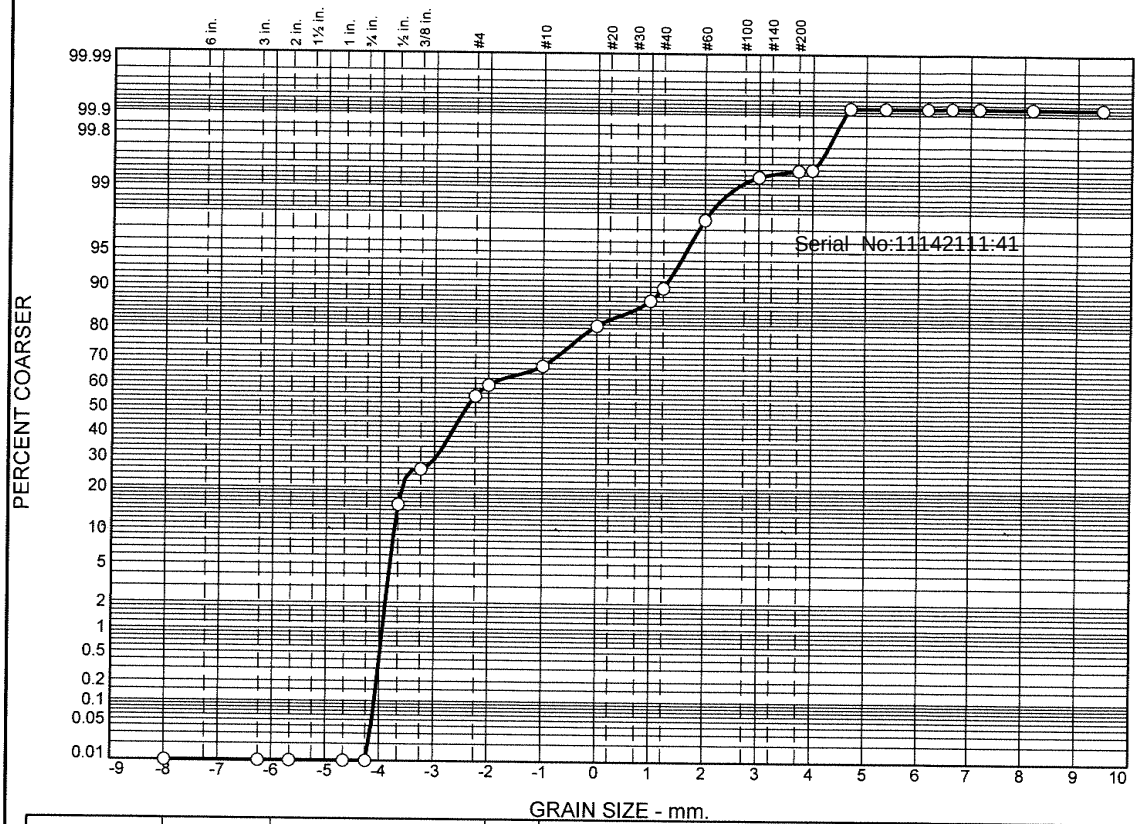
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		6.3	4.2	8.5	15.0	39.0	13.6	0.4	76.5	11.0	0.0	0.0	0.0	11.0	2.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0471	0.0557	0.1520	0.2033	0.2668	0.3178	0.3715	0.4401	0.9303	1.3388	2.1362	4.8272

Fineness Modulus	C_u	C_c
2.09	7.90	2.91

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			59.3	7.7	13.7	6.4	10.5	1.7	0.1	0.5	0.0	0.0		0.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			12.7338	6.3555	5.2957	1.7081	0.6074	0.4185	1.10	15.19

	Material Description	USCS	AASHTO
○		GW	

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-C|1430|SED|01 **Sample No.:** L2151376-07

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-C|1430|SED|01
Sample Number: L2151376-07
USCS Classification: GW

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 127.66
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11142111:41

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
127.66	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	19.51	0.00	84.7
		3/8"	13.38	0.00	74.2
		#4	37.08	0.00	45.2
		#5	5.79	0.00	40.7
		#10	9.78	0.00	33.0
		#18	17.44	0.00	19.3
		#35	8.27	0.00	12.9
		#40	3.28	0.00	10.3
		#60	10.10	0.00	2.4
		#120	2.08	0.00	0.7
		#200	0.16	0.00	0.6
		#230	0.02	0.00	0.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 0.6
Weight of hydrometer sample =35.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0384	0.1
5.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0243	0.1
15.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0140	0.1
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	0.1
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	0.1
240.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0035	0.1
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	0.1

Fractional Components

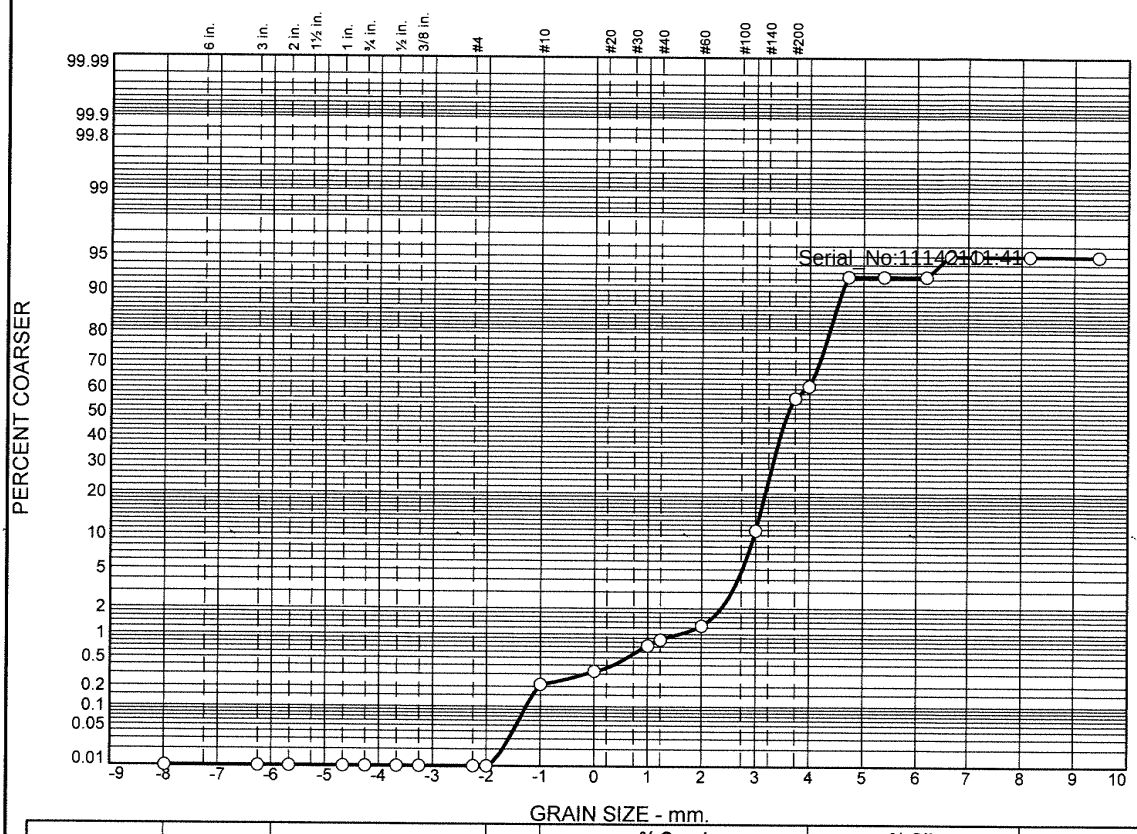
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		59.3	7.7	13.7	6.4	10.5	1.7	0.1	32.4	0.5	0.0	0.0		0.5	0.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.3185	0.4185	0.6074	1.0485	1.7081	3.8529	5.2957	6.3555	12.0784	12.7338	13.3316	14.0773

Fineness Modulus	C_u	C_c
5.04	15.19	1.10

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.1	0.4	0.6	9.6	50.5	31.0	0.0	2.6	0.0	5.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1171	0.0914	0.0826	0.0550	0.0453	0.0410	0.81	2.23

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|312|SED|01 **Sample No.:** L2151376-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|312|SED|01

Sample Number: L2151376-08

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 51.49
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
51.49	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.11	0.00	99.8
		#18	0.06	0.00	99.7
		#35	0.20	0.00	99.3
		#40	0.07	0.00	99.1
		#60	0.21	0.00	98.7
		#120	4.95	0.00	89.1
		#200	23.33	0.00	43.8
		#230	2.53	0.00	38.9

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 38.9
Weight of hydrometer sample =35.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0379	7.6
5.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0240	7.6
15.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0138	7.6
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	5.0
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	5.0
240.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0035	5.0
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	5.0

Fractional Components

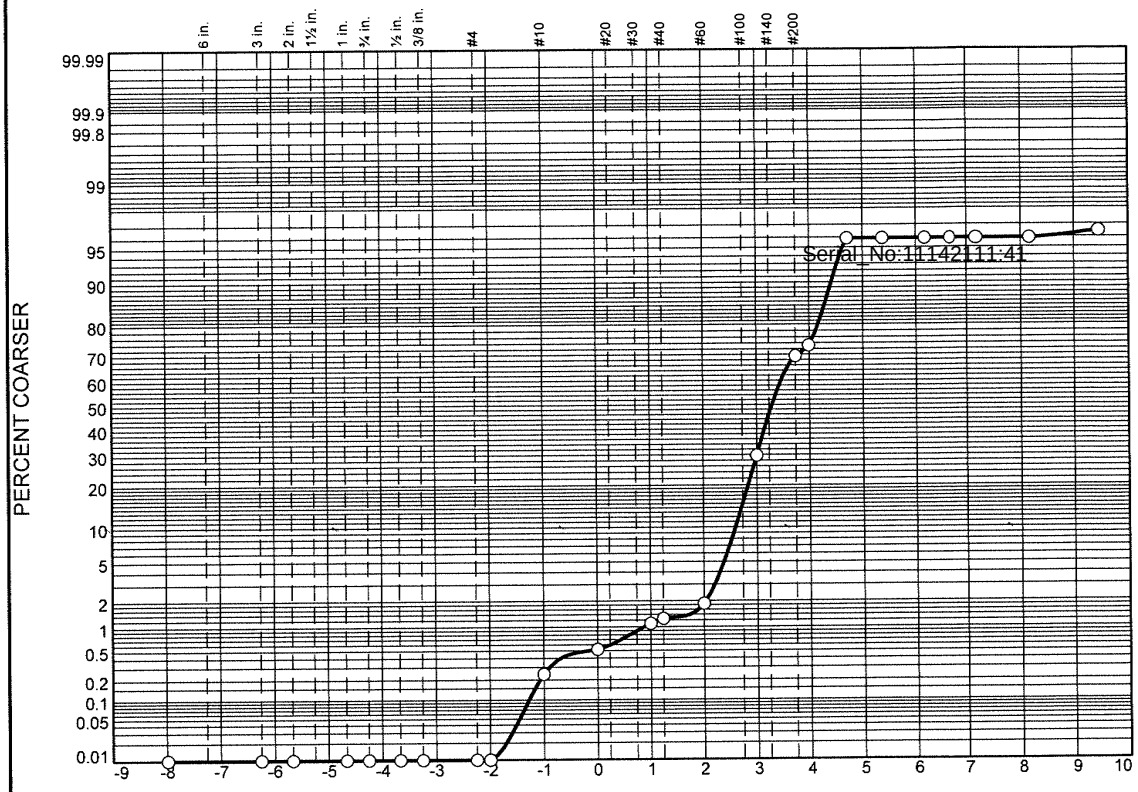
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.1	0.4	0.6	9.6	50.5	61.2	31.0	0.0	2.6	0.0	33.6	5.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0410	0.0453	0.0487	0.0550	0.0650	0.0826	0.0914	0.1102	0.1171	0.1272	0.1480

Fineness Modulus	C_u	C_c
0.07	2.23	0.81

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.3	0.6	0.8	27.9	43.7	22.4	0.0	0.0		4.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1503	0.1128	0.1020	0.0732	0.0513	0.0469	1.01	2.41

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|314|SED|01 **Sample No.:** L2151376-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|314|SED|01
Sample Number: L2151376-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 70.86
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
70.86	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.17	0.00	99.8
		#18	0.20	0.00	99.5
		#35	0.41	0.00	98.9
		#40	0.11	0.00	98.7
		#60	0.43	0.00	98.1
		#120	19.77	0.00	70.2
		#200	28.12	0.00	30.6
		#230	2.66	0.00	26.8

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 26.8
Weight of hydrometer sample =35.39
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	4.1
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	4.1
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	4.1
30.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0099	4.1
60.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0070	4.1
240.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0035	4.1
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	3.5

Fractional Components

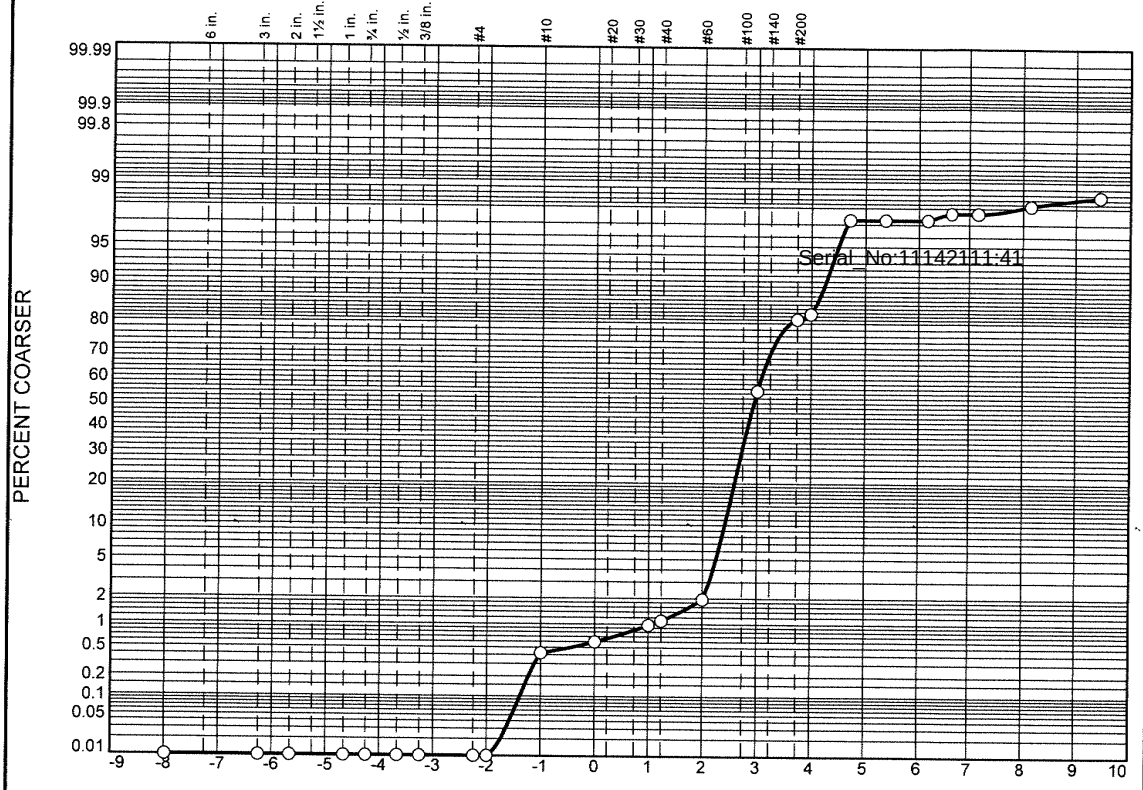
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.3	0.6	0.8	27.9	43.7	73.3	22.4	0.0	0.0		22.4	4.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0404	0.0469	0.0513	0.0555	0.0732	0.0906	0.1020	0.1128	0.1399	0.1503	0.1649	0.1921

Fineness Modulus	C_u	C_c
0.18	2.41	1.01

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	0.2	0.4	1.0	53.0	27.8	14.5	0.0	0.4	0.3	2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1755	0.1410	0.1304	0.1056	0.0583	0.0517	1.53	2.73

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|316|SED|01 **Sample No.:** L2151376-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|316|SED|01
Sample Number: L2151376-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 116.34
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.34	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.49	0.00	99.6
		#18	0.20	0.00	99.4
		#35	0.44	0.00	99.0
		#40	0.15	0.00	98.9
		#60	0.99	0.00	98.0
		#120	61.67	0.00	45.0
		#200	30.39	0.00	18.9
		#230	1.75	0.00	17.4

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.4
Weight of hydrometer sample =35.08
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	2.7
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	2.7
15.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0140	2.7
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	2.3
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	2.3
240.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0035	1.9
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	1.5

Fractional Components

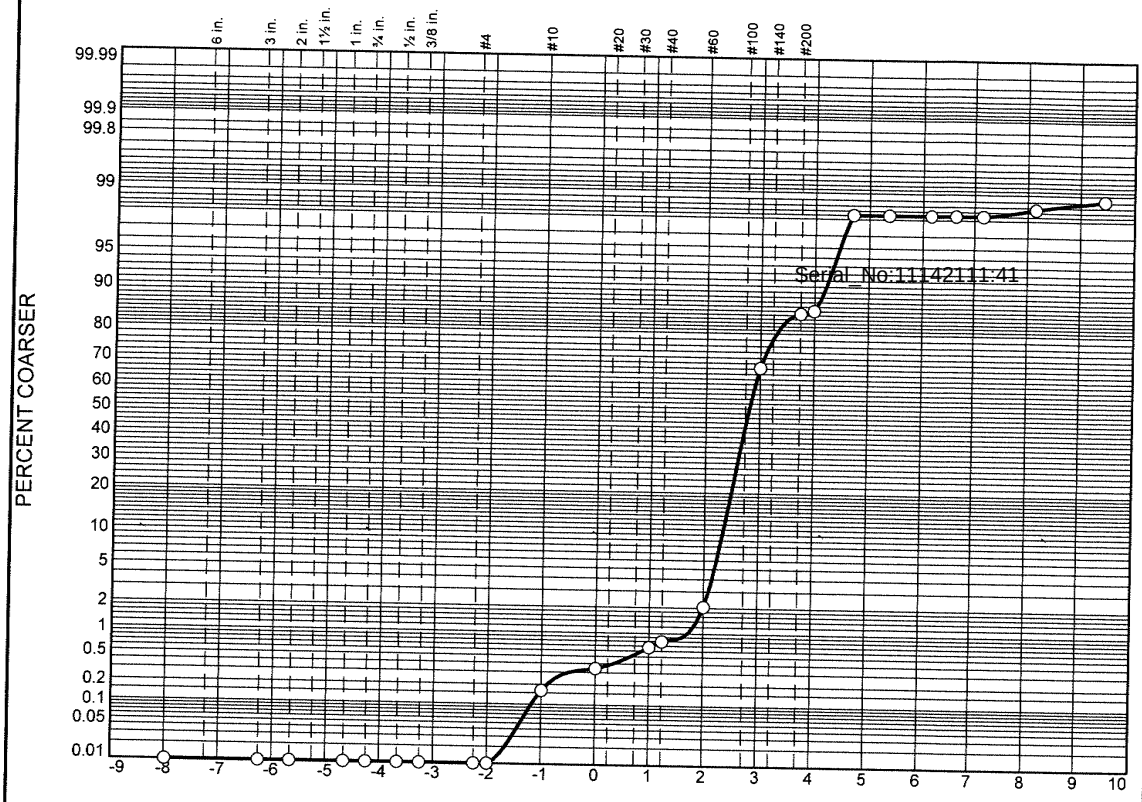
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	0.2	0.4	1.0	53.0	27.8	82.4	14.5	0.0	0.4	0.3	15.2	2.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0444	0.0517	0.0583	0.0820	0.1056	0.1192	0.1304	0.1410	0.1663	0.1755	0.1881	0.2104

Fineness Modulus	C_u	C_c
0.35	2.73	1.53

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.1	0.4	1.4	66.2	17.9	12.0	0.0	0.0	0.3	1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1859	0.1539	0.1442	0.1223	0.0805	0.0553	1.76	2.78

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|318|SED|01 **Sample No.:** L2151376-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|318|SED|01

Sample Number: L2151376-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 105.04
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
105.04	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.17	0.00	99.8
		#18	0.19	0.00	99.7
		#35	0.34	0.00	99.3
		#40	0.13	0.00	99.2
		#60	1.33	0.00	97.9
		#120	69.63	0.00	31.7
		#200	17.85	0.00	14.7
		#230	0.77	0.00	13.9

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.9
Weight of hydrometer sample =35.74
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0384	1.8
5.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0243	1.8
15.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0140	1.8
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	1.8
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	1.8
240.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0035	1.5
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	1.2

Fractional Components

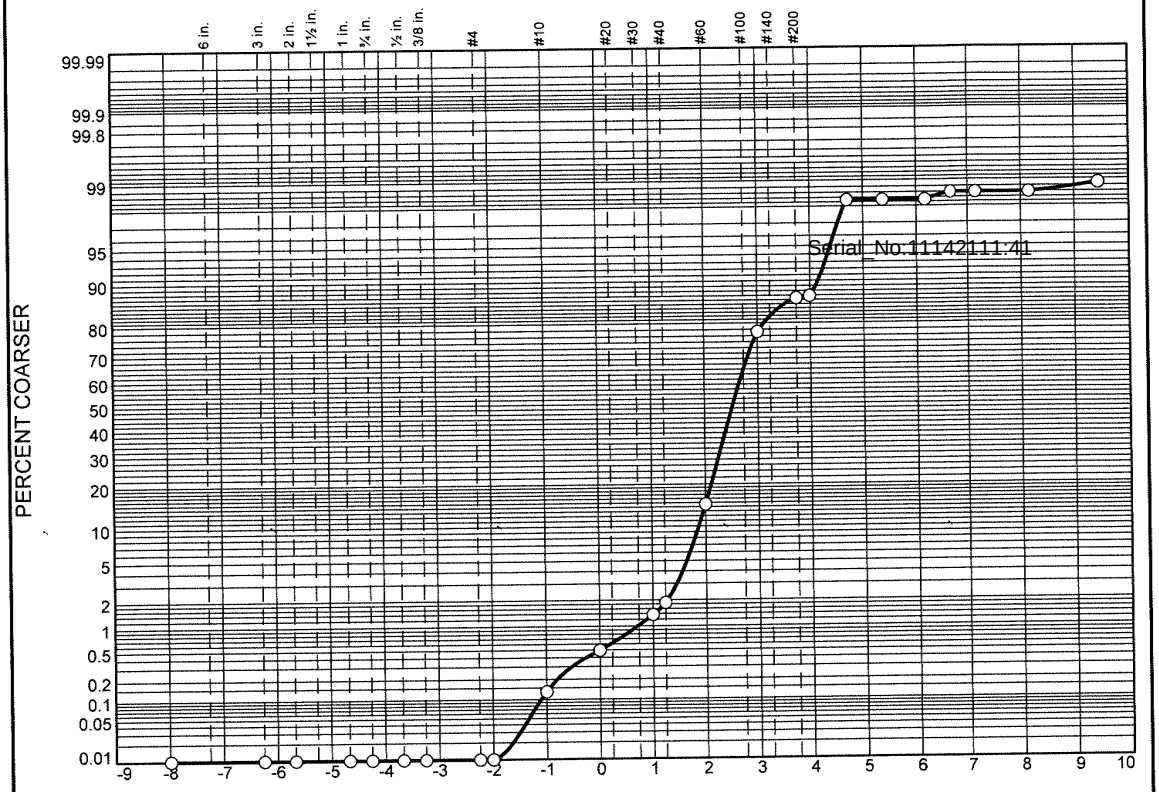
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.1	0.4	1.4	66.2	17.9	86.0	12.0	0.0	0.0	0.3	12.3	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0475	0.0553	0.0805	0.1016	0.1223	0.1344	0.1442	0.1539	0.1773	0.1859	0.1975	0.2179

Fineness Modulus	C_u	C_c
0.46	2.78	1.76

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.4	0.9	13.2	62.7	9.7	11.3	0.0	0.3		1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2485	0.1888	0.1726	0.1402	0.0878	0.0562	1.85	3.36

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|320\|SED\|01 **Sample No.:** L2151376-12

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|320|SED|01
Sample Number: L2151376-12

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 114.39
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
114.39	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.15	0.00	99.9
		#18	0.42	0.00	99.5
		#35	0.99	0.00	98.6
		#40	0.57	0.00	98.1
		#60	14.61	0.00	85.4
		#120	71.73	0.00	22.7
		#200	10.37	0.00	13.6
		#230	0.53	0.00	13.1

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.1
Weight of hydrometer sample =35.59
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0384	1.7
5.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0243	1.7
15.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0140	1.7
30.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0099	1.4
60.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0070	1.4
240.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0035	1.4
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	1.1

Fractional Components

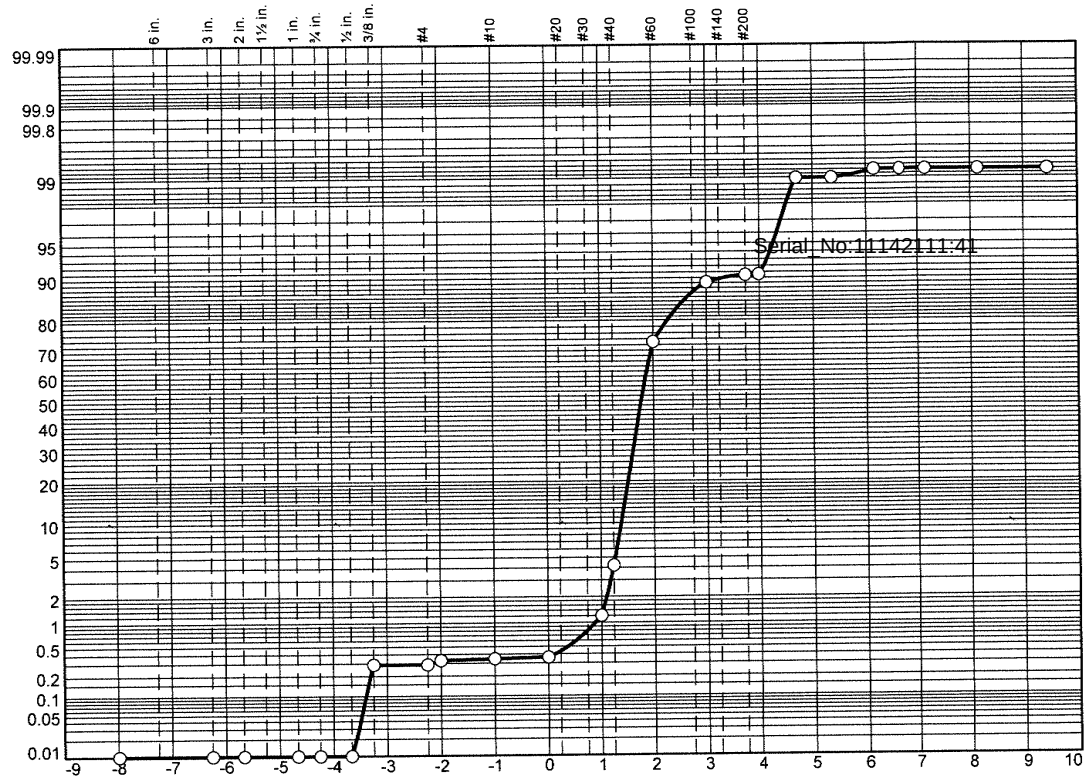
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.4	0.9	13.2	62.7	9.7	86.9	11.3	0.0	0.3		11.6	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0480	0.0562	0.0878	0.1143	0.1402	0.1570	0.1726	0.1888	0.2316	0.2485	0.2731	0.3205

Fineness Modulus	C_u	C_c
0.73	3.36	1.85

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.3	0.0	0.1	0.8	71.9	16.0	1.6	8.3	0.1	0.1	0.0	0.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3636	0.3091	0.2925	0.2568	0.1692	0.0985	2.17	3.14

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|322|SED|01 **Sample No.:** L2151376-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|322|SED|01
Sample Number: L2151376-13

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 124.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
124.67	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.36	0.00	99.7
		#4	0.00	0.00	99.7
		#5	0.05	0.00	99.7
		#10	0.02	0.00	99.7
		#18	0.02	0.00	99.6
		#35	1.06	0.00	98.8
		#40	3.74	0.00	95.8
		#60	85.84	0.00	26.9
		#120	20.04	0.00	10.9
		#200	1.71	0.00	9.5
		#230	0.11	0.00	9.4

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.4
Weight of hydrometer sample =35.35
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0385	1.0
5.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0244	1.0
15.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0141	0.8
30.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0100	0.8
60.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0071	0.8
240.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0035	0.8
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	0.8

Fractional Components

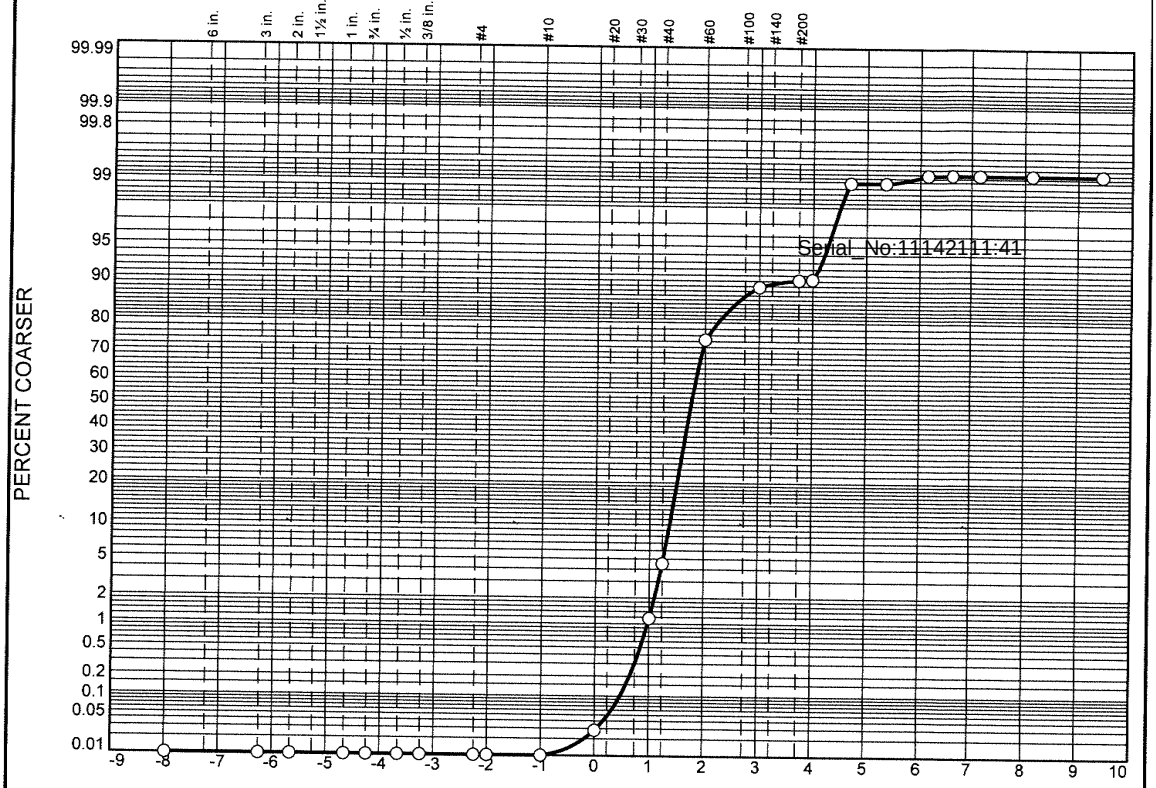
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.3	0.0	0.1	0.8	71.9	16.0	1.6	90.4	8.3	0.1	0.1	0.0	8.5	0.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0520	0.0985	0.1692	0.2071	0.2568	0.2758	0.2925	0.3091	0.3492	0.3636	0.3831	0.4164

Fineness Modulus	C_u	C_c
1.35	3.14	2.17

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.0	0.0	1.2	73.3	14.3	1.6	8.6	0.1	0.1	0.0	0.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3675	0.3128	0.2961	0.2604	0.1694	0.0832	2.61	3.76

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|322|SED|02 **Sample No.:** L2151376-14

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|322|SED|02
Sample Number: L2151376-14

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 107.54
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
107.54	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.01	0.00	100.0
		#18	0.02	0.00	100.0
		#35	1.22	0.00	98.8
		#40	3.62	0.00	95.5
		#60	75.30	0.00	25.5
		#120	15.32	0.00	11.2
		#200	1.45	0.00	9.9
		#230	0.11	0.00	9.8

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.8
Weight of hydrometer sample =35.54
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0385	1.0
5.00	19.2	1.0025	1.0024	0.0138	2.5	15.6	0.0244	1.0
15.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0141	0.8
30.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0100	0.8
60.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0071	0.8
240.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0035	0.8
1440.00	19.2	1.0020	1.0019	0.0138	2.0	15.8	0.0014	0.8

Fractional Components

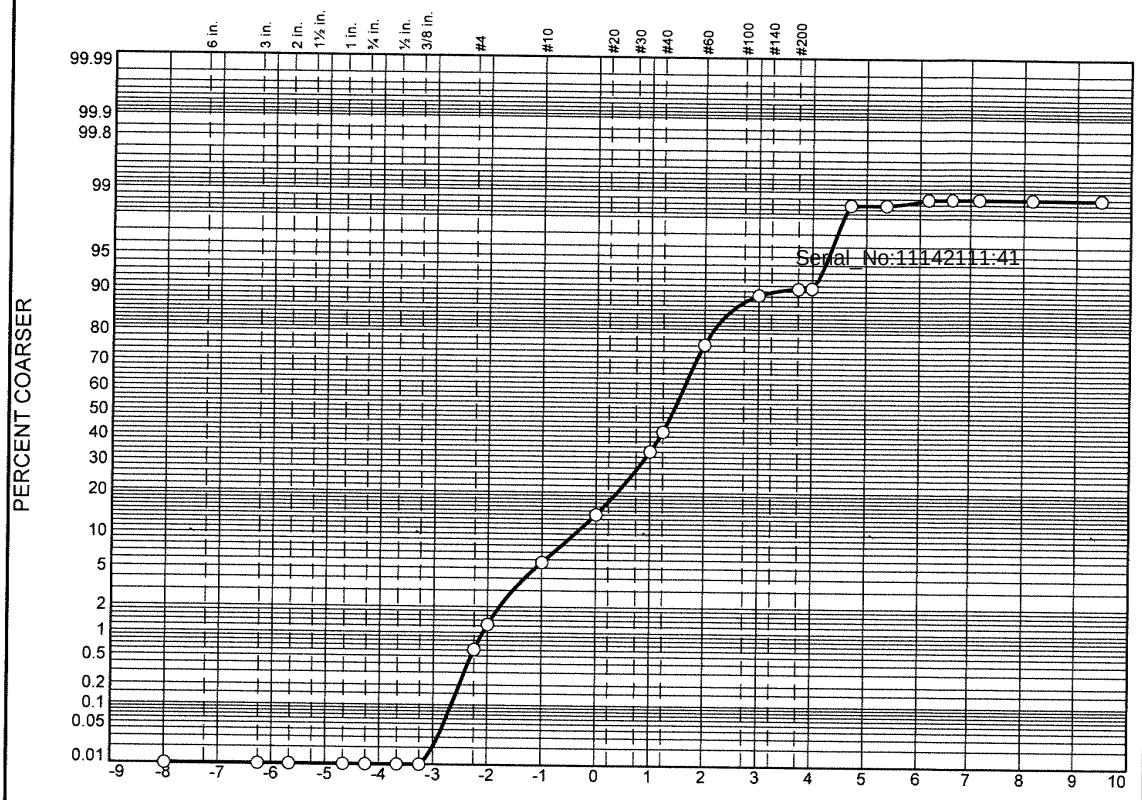
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.0	0.0	1.2	73.3	14.3	1.6	90.4	8.6	0.1	0.1	0.0	8.8	0.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0516	0.0832	0.1694	0.2116	0.2604	0.2793	0.2961	0.3128	0.3531	0.3675	0.3871	0.4201

Fineness Modulus	C_u	C_c
1.35	3.76	2.61

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.2	4.4	8.5	20.0	42.1	13.0	1.4	8.0	0.1	0.1	0.0	1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9507	0.4402	0.3746	0.2811	0.1860	0.0988	1.82	4.46

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|324|SED|01 **Sample No.:** L2151376-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|324|SED|01
Sample Number: L2151376-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 96.84
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
96.84	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.59	0.00	99.4
		#5	0.62	0.00	98.8
		#10	4.26	0.00	94.4
		#18	8.15	0.00	85.9
		#35	19.36	0.00	65.9
		#40	7.61	0.00	58.1
		#60	33.25	0.00	23.8
		#120	12.53	0.00	10.8
		#200	1.24	0.00	9.5
		#230	0.05	0.00	9.5

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.5
Weight of hydrometer sample =35.78
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0382	1.4
5.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0242	1.4
15.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0140	1.2
30.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0099	1.2
60.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0070	1.2
240.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0035	1.2
1440.00	19.2	1.0030	1.0029	0.0138	3.0	15.5	0.0014	1.2

Fractional Components

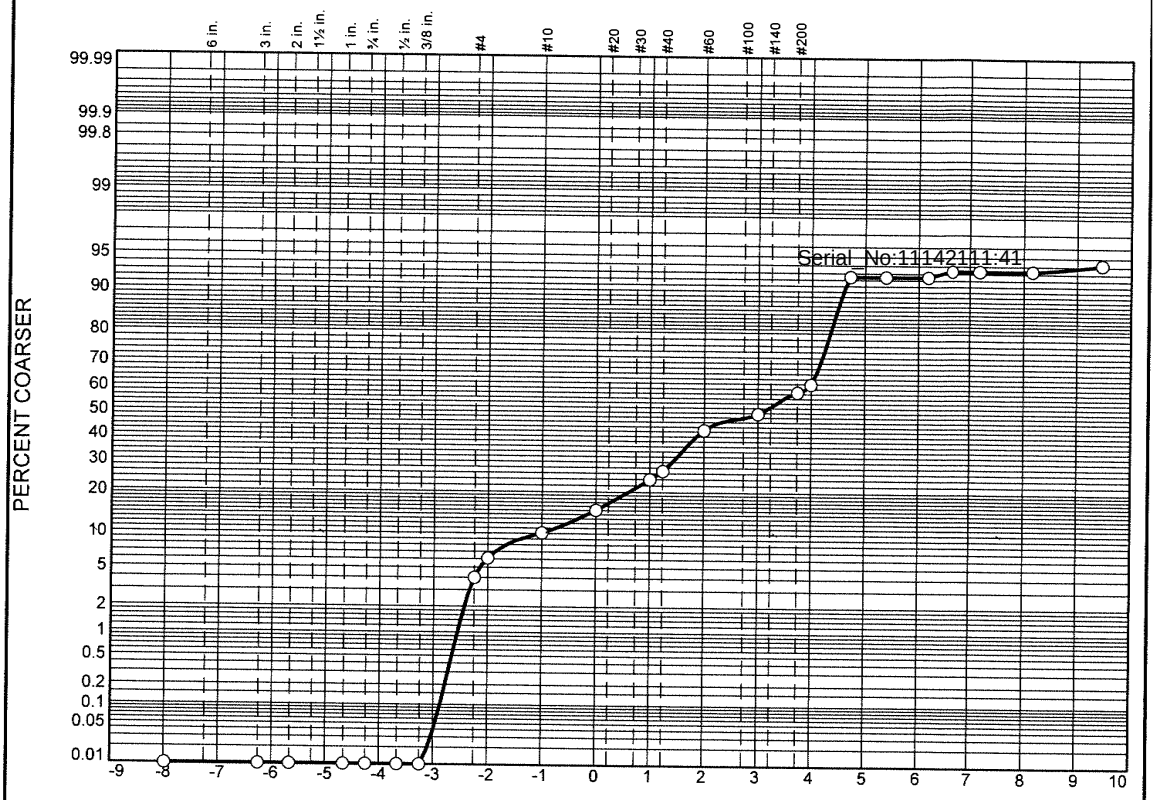
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.2	4.4	8.5	20.0	42.1	13.0	1.4	85.0	8.0	0.1	0.1	0.0	8.2	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0507	0.0988	0.1860	0.2273	0.2811	0.3261	0.3746	0.4402	0.7595	0.9507	1.3076	2.1713

Fineness Modulus	C_u	C_c
1.97	4.46	1.82

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			6.1	4.0	4.9	8.9	18.7	6.9	12.7	30.3	0.0	0.8		6.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0049	0.2756	0.1210	0.0555	0.0456	0.0412	0.27	6.68

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|326|SED|01 **Sample No.:** L2151376-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|326|SED|01

Sample Number: L2151376-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 104.26
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
104.26	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	4.17	0.00	96.0
		#5	2.19	0.00	93.9
		#10	4.16	0.00	89.9
		#18	5.17	0.00	85.0
		#35	9.28	0.00	76.1
		#40	3.02	0.00	73.2
		#60	16.43	0.00	57.4
		#120	7.21	0.00	50.5
		#200	9.45	0.00	41.4
		#230	3.39	0.00	38.2

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 38.2
Weight of hydrometer sample =35.56
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0379	7.5
5.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0240	7.5
15.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0138	7.5
30.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0098	6.7
60.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0069	6.7
240.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0035	6.7
1440.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0014	5.8

Fractional Components

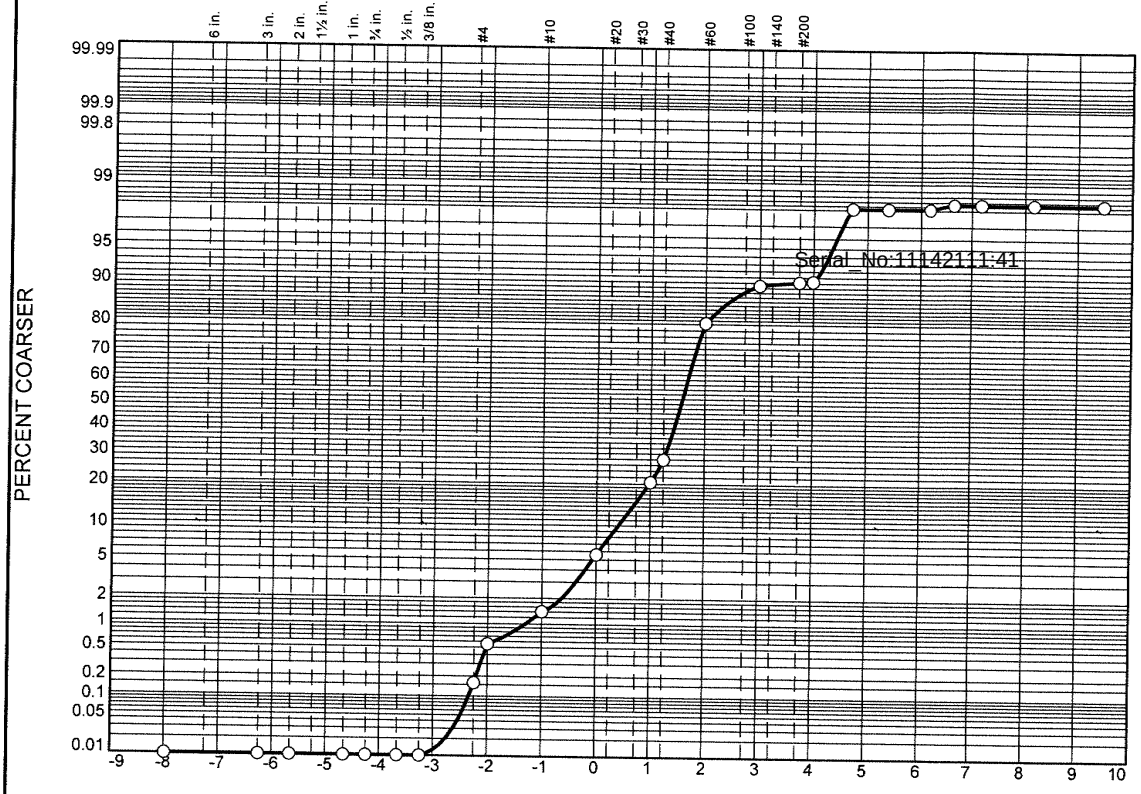
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		6.1	4.0	4.9	8.9	18.7	6.9	12.7	52.1	30.3	0.0	0.8		31.1	6.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0412	0.0456	0.0490	0.0555	0.0668	0.1210	0.2756	0.6559	1.0049	2.0415	4.4308

Fineness Modulus	C_u	C_c
1.33	6.68	0.27

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.6	0.8	4.2	14.9	59.8	9.2	0.9	7.7	0.0	0.2		1.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6005	0.3697	0.3389	0.2845	0.1963	0.0844	2.60	4.38

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|328|SED|01 **Sample No.:** L2151376-17

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|328|SED|01
Sample Number: L2151376-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 100.87
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
100.87	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.16	0.00	99.8
		#5	0.40	0.00	99.4
		#10	0.86	0.00	98.6
		#18	4.22	0.00	94.4
		#35	15.02	0.00	79.5
		#40	7.45	0.00	72.1
		#60	52.85	0.00	19.7
		#120	9.28	0.00	10.5
		#200	0.67	0.00	9.9
		#230	0.16	0.00	9.7

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.7
Weight of hydrometer sample =35.02
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0379	1.9
5.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0240	1.9
15.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0138	1.9
30.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0098	1.7
60.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0069	1.7
240.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0035	1.7
1440.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0014	1.7

Fractional Components

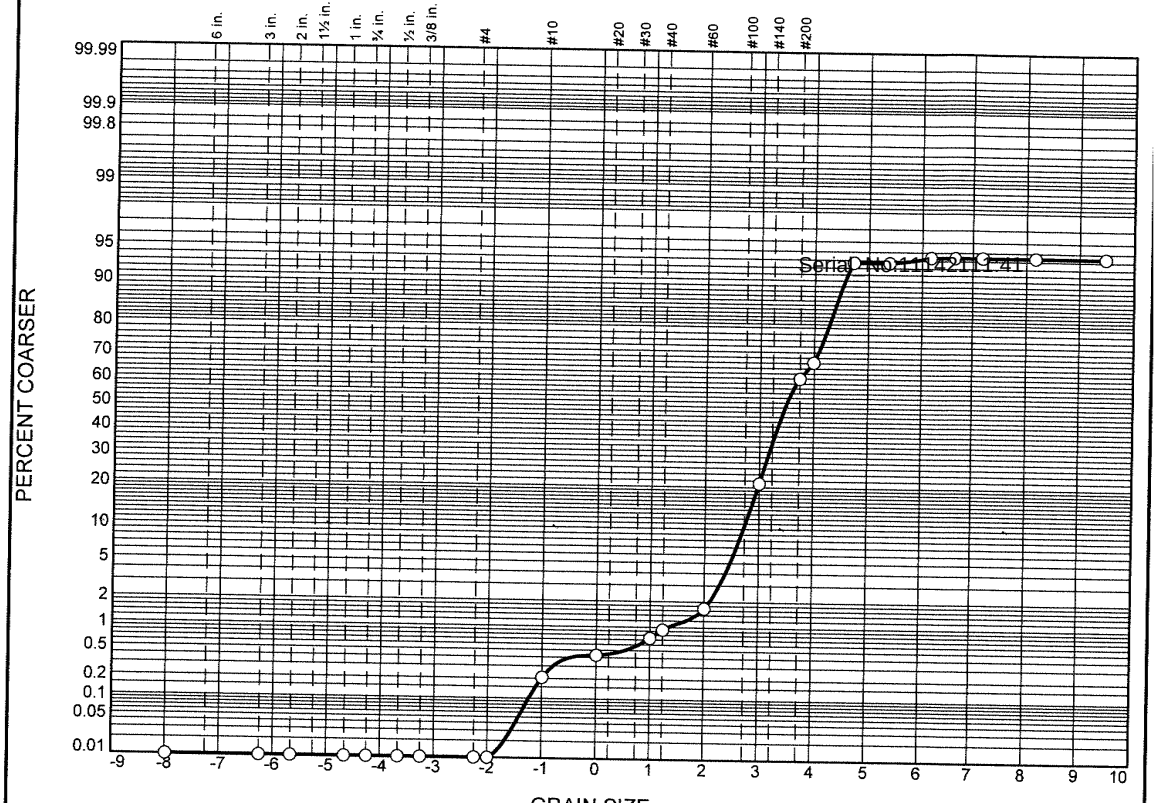
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.6	0.8	4.2	14.9	59.8	9.2	0.9	89.0	7.7	0.0	0.2		7.9	1.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0490	0.0844	0.1963	0.2511	0.2845	0.3118	0.3389	0.3697	0.5072	0.6005	0.7527	1.0497

Fineness Modulus	C_u	C_c
1.73	4.38	2.60

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.2	0.3	1.0	19.4	47.5	25.1	0.5	0.2	0.0	5.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1372	0.1009	0.0902	0.0609	0.0483	0.0435	0.84	2.32

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|484\|SED\|01 **Sample No.:** L2151376-19

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|484|SED|01

Sample Number: L2151376-19

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 53.57
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
53.57	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.11	0.00	99.8
		#18	0.12	0.00	99.6
		#35	0.16	0.00	99.3
		#40	0.11	0.00	99.1
		#60	0.40	0.00	98.3
		#120	10.41	0.00	78.9
		#200	21.86	0.00	38.1
		#230	3.39	0.00	31.8

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 31.8
Weight of hydrometer sample =35.30
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0379	6.3
5.00	19.2	1.0045	1.0044	0.0138	4.5	15.1	0.0240	6.3
15.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0139	5.6
30.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0098	5.6
60.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0069	5.6
240.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0035	5.6
1440.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0014	5.6

Fractional Components

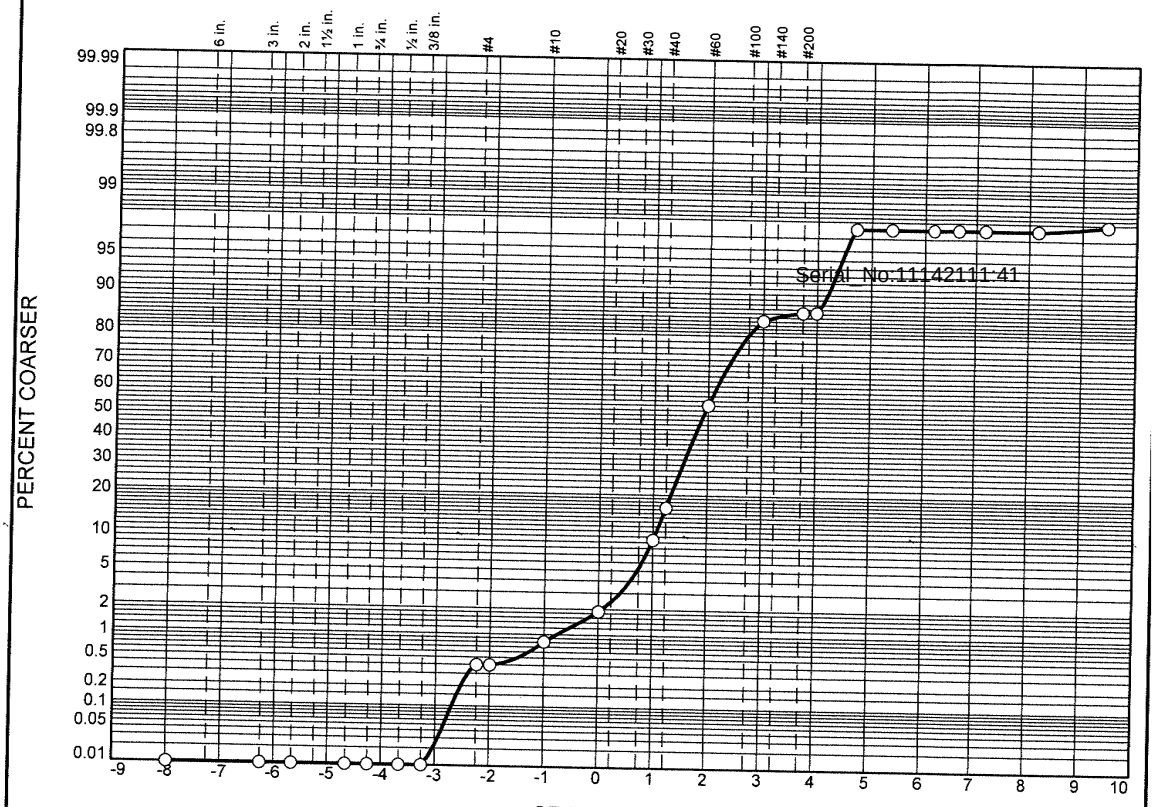
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.2	0.3	1.0	19.4	47.5	68.4	25.1	0.5	0.2	0.0	25.8	5.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0435	0.0483	0.0523	0.0609	0.0781	0.0902	0.1009	0.1269	0.1372	0.1520	0.1802

Fineness Modulus	C_u	C_c
0.13	2.32	0.84

Serial_No:11142111:41

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.4	1.1	7.5	44.7	30.0	2.3	11.2	0.0	0.0	0.0	2.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			0.4365	0.3012	0.2645	0.1938	0.1085	0.0544	2.29	5.53

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|510|SED|02 **Sample No.:** L2151376-20

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/8/2021

Location: 3664|2021|ECR-B|510|SED|02
Sample Number: L2151376-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 60.40
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
60.40	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.24	0.00	99.6
		#5	0.00	0.00	99.6
		#10	0.25	0.00	99.2
		#18	0.65	0.00	98.1
		#35	4.52	0.00	90.6
		#40	4.24	0.00	83.6
		#60	22.80	0.00	45.9
		#120	18.11	0.00	15.9
		#200	1.25	0.00	13.8
		#230	0.04	0.00	13.7

Serial_No:11142111:41

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.7
Weight of hydrometer sample =35.50
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0380	2.4
5.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0241	2.4
15.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0139	2.4
30.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0098	2.4
60.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0069	2.4
240.00	19.2	1.0040	1.0039	0.0138	4.0	15.2	0.0035	2.4
1440.00	19.2	1.0035	1.0034	0.0138	3.5	15.4	0.0014	2.1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:11142111:41

9/22/21 L21 61376

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab

JOB #: 3664

SURVEY/CRUISE: Beacon Wind

CLIENT: MMT\Equinor

DATE: 09/19/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|504|Sed|TOC|01	9/14/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|508|Sed|TOC|01	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|510|Sed|TOC|01	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|510|Sed|TOC|02	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|512|Sed|TOC|01	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-B|514|Sed|TOC|01	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	5	Cooler #1
3664|2021|ECR-C|1215|Sed|TOC|01	9/13/2021	SmithMac	250-mL plastic	freeze	total organic carbon	2	Cooler #1
3664|2021|ECR-C|1429|Sed|TOC|01	9/15/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1
3664|2021|ECR-C|1430|Sed|TOC|01	9/11/2021	SmithMac	250-mL plastic	freeze	total organic carbon	4	Cooler #1

Shipper: FEDEX UPS USPS DHL

Custody Seal: Intact Broken None

Sample Condition: Intact Broken Leaking

Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 15 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/18/21

RELINQUISHED BY: [signature] DATE/TIME: 9/22/21 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

[signature] 9/22/21 1720 CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents [illegible] as evidence in future [illegible]. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time on all accompanying forms, whenever [illegible] at the time of sample receipt. Note: Initials are not acceptable.

[signature] 9/22/21 2000

[signature] 9/22/21 2000

[signature] 9/22/21 2119

[signature] 9/22/21

Page 3 of 7

Serial_No:11142111:41

9/22/21 L2151376

Chain of Custody Record

DESIGNATED LABORATORY: Alpha Lab
JOB #: 3664
SURVEY/CRUISE: Beacon Wind
CLIENT: MMT\Equinor
DATE: 09/19/2021

Sample I.D.	Date Collected (mm/dd/yy)	Collection Method	Container Type	Sample Type/ Preservative	Analysis/Instructions	Block	Cooler No. / Notes
3664|2021|ECR-B|504|Sed|GS|01	9/14/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|506|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|508|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|510|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-B|512|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2; QC duplicate
3664|2021|ECR-B|514|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	5	Cooler #2
3664|2021|ECR-C|1215|Sed|GS|01	9/13/2021	SmithMac	250-mL plastic	freeze	grain size	2	Cooler #2
3664|2021|ECR-C|1429|Sed|GS|01	9/15/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2
3664|2021|ECR-C|1430|Sed|GS|01	9/11/2021	SmithMac	250-mL plastic	freeze	grain size	4	Cooler #2

Shipper: FEDEX UPS USPS DHL
Custody Seal: Intact Broken None
Sample Condition: Intact Broken Leaking
Container Temperature:

RELINQUISHED BY: [signature] DATE/TIME: 18 Sept 2021 RECEIVED BY: [signature] DATE/TIME: 9/18/21

RELINQUISHED BY: [signature] DATE/TIME: 9/22/21 RECEIVED BY: [signature] DATE/TIME: 9/22/21 1204

CSA CONTACT NAME: Jason Clermont TELEPHONE NUMBER: 252-258-1626

This chain-of-custody form is a legal document signifying that the samples listed have been under the continuous custody of the signatories. Custodians must ensure that documents are admissible and have weight as evidence in litigation. Continuous custody means the samples have been in their sight or under lock and key for which they have control. The sample custodian or his/her representative shall sign, date, and record the time for all accompanying forms, when applicable, at the time of sample receipt. Note: Initials are not acceptable.

[signature] 9/22/21 1720

[signature] 9/22/21 2000

[signature] 9/22/2000

[signature] 9/22/21 2119

Sam Aldrich 9/22/21 21:19

Serial_No:11142111:41

TOC

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL 508-898-9220 FAX 508-898-9193
Mansfield, MA TEL 508-822-9300 FAX 508-822-3288

Project Information

Project Name: 3664

Project Location: Offshore MA

Project #: 3664

Project Manager: Jason Clermont

ALPHA Quote #: ref: 11026

Client Information

Client: CSA Ocean Sciences

Address: 8502 SW Kansas Avenue

Stuart, FL 34997

Phone: cell: (252) 258-1626

Fax:

Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2161376

Report Information

☐ FAX ☐ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client Info PO #

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
-08	3664|2021 ECR-B-312	08-31-21	2:23	SE	JPM	☒	
-09	3664|2021 ECR-B-314	08-31-21	0339	SE	JPM	☒	
-10	3664|2021 ECR-B-316	08-31-21	0807	SE	JPM	☒	
-11	3664|2021 ECR-B-318	08-31-21	1303	SE	JPM	☒	
-12	3664|2021 ECR-B-320	08-31-21	1501	SE	JPM	☒	
-13	3664|2021 ECR-B-322-01	08-31-21	1850	SE	JPM	☒	
-14	3664|2021 ECR-B-322-02	08-31-21	1850	SE	JPM	☒	
-15	3664|2021 ECR-B-324	08-31-21	2059	SE	JPM	☒	
-16	3664|2021 ECR-B-326	08-31-21	2324	SE	JPM	☒	
-17	3664|2021 ECR-B-328	09-01-21	0231	SE	JPM	☒	

Container Type G

Preservative A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	09-05-21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1720	[signature]	9/22/21 1720
[signature]	9/22 2000	[signature]	9/22/21 2000
[signature]	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

GS

CHAIN OF CUSTODY

PAGE OF

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151376

Project Information

Project Name: 3664

Project Location: Offshore MA

Project #: 3664

Project Manager: Jason Clermont

ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences

Address: 8502 SW Kansas Avenue

Stuart, FL 34997

Phone: cell: (252) 258-1626

Fax:

Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Grain size reported using Wentworth classification scheme

ANALYSIS

SAMPLE HANDLING

Filtration
☐ Done
☒ Not Needed
☐ Lab to do

Preservation
☐ Lab to do

(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size	Sample Specific Comments
-08	3664|2021 ECR-B-312	08-31-21	0223	SE		☒	
-09	3664|2021 ECR-B-314	08-31-21	0339	SE		☒	
-10	3664|2021 ECR-B-316	08-31-21	0507	SE		☒	
-11	3664|2021 ECR-B-318	08-31-21	1302	SE		☒	
-12	3664|2021 ECR-B-320	08-31-21	1501	SE		☒	
-13	3664|2021 ECR-B-322-01	08-31-21	1850	SE		☒	
-14	3664|2021 ECR-B-322-02	08-31-21	1850	SE		☒	
-15	3664|2021 ECR-B-324	08-31-21	2059	SE		☒	
-16	3664|2021 ECR-B-326	08-31-21	2326	SE		☒	
-17	3664|2021 ECR-B-328	09-01-21	0231	SE		☒	

Container Type	P												
Preservative	A												

Relinquished By	Date/Time	Received By	Date/Time
	9/9/21		9/9/21
	9/22/21		9/22/21
	9/22/21 1720		9/22/21 1720
Meghan Murphy	9/22/21 2000		9/22/21 2000
Joseph C. Burgio	9/22/21 2119	Kim L. Bailey	9/23/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Serial_No:11212114:17

ANALYTICAL REPORT

Lab Number:	L2151379
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/21/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151379-01	3664|2021|ECR-B|330|SED|01	SEDIMENT	OFFSHORE MA / NY	09/01/21 06:28	09/22/21
L2151379-02	3664|2021|ECR-B|332|SED|01	SEDIMENT	OFFSHORE MA / NY	09/01/21 13:24	09/22/21
L2151379-03	3664|2021|ECR-B|334|SED|01	SEDIMENT	OFFSHORE MA / NY	09/01/21 17:23	09/22/21
L2151379-04	3664|2021|ECR-C|1302|SED|01	SEDIMENT	OFFSHORE MA / NY	09/01/21 19:41	09/22/21
L2151379-05	3664|2021|ECR-B|336|SED|01	SEDIMENT	OFFSHORE MA / NY	09/02/21 15:34	09/22/21
L2151379-06	3664|2021|ECR-B|338|SED|01	SEDIMENT	OFFSHORE MA / NY	09/02/21 19:11	09/22/21
L2151379-07	3664|2021|ECR-B|340|SED|01	SEDIMENT	OFFSHORE MA / NY	09/03/21 02:16	09/22/21
L2151379-08	3664|2021|ECR-B|340|SED|02	SEDIMENT	OFFSHORE MA / NY	09/03/21 02:16	09/22/21
L2151379-09	3664|2021|ECR-B|342|SED|01	SEDIMENT	OFFSHORE MA / NY	09/03/21 04:46	09/22/21
L2151379-10	3664|2021|ECR-B|344|SED|01	SEDIMENT	OFFSHORE MA / NY	09/03/21 10:38	09/22/21
L2151379-11	3664|2021|ECR-B|201|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 16:35	09/22/21
L2151379-12	3664|2021|ECR-B|203|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 11:37	09/22/21
L2151379-13	3664|2021|ECR-B|205|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 09:39	09/22/21
L2151379-14	3664|2021|ECR-B|207|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 05:13	09/22/21
L2151379-15	3664|2021|ECR-B|209|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 02:17	09/22/21
L2151379-16	3664|2021|ECR-B|211|SED|01	SEDIMENT	OFFSHORE MA / NY	08/29/21 03:25	09/22/21
L2151379-17	3664|2021|ECR-B|213|SED|01	SEDIMENT	OFFSHORE MA / NY	08/28/21 00:56	09/22/21
L2151379-18	3664|2021|ECR-B|215|SED|01	SEDIMENT	OFFSHORE MA / NY	08/27/21 19:38	09/22/21
L2151379-19	3664|2021|ECR-B|217|SED|01	SEDIMENT	OFFSHORE MA / NY	08/27/21 17:25	09/22/21
L2151379-20	3664|2021|ECR-B|219|SED|01	SEDIMENT	OFFSHORE MA / NY	08/27/21 13:25	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size

The WG1566677-1 Laboratory Duplicate RPD for pebble (38%), granule (29%), and % very fine sand (40%), performed on L2151379-02, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2151379: Samples were frozen upon receipt in order to arrest the holding time.

The WG1558238-4/-5 MS/MSD recoveries (Rep1 - 44%/63%) performed on L2151379-11, are outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria, indicating the sample batch was in control, and all sample results were accepted.

The WG1557790-3 Laboratory Duplicate RPD (Rep1 - 29%), performed on L2151379-05, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/21/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-01
Client ID: 3664|2021|ECR-B|330|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/01/21 06:28
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.108		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.135		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.122		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	14.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	8.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	34.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	13.8		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-02
Client ID: 3664|2021|ECR-B|332|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/01/21 13:24
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.101		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.075		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.088		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	5.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	48.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	17.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	18.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-03
Client ID: 3664|2021|ECR-B|334|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/01/21 17:23
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.011		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.042		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.027		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	27.2		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	47.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	4.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.200		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-04
Client ID: 3664|2021|ECR-C|1302|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/01/21 19:41
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.036		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.023		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.030		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	31.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	49.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	2.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-05
Client ID: 3664|2021|ECR-B|336|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/02/21 15:34
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.464		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.389		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.426		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.800		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	4.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	42.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	20.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	20.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-06
Client ID: 3664|2021|ECR-B|338|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/02/21 19:11
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.114		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.110		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.112		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	10.8		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	40.6		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	25.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	14.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-07
Client ID: 3664|2021|ECR-B|340|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/03/21 02:16
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.118		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.105		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.112		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.600		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	8.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	49.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	28.1		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.400		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-08
Client ID: 3664|2021|ECR-B|340|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/03/21 02:16
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.079		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.089		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.084		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	11.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	49.8		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	25.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.500		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-09
Client ID: 3664|2021|ECR-B|342|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/03/21 04:46
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.066		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.062		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.064		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.800		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	22.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	57.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	5.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.200		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-10
Client ID: 3664|2021|ECR-B|344|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/03/21 10:38
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.036		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	0.028		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	0.032		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	40.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	36.2		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	1.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.100		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-11
Client ID: 3664|2021|ECR-B|201|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 16:35
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.81		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.09		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.45		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	7.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	13.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	8.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	6.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	49.1		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-12
Client ID: 3664|2021|ECR-B|203|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 11:37
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.74		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.86		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.80		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.500		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	7.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	5.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	3.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	48.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	14.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-13
Client ID: 3664|2021|ECR-B|205|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 09:39
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.82		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.88		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.85		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	5.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	20.1		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	12.1		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	7.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	4.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	3.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	37.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	7.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-14
Client ID: 3664|2021|ECR-B|207|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 05:13
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.12		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	2.16		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	2.14		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	4.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	4.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	2.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	1.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	59.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	9.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-15
Client ID: 3664|2021|ECR-B|209|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 02:17
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.05		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	2.12		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	2.09		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	5.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	3.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	1.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	57.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	13.6		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-16
Client ID: 3664|2021|ECR-B|211|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/29/21 03:25
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.94		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.88		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.91		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.900		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	11.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	18.5		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	4.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	2.20		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	49.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	9.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-17
Client ID: 3664|2021|ECR-B|213|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/28/21 00:56
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.65		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.63		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.64		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	9.00		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	11.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	6.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	3.90		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	3.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	48.6		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	10.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-18
Client ID: 3664|2021|ECR-B|215|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 19:38
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.25		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	1.10		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	1.18		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.80		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	6.60		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	8.40		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	15.0		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	9.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	45.3		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	9.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-19
Client ID: 3664|2021|ECR-B|217|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 17:25
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.780		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	0.828		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	0.804		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.700		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	7.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	28.8		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	19.4		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	4.50		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	31.7		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

SAMPLE RESULTS

Lab ID: L2151379-20
Client ID: 3664|2021|ECR-B|219|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 13:25
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.844		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	0.759		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	0.802		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Coarse Sand	7.10		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Medium Sand	31.7		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Fine Sand	22.7		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
% Very Fine Sand	7.30		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	23.9		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.70		%	0.100	NA	1	-	11/03/21 13:39	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151379
Report Date: 11/21/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-10 Batch: WG1557790-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/12/21 16:55	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 11-20 Batch: WG1558238-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	10/12/21 16:22	1,9060A	SP

Lab Control Sample Analysis

Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 Batch: WG1557790-2								
Total Organic Carbon (Rep1)	101		-		75-125	-		25
Total Organic Carbon (Rep2)	99		-		75-125	-		25
Total Organic Carbon (Average)	100		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 Batch: WG1558238-2								
Total Organic Carbon (Rep1)	106		-		75-125	-		25
Total Organic Carbon (Rep2)	105		-		75-125	-		25
Total Organic Carbon (Average)	105		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1557790-4 QC Sample: L2151379-05 Client ID: 3664|2021|ECR-B|336|SED|01												
Total Organic Carbon (Rep1)	0.464	0.714	1.18	100		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.389	0.612	1.10	116		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG1558238-4 WG1558238-5 QC Sample: L2151379-11 Client ID: 3664|2021|ECR-B|201|SED|01												
Total Organic Carbon (Rep1)	1.81	0.949	2.23	**44**	Q	2.57	**63**	Q	75-125	14		25
Total Organic Carbon (Rep2)	1.09	1.13	2.46	121		2.72	121		75-125	10		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1557790-3 QC Sample: L2151379-05 Client ID: 3664|2021|ECR-B|336|SED|01						
Total Organic Carbon (Rep1)	0.464	0.348	%	**29**	Q	25
Total Organic Carbon (Rep2)	0.389	0.365	%	6		25
Total Organic Carbon (Average)	0.426	0.356	%	18		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11-20 QC Batch ID: WG1558238-3 QC Sample: L2151379-11 Client ID: 3664|2021|ECR-B|201|SED|01						
Total Organic Carbon (Rep1)	1.81	1.45	%	22		25
Total Organic Carbon (Rep2)	1.09	1.23	%	12		25
Total Organic Carbon (Average)	1.45	1.34	%	8		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151379
Report Date: 11/21/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1566677-1 QC Sample: L2151379-02 Client ID: 3664|2021|ECR-B|332|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	3.80	2.60	%	**38**	Q	20
Granule (2.0-4.0 mm)	0.300	0.400	%	**29**	Q	20
% Very Coarse Sand	1.10	1.20	%	9		20
% Coarse Sand	5.60	5.90	%	5		20
% Medium Sand	48.0	47.5	%	1		20
% Fine Sand	17.3	17.3	%	0		20
% Very Fine Sand	1.20	0.800	%	**40**	Q	20
Silt - (3.9-62.5 um)	18.5	19.8	%	7		20
Clay - (<3.9 um)	4.20	4.50	%	7		20

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
C	Absent
D	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151379-01A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151379-01B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-02A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-02B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-03A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-03B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-04A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151379-04B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151379-05A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151379-05B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-06A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151379-06B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-07A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151379-07B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-08A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151379-08B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-09A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-09B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11212114:17

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151379-10A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2151379-10B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-11A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151379-11B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-12A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-12B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-13A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151379-13B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-14A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151379-14B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11212114:17

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151379-15A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-15B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-16A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151379-16B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-17A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151379-17B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-18A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151379-18B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151379-19A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151379-19B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11212114:17

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151379
Report Date: 11/21/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151379-20A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151379-20B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151379
Project Number:	3664	**Report Date:**	11/21/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

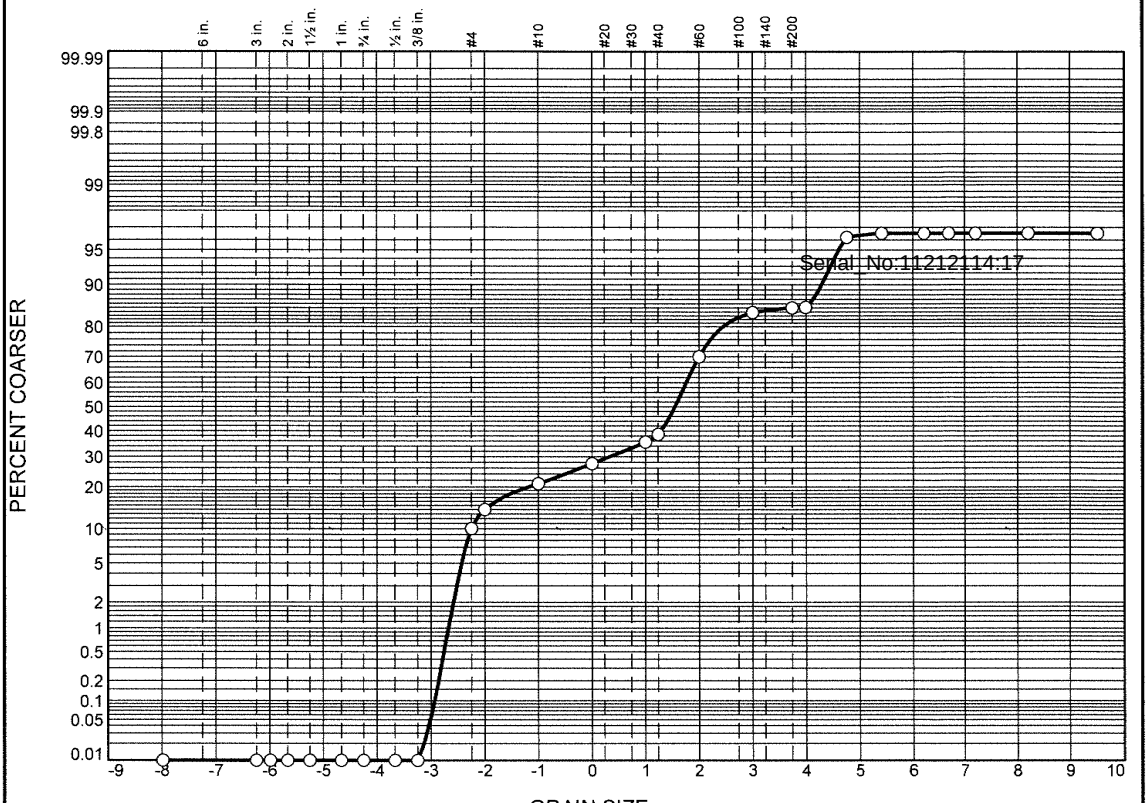
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			14.0	6.9	6.6	8.0	34.5	13.8	1.5	11.1	0.2	0.0	0.0	3.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.7365	0.4092	0.3410	0.2502	0.0772	0.0511	2.99	8.00

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|330|SED|01 **Sample No.:** L2151379-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|330|SED|01

Sample Number: L2151379-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 68.70
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.70	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	6.89	0.00	90.0
		#5	2.74	0.00	86.0
		#10	4.76	0.00	79.1
		#18	4.53	0.00	72.5
		#35	5.47	0.00	64.5
		#40	2.16	0.00	61.4
		#60	21.57	0.00	30.0
		#120	9.48	0.00	16.2
		#200	0.82	0.00	15.0
		#230	0.10	0.00	14.8

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.8
Weight of hydrometer sample =35.07
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0369	3.8
5.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0234	3.4
15.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0135	3.4
30.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0096	3.4
60.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0068	3.4
240.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0034	3.4
1440.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0014	3.4

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Fractional Components

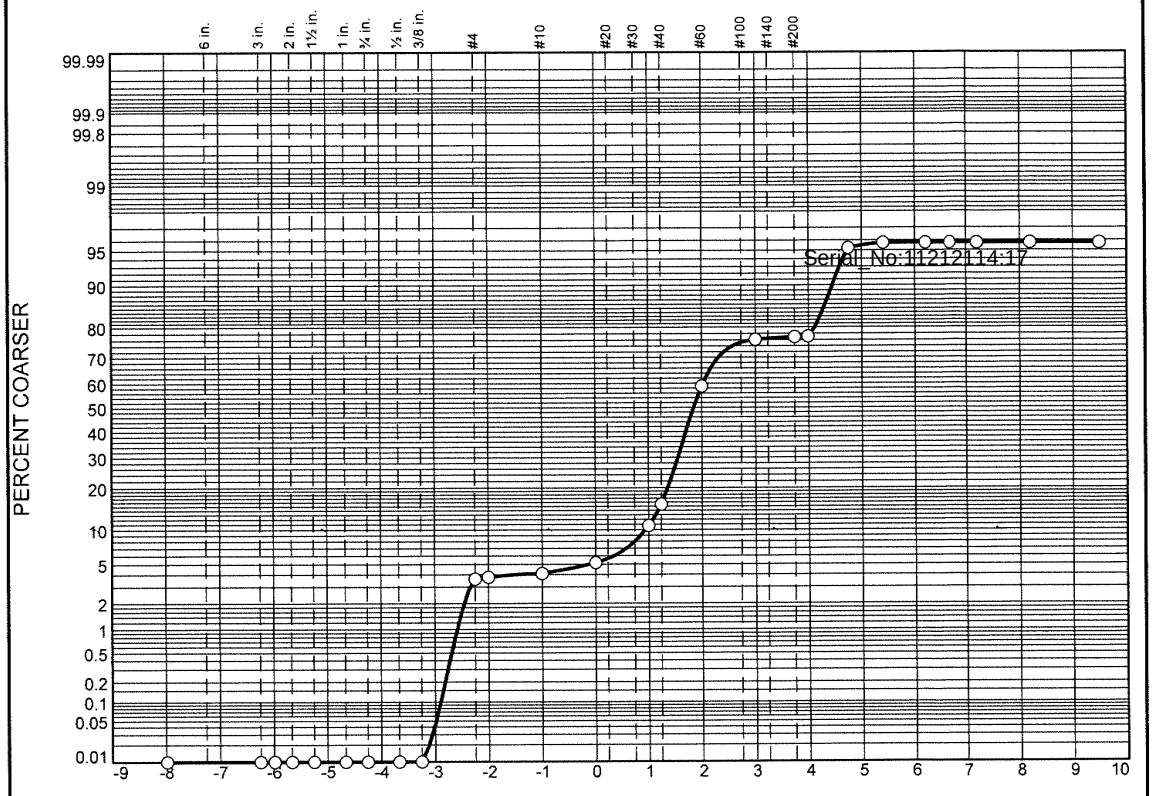
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		14.0	6.9	6.6	8.0	34.5	13.8	1.5	64.4	11.1	0.2	0.0	0.0	11.3	3.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0410	0.0511	0.0772	0.1828	0.2502	0.2949	0.3410	0.4092	2.2616	3.7365	4.7539	5.4001

Fineness Modulus	C_u	C_c
2.30	8.00	2.99

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.8	0.3	1.1	5.6	48.0	17.3	1.2	18.2	0.3	0.0		4.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4305	0.3073	0.2774	0.2015	0.0515	0.0459	2.88	6.70

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|332|SED|01 **Sample No.:** L2151379-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|332|SED|01

Sample Number: L2151379-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.85
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.85	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	1.19	0.00	96.4
		#5	0.05	0.00	96.2
		#10	0.10	0.00	95.9
		#18	0.36	0.00	94.8
		#35	1.84	0.00	89.2
		#40	1.56	0.00	84.5
		#60	14.23	0.00	41.2
		#120	5.68	0.00	23.9
		#200	0.28	0.00	23.0
		#230	0.06	0.00	22.8

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 22.8
Weight of hydrometer sample =35.02
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	4.8
5.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0236	4.2
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	4.2
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	4.2
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	4.2
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	4.2
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	4.2

Alpha Analytical

Fractional Components

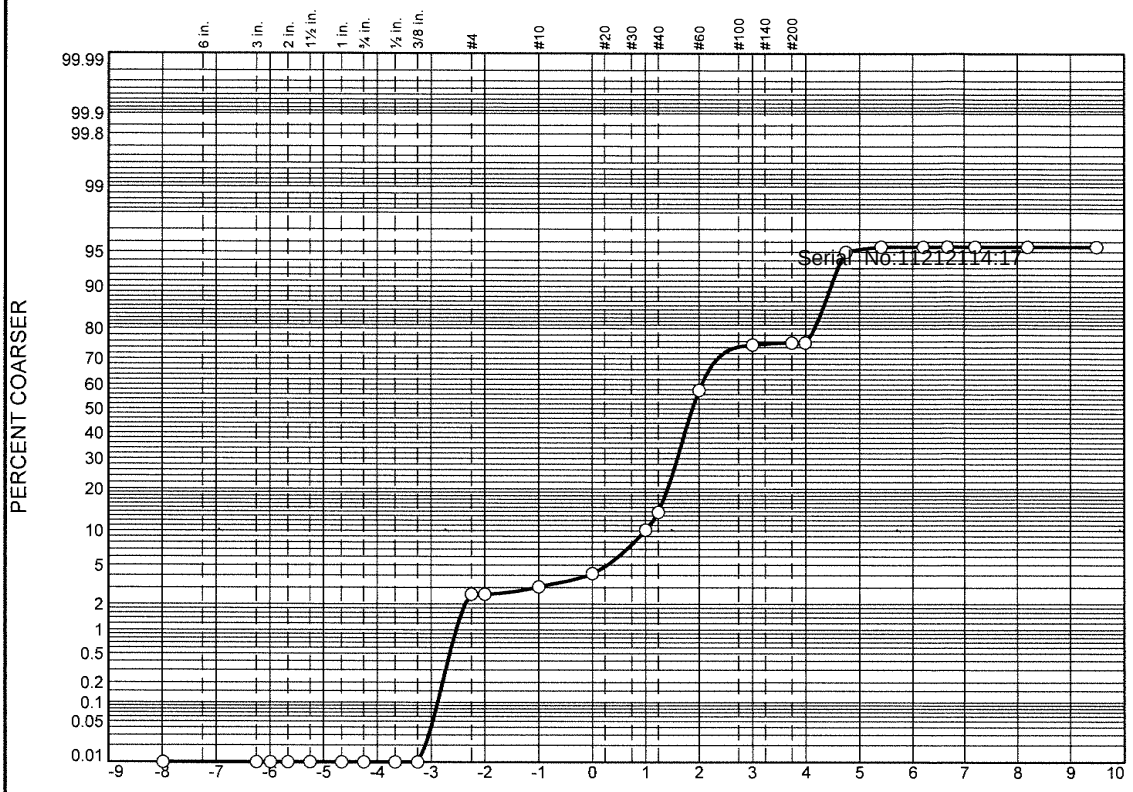
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.8	0.3	1.1	5.6	48.0	17.3	1.2	73.2	18.2	0.3	0.0		18.5	4.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0379	0.0459	0.0515	0.0574	0.2015	0.2460	0.2774	0.3073	0.3897	0.4305	0.5207	1.0816

Fineness Modulus	C_u	C_c
1.38	6.70	2.88

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.6	0.4	1.2	5.9	47.5	17.3	0.9	19.5	0.2	0.0		4.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4121	0.3001	0.2722	0.1971	0.0504	0.0451	2.87	6.65

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|332|SED|01 **Sample No.:** WG1566677-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|332|SED|01

Sample Number: WG1566677-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.51	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.83	0.00	97.4
		#5	0.00	0.00	97.4
		#10	0.16	0.00	97.0
		#18	0.36	0.00	95.8
		#35	1.94	0.00	89.9
		#40	1.20	0.00	86.2
		#60	14.24	0.00	42.4
		#120	5.61	0.00	25.1
		#200	0.24	0.00	24.4
		#230	0.00	0.00	24.4

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 24.4
Weight of hydrometer sample =35.57
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	5.0
5.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0236	4.5
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	4.5
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	4.5
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	4.5
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	4.5
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	4.5

Fractional Components

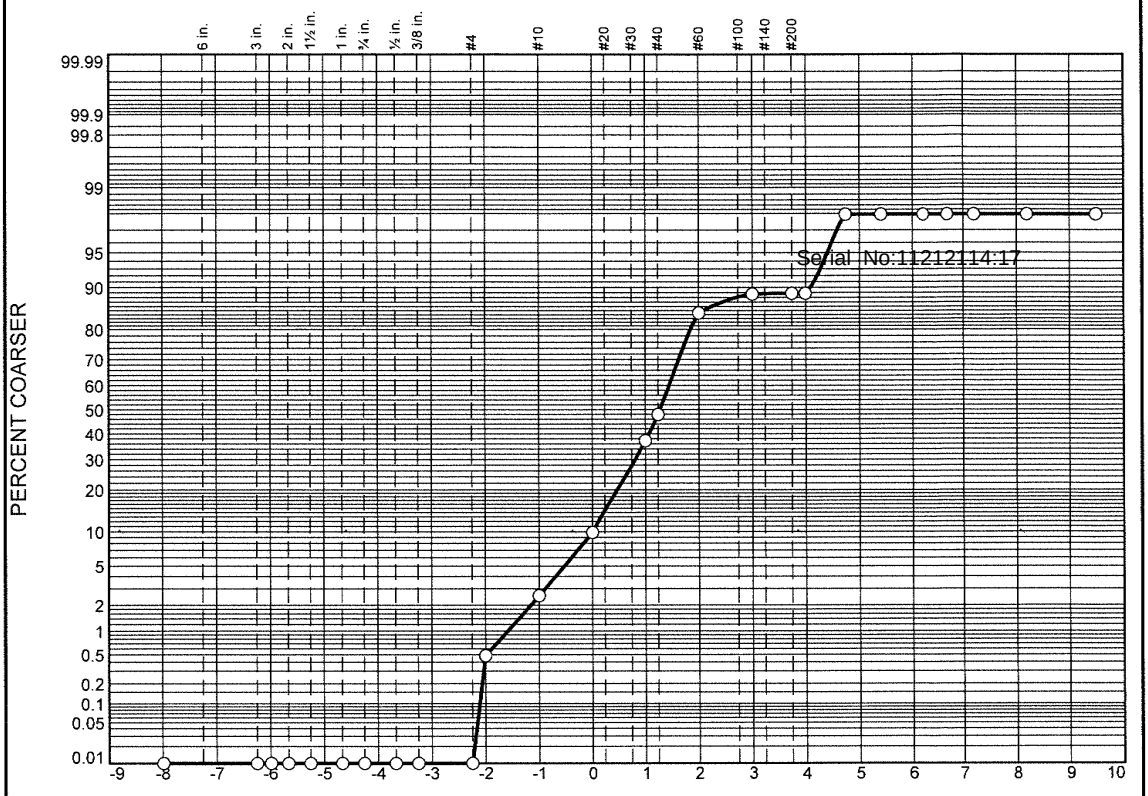
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.6	0.4	1.2	5.9	47.5	17.3	0.9	72.8	19.5	0.2	0.0		19.7	4.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0369	0.0451	0.0504	0.0557	0.1971	0.2422	0.2722	0.3001	0.3754	0.4121	0.5038	0.8251

Fineness Modulus	C_u	C_c
1.31	6.65	2.87

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	2.0	7.4	27.2	47.4	4.2	0.3	9.0	0.0	0.0	0.0	2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8355	0.4769	0.4141	0.3251	0.2371	0.0586	3.78	8.13

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|334|SED|01 **Sample No.:** L2151379-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|334|SED|01

Sample Number: L2151379-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 78.34
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
78.34	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.38	0.00	99.5
		#10	1.60	0.00	97.5
		#18	5.74	0.00	90.1
		#35	21.36	0.00	62.9
		#40	8.50	0.00	52.0
		#60	28.59	0.00	15.5
		#120	3.33	0.00	11.3
		#200	0.12	0.00	11.1
		#230	0.00	0.00	11.1

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.1
Weight of hydrometer sample =35.56
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0374	2.0
5.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0236	2.0
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	2.0
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	2.0
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	2.0
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	2.0
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	2.0

Fractional Components

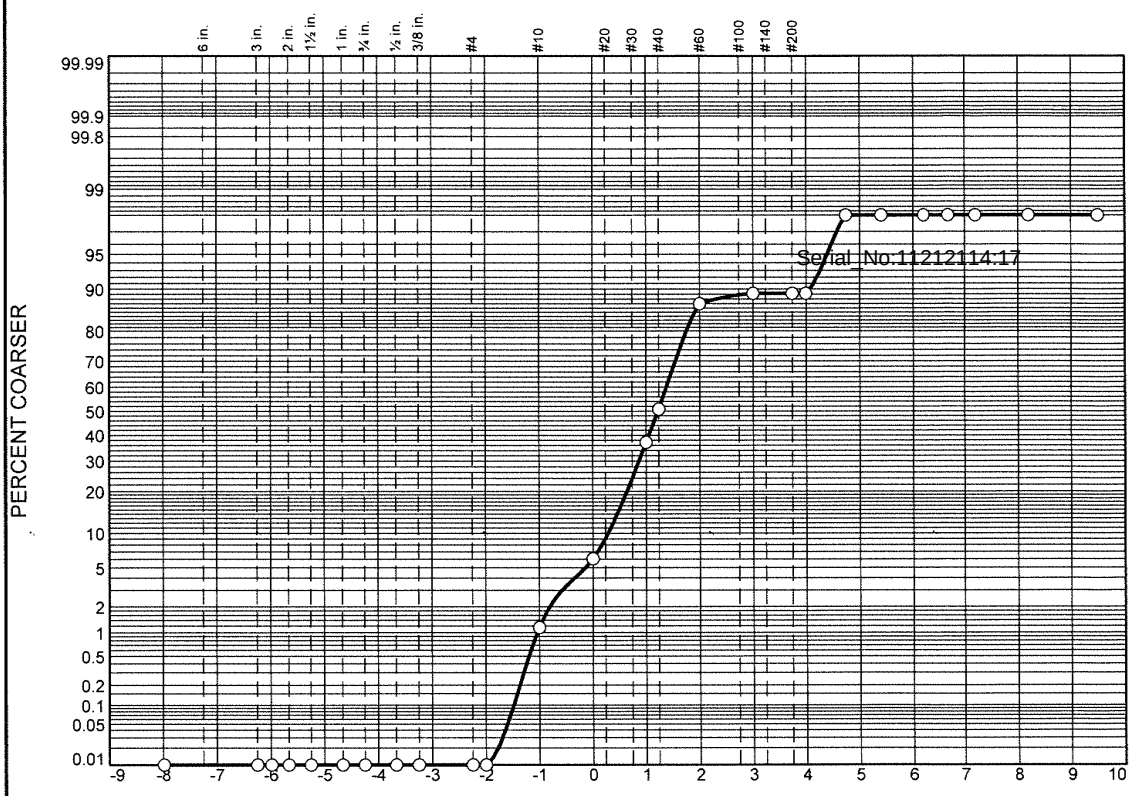
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	2.0	7.4	27.2	47.4	4.2	0.3	86.5	9.0	0.0	0.0	0.0	9.0	2.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0474	0.0586	0.2371	0.2783	0.3251	0.3674	0.4141	0.4769	0.7215	0.8355	0.9944	1.4409

Fineness Modulus	C_u	C_c
2.00	8.13	3.78

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.2	4.9	31.0	49.9	2.2	0.0	8.8	0.0	0.0	0.0	2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7108	0.4825	0.4292	0.3429	0.2665	0.0594	4.10	8.12

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-C|1302|SED|01 **Sample No.:** L2151379-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-C|1302|SED|01

Sample Number: L2151379-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 84.82
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
84.82	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.98	0.00	98.8
		#18	4.16	0.00	93.9
		#35	26.36	0.00	62.9
		#40	11.65	0.00	49.1
		#60	30.66	0.00	13.0
		#120	1.81	0.00	10.8
		#200	0.01	0.00	10.8
		#230	0.00	0.00	10.8

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.8
Weight of hydrometer sample =35.25
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0374	2.0
5.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0236	2.0
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	2.0
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	2.0
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	2.0
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	2.0
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	2.0

Fractional Components

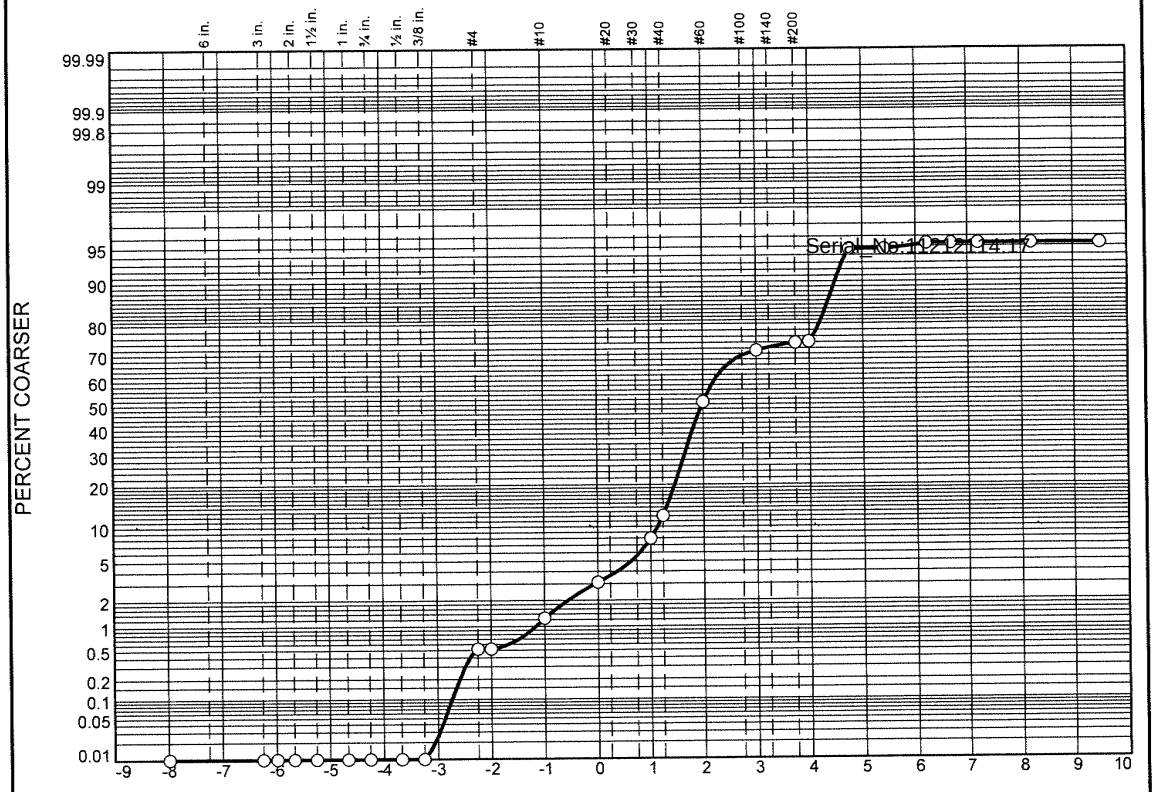
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.2	4.9	31.0	49.9	2.2	0.0	88.0	8.8	0.0	0.0	0.0	8.8	2.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0477	0.0594	0.2665	0.2967	0.3429	0.3847	0.4292	0.4825	0.6418	0.7108	0.8199	1.1033

Fineness Modulus	C_u	C_c
1.97	8.12	4.10

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	0.8	1.8	4.9	42.9	20.4	3.2	20.3	0.3	0.2	0.0	4.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3968	0.2850	0.2530	0.1425	0.0499	0.0448	1.59	6.36

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|336|SED|01 **Sample No.:** L2151379-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|336|SED|01

Sample Number: L2151379-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 51.84
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
51.84	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.27	0.00	99.5
		#5	0.00	0.00	99.5
		#10	0.38	0.00	98.7
		#18	0.96	0.00	96.9
		#35	2.52	0.00	92.0
		#40	2.14	0.00	87.9
		#60	20.12	0.00	49.1
		#120	10.55	0.00	28.7
		#200	1.32	0.00	26.2
		#230	0.26	0.00	25.7

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 25.7
Weight of hydrometer sample =35.82
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	5.2
5.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0235	5.2
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	4.7
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	4.7
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	4.7
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	4.7
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	4.7

Alpha Analytical

Fractional Components

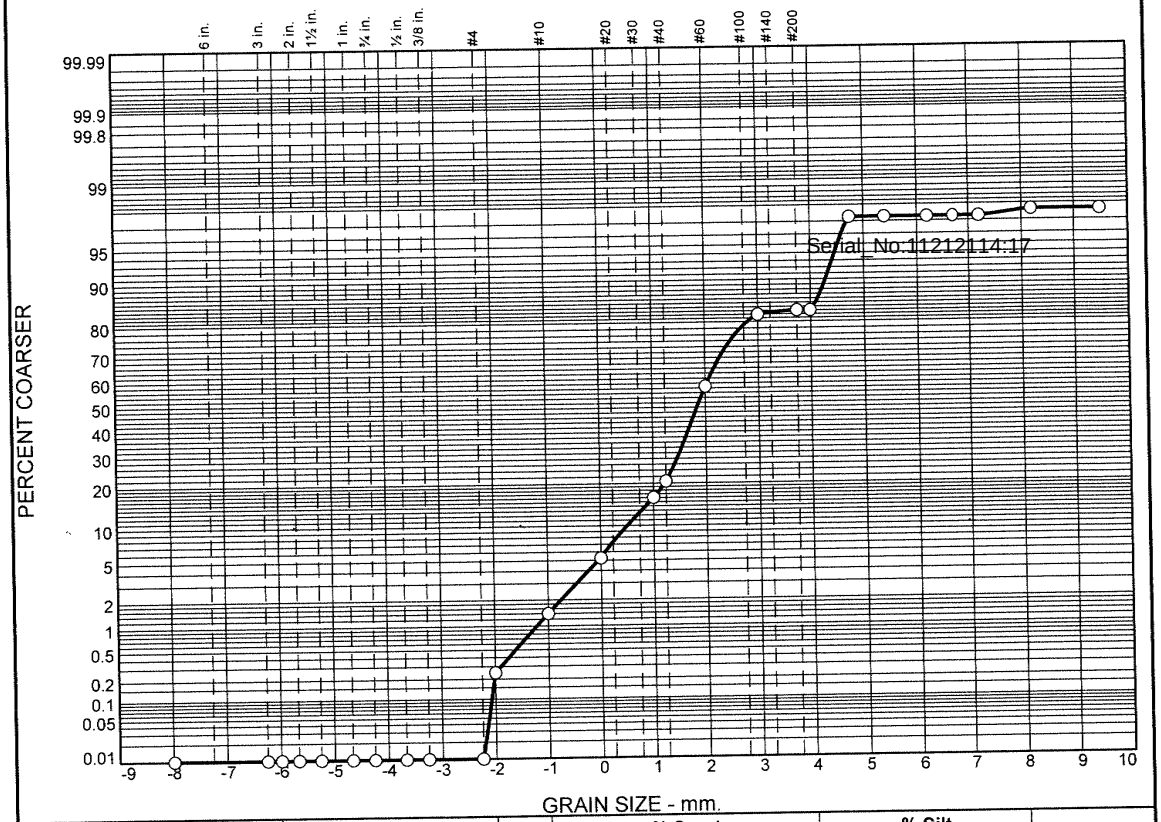
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	0.8	1.8	4.9	42.9	20.4	3.2	73.2	20.3	0.3	0.2	0.0	20.8	4.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0174	0.0448	0.0499	0.0548	0.1425	0.2147	0.2530	0.2850	0.3635	0.3968	0.4549	0.6464

Fineness Modulus	C_u	C_c
1.15	6.36	1.59

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	1.2	3.9	10.8	40.6	25.4	1.1	14.1	0.0	0.0	0.3	2.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5274	0.3090	0.2730	0.1990	0.0584	0.0513	2.50	6.02

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|338|SED|01 **Sample No.:** L2151379-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|338|SED|01
Sample Number: L2151379-06

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 52.89
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
52.89	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.13	0.00	99.8
		#10	0.61	0.00	98.6
		#18	2.05	0.00	94.7
		#35	5.73	0.00	83.9
		#40	2.35	0.00	79.4
		#60	19.12	0.00	43.3
		#120	13.41	0.00	17.9
		#200	0.52	0.00	17.0
		#230	0.01	0.00	16.9

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.9
Weight of hydrometer sample =35.98
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0375	2.7
5.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0237	2.7
15.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0137	2.7
30.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0097	2.7
60.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0069	2.7
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	2.3
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	2.3

Fractional Components

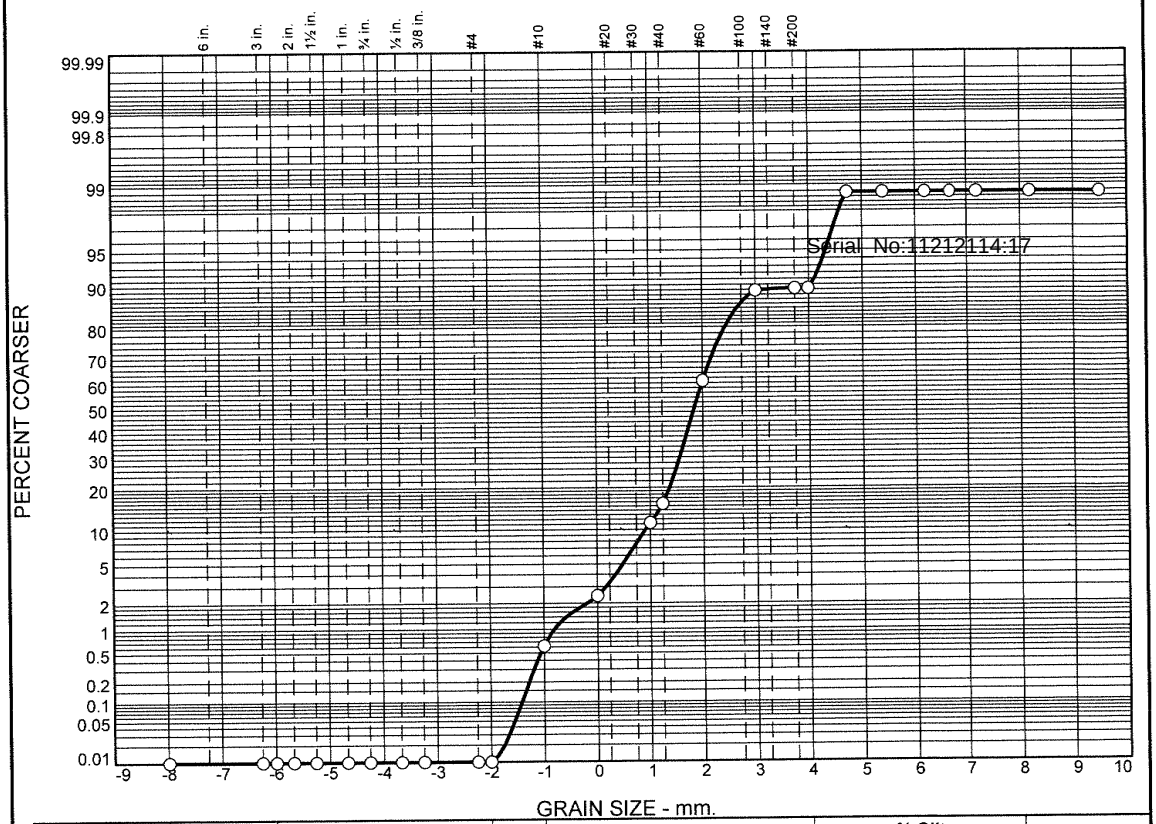
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	1.2	3.9	10.8	40.6	25.4	1.1	81.8	14.1	0.0	0.0	0.3	14.4	2.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0438	0.0513	0.0584	0.1435	0.1990	0.2383	0.2730	0.3090	0.4317	0.5274	0.7063	1.0328

Fineness Modulus	C_u	C_c
1.39	6.02	2.50

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.6	1.8	8.9	49.5	28.1	0.5	9.4	0.0	0.0		1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4318	0.3058	0.2784	0.2232	0.1592	0.0604	2.70	5.07

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|340|SED|01 **Sample No.:** L2151379-07

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|340|SED|01

Sample Number: L2151379-07

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 82.62
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
82.62	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.51	0.00	99.4
		#18	1.48	0.00	97.6
		#35	7.32	0.00	88.7
		#40	3.55	0.00	84.4
		#60	37.38	0.00	39.2
		#120	23.17	0.00	11.1
		#200	0.34	0.00	10.7
		#230	0.00	0.00	10.7

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.7
Weight of hydrometer sample =35.47
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0379	1.2
5.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0239	1.2
15.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0138	1.2
30.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0098	1.2
60.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0069	1.2
240.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0035	1.2
1440.00	20.6	1.0025	1.0026	0.0135	2.5	15.6	0.0014	1.2

Fractional Components

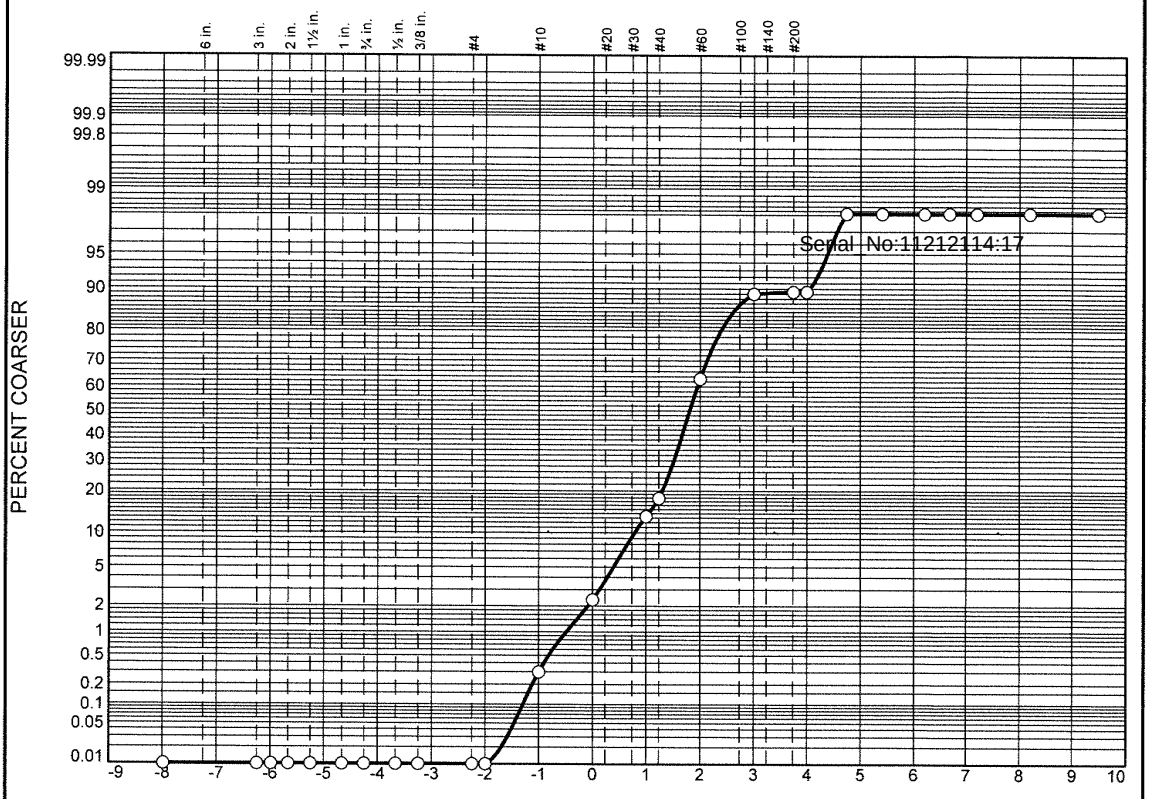
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.6	1.8	8.9	49.5	28.1	0.5	88.8	9.4	0.0	0.0		9.4	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0500	0.0604	0.1592	0.1860	0.2232	0.2522	0.2784	0.3058	0.3873	0.4318	0.5313	0.7173

Fineness Modulus	C_u	C_c
1.38	5.07	2.70

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	2.0	11.0	49.8	25.9	0.5	8.6	0.0	0.0		1.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4658	0.3142	0.2856	0.2291	0.1631	0.0603	2.77	5.21

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|340|SED|02 **Sample No.:** L2151379-08

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|340|SED|02

Sample Number: L2151379-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 90.48
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
90.48	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.27	0.00	99.7
		#18	1.84	0.00	97.7
		#35	9.94	0.00	86.7
		#40	4.09	0.00	82.2
		#60	40.94	0.00	36.9
		#120	23.45	0.00	11.0
		#200	0.37	0.00	10.6
		#230	0.00	0.00	10.6

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.6
Weight of hydrometer sample =35.74
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0377	1.5
5.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0238	1.5
15.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0138	1.5
30.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0097	1.5
60.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0069	1.5
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	1.5
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	1.5

Fractional Components

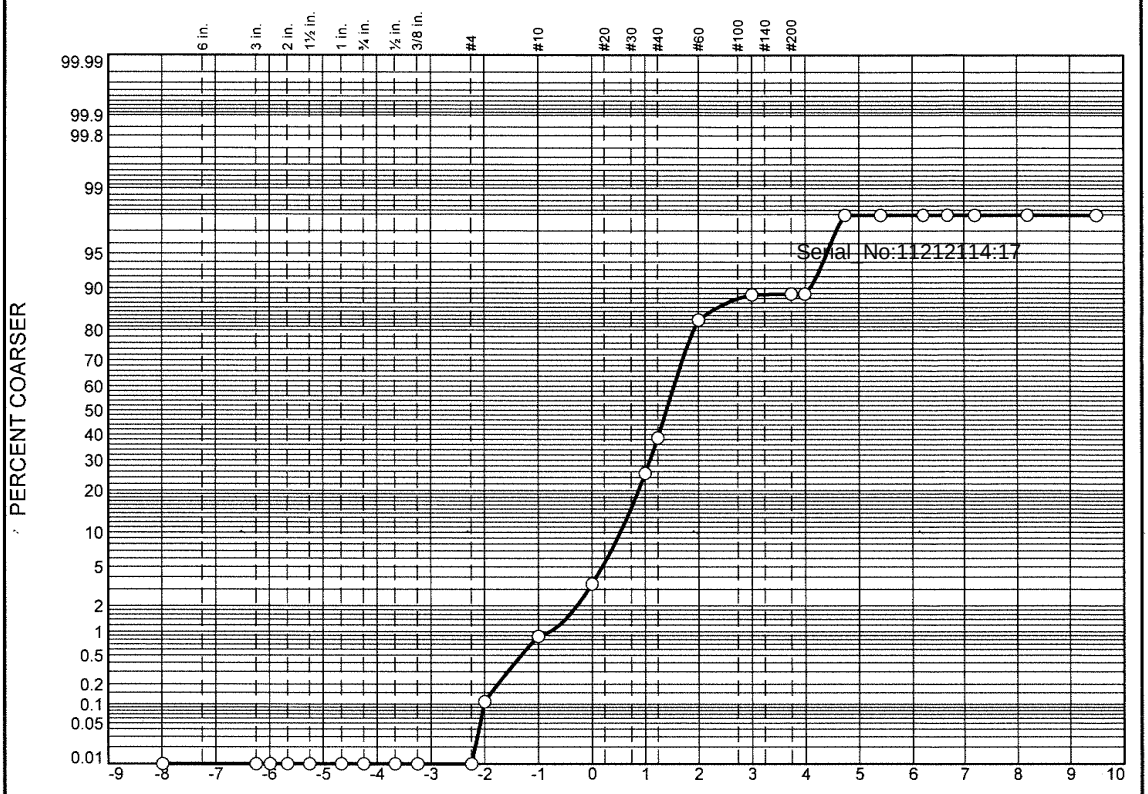
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	2.0	11.0	49.8	25.9	0.5	89.2	9.0	0.0	0.0	0.0	9.0	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0495	0.0606	0.1629	0.1907	0.2291	0.2586	0.2856	0.3142	0.4049	0.4658	0.5784	0.7611

Fineness Modulus	C_u	C_c
1.42	5.18	2.75

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.8	2.5	22.0	57.5	5.8	0.3	9.0	0.0	0.0		2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6021	0.4188	0.3792	0.3086	0.2126	0.0587	3.87	7.13

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|342|SED|01 **Sample No.:** L2151379-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|342|SED|01

Sample Number: L2151379-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 99.92
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
99.92	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.11	0.00	99.9
		#10	0.77	0.00	99.1
		#18	2.52	0.00	96.6
		#35	21.94	0.00	74.6
		#40	13.23	0.00	61.4
		#60	44.22	0.00	17.1
		#120	5.88	0.00	11.3
		#200	0.14	0.00	11.1
		#230	0.01	0.00	11.1

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.1
Weight of hydrometer sample =35.46
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0377	1.5
5.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0238	1.5
15.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0138	1.5
30.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0097	1.5
60.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0069	1.5
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	1.5
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	1.5

Alpha Analytical

Fractional Components

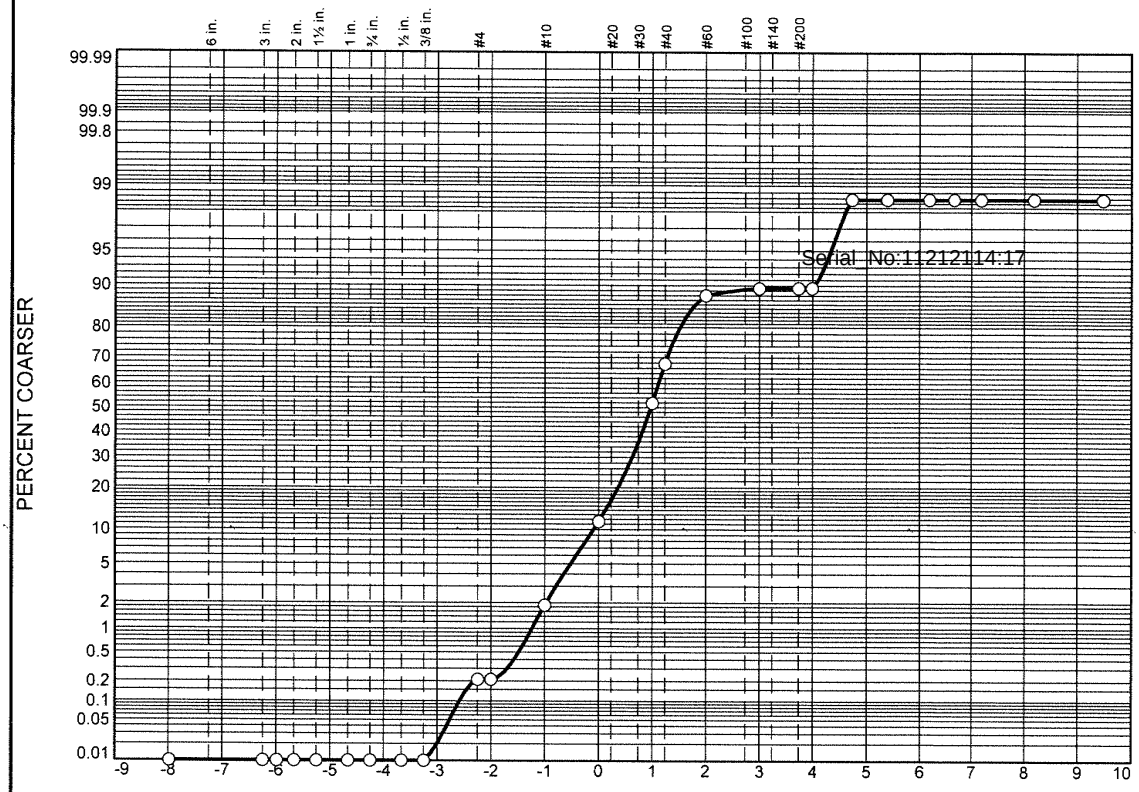
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.8	2.5	22.0	57.5	5.8	0.3	88.1	9.5	0.0	0.0		9.5	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0489	0.0592	0.2126	0.2662	0.3086	0.3440	0.3792	0.4188	0.5447	0.6021	0.6913	0.8749

Fineness Modulus	C_u	C_c
1.78	7.08	3.84

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	1.7	9.6	40.3	36.2	1.5	0.1	9.0	0.0	0.0	0.0	1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8873	0.5679	0.5092	0.4130	0.2993	0.0609	4.93	9.33

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|344|SED|01 **Sample No.:** L2151379-10

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|344|SED|01

Sample Number: L2151379-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 90.92
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
90.92	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.19	0.00	99.8
		#5	0.00	0.00	99.8
		#10	1.51	0.00	98.1
		#18	8.78	0.00	88.5
		#35	36.63	0.00	48.2
		#40	14.41	0.00	32.3
		#60	18.50	0.00	12.0
		#120	1.33	0.00	10.5
		#200	0.02	0.00	10.5
		#230	0.01	0.00	10.5

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.5
Weight of hydrometer sample =35.54
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0377	1.4
5.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0238	1.4
15.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0138	1.4
30.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0097	1.4
60.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0069	1.4
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	1.4
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	1.4

Alpha Analytical

Fractional Components

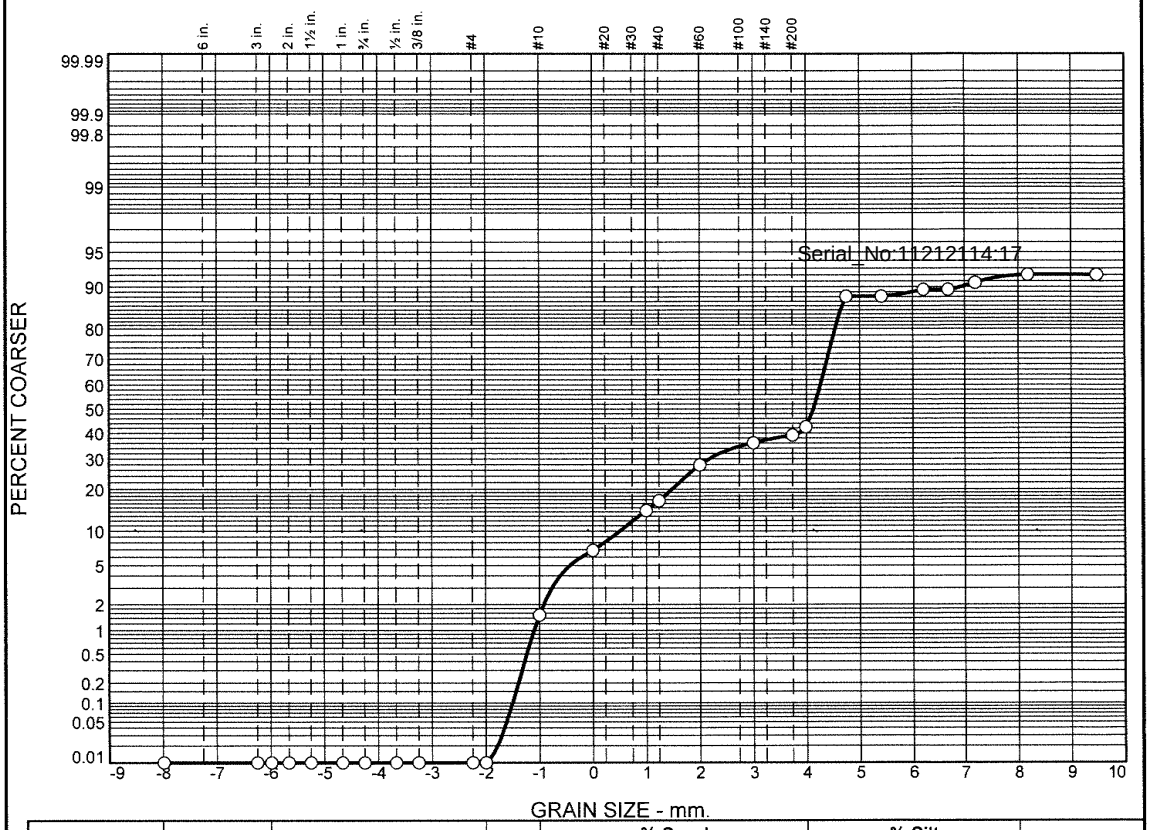
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	1.7	9.6	40.3	36.2	1.5	0.1	87.7	9.0	0.0	0.0	0.0	9.0	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0495	0.0609	0.2993	0.3488	0.4130	0.4613	0.5092	0.5679	0.7789	0.8873	1.0662	1.4344

Fineness Modulus	C_u	C_c
2.19	9.33	4.93

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.5	5.4	7.4	13.4	8.4	6.8	45.2	0.9	1.2	1.8	8.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4764	0.0679	0.0570	0.0477	0.0400	0.0081	4.14	8.41

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|201|SED|01 **Sample No.:** L2151379-11

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|201|SED|01

Sample Number: L2151379-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 27.57
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
27.57	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.42	0.00	98.5
		#18	1.48	0.00	93.1
		#35	2.05	0.00	85.7
		#40	0.66	0.00	83.3
		#60	3.04	0.00	72.3
		#120	2.30	0.00	63.9
		#200	0.83	0.00	60.9
		#230	0.94	0.00	57.5

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 57.5
Weight of hydrometer sample =35.42
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	11.9
5.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0235	11.9
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	10.6
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	10.6
60.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0069	9.3
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	8.0
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	8.0

Alpha Analytical

Fractional Components

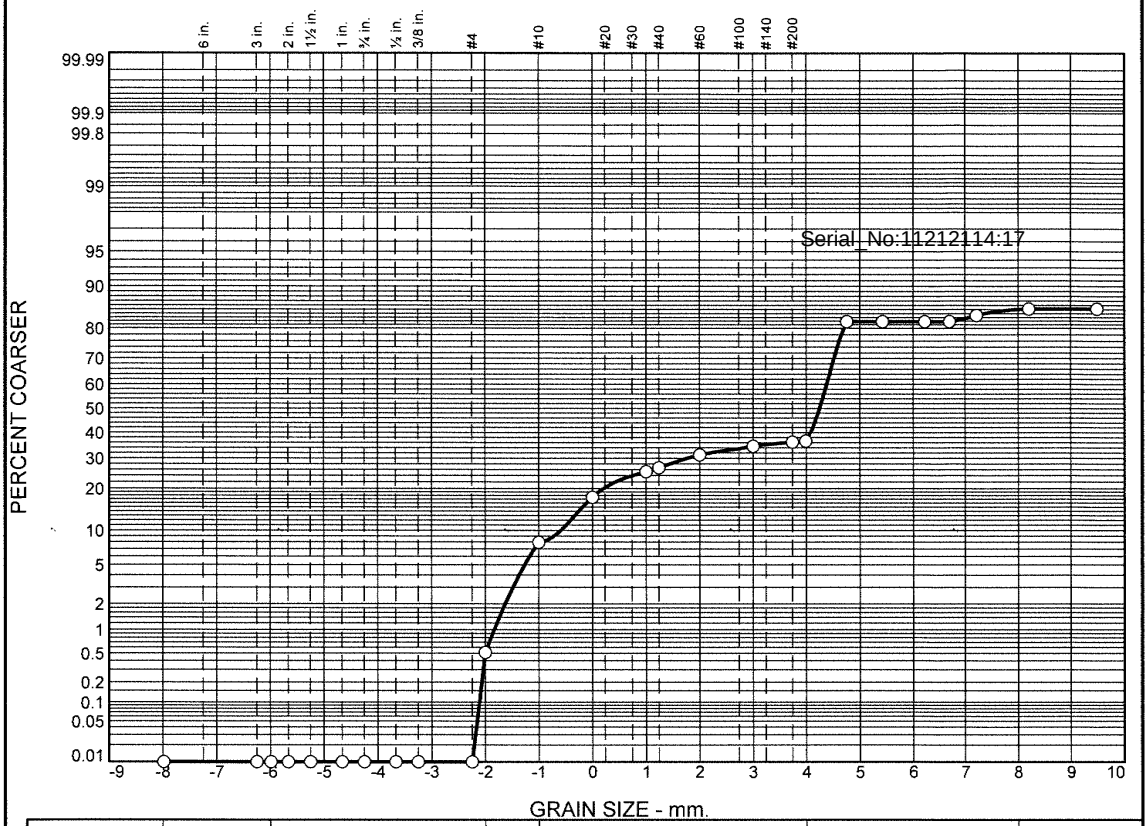
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.5	5.4	7.4	13.4	8.4	6.8	41.4	45.2	0.9	1.2	1.8	49.1	8.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0081	0.0400	0.0430	0.0477	0.0520	0.0570	0.0679	0.3569	0.4764	0.7035	1.3502

Fineness Modulus	C_u	C_c
0.77	8.41	4.14

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.5	7.5	9.5	7.8	5.9	3.4	2.2	45.1	0.0	0.8	2.3	15.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.1338	0.0588	0.0525	0.0437	0.0040			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|203|SED|01 **Sample No.:** L2151379-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|203|SED|01

Sample Number: L2151379-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 31.25
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
31.25	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.16	0.00	99.5
		#10	2.33	0.00	92.0
		#18	2.99	0.00	82.5
		#35	2.43	0.00	74.7
		#40	0.42	0.00	73.3
		#60	1.43	0.00	68.8
		#120	1.05	0.00	65.4
		#200	0.48	0.00	63.9
		#230	0.14	0.00	63.4

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 63.4
Weight of hydrometer sample =31.25
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0369	18.1
5.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0233	18.1
15.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0135	18.1
30.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0095	18.1
60.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0068	16.5
240.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0034	14.8
1440.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0014	14.8

Alpha Analytical

Fractional Components

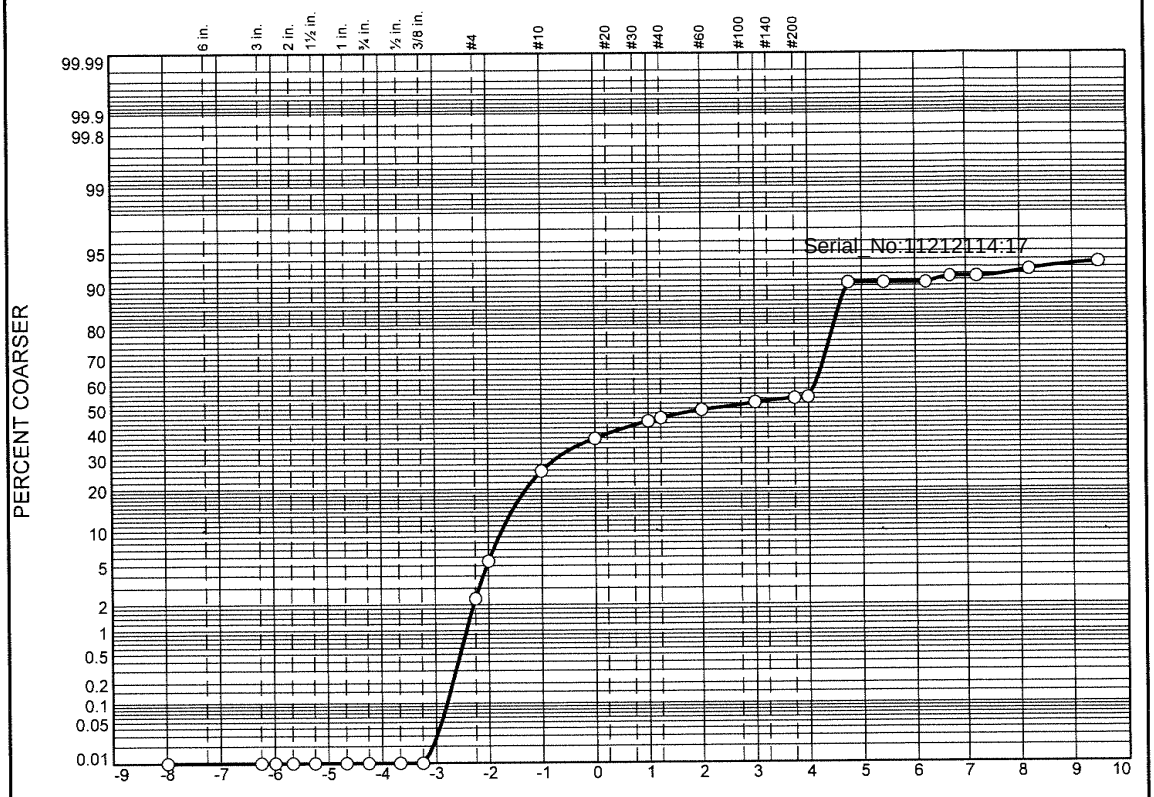
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.5	7.5	9.5	7.8	5.9	3.4	2.2	28.8	45.1	0.0	0.8	2.3	48.2	15.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0040	0.0384	0.0437	0.0479	0.0525	0.0588	0.8652	1.1338	1.5013	2.3982

Fineness Modulus
1.07

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			5.5	20.1	12.1	7.0	4.6	3.1	2.5	35.6	0.0	1.1	0.8	7.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.8638	0.8174	0.2111	0.0510	0.0424	0.0379	0.08	21.56

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|205|SED|01 **Sample No.:** L2151379-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|205|SED|01

Sample Number: L2151379-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 32.42
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
32.42	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.75	0.00	97.7
		#5	1.03	0.00	94.5
		#10	6.53	0.00	74.4
		#18	3.92	0.00	62.3
		#35	2.26	0.00	55.3
		#40	0.42	0.00	54.0
		#60	1.08	0.00	50.7
		#120	1.01	0.00	47.6
		#200	0.54	0.00	45.9
		#230	0.16	0.00	45.4

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 45.4
Weight of hydrometer sample =35.01
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	9.5
5.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0235	9.5
15.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0136	9.5
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	8.4
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	8.4
240.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0034	7.4
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	6.4

Alpha Analytical

Fractional Components

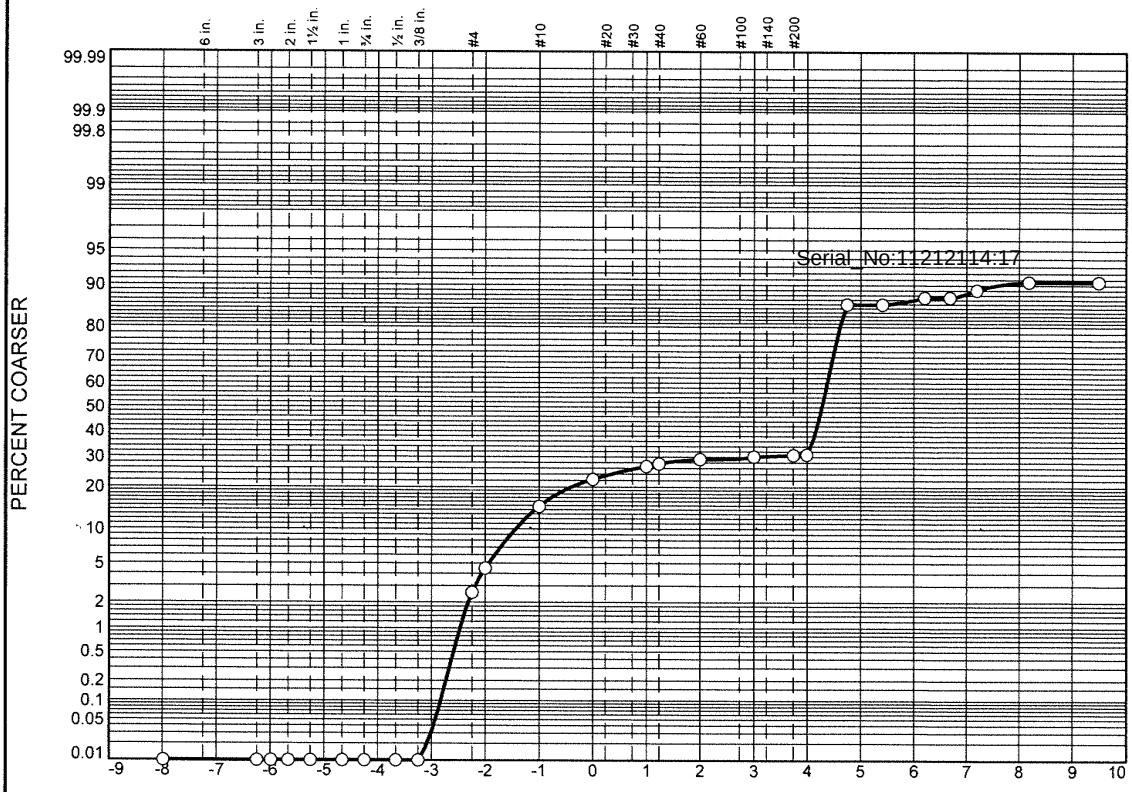
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		5.5	20.1	12.1	7.0	4.6	3.1	2.5	29.3	35.6	0.0	1.1	0.8	37.5	7.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0379	0.0424	0.0455	0.0510	0.0572	0.2111	0.8174	2.4401	2.8638	3.3693	4.0896

Fineness Modulus	C_u	C_c
2.02	21.56	0.08

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			4.5	10.3	7.5	4.4	2.4	1.0	1.0	54.9	1.0	1.3	2.2	9.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.9694	0.0557	0.0515	0.0447	0.0380	0.0053	6.83	10.61

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|207|SED|01 **Sample No.:** L2151379-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|207|SED|01

Sample Number: L2151379-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 36.02
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.02	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.92	0.00	97.4
		#5	0.69	0.00	95.5
		#10	3.71	0.00	85.2
		#18	2.72	0.00	77.7
		#35	1.56	0.00	73.3
		#40	0.32	0.00	72.5
		#60	0.57	0.00	70.9
		#120	0.35	0.00	69.9
		#200	0.21	0.00	69.3
		#230	0.05	0.00	69.2

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 69.2
Weight of hydrometer sample =36.02
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	14.0
5.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0235	14.0
15.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0137	12.5
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	12.5
60.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0069	11.0
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	9.4
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	9.4

Alpha Analytical

Fractional Components

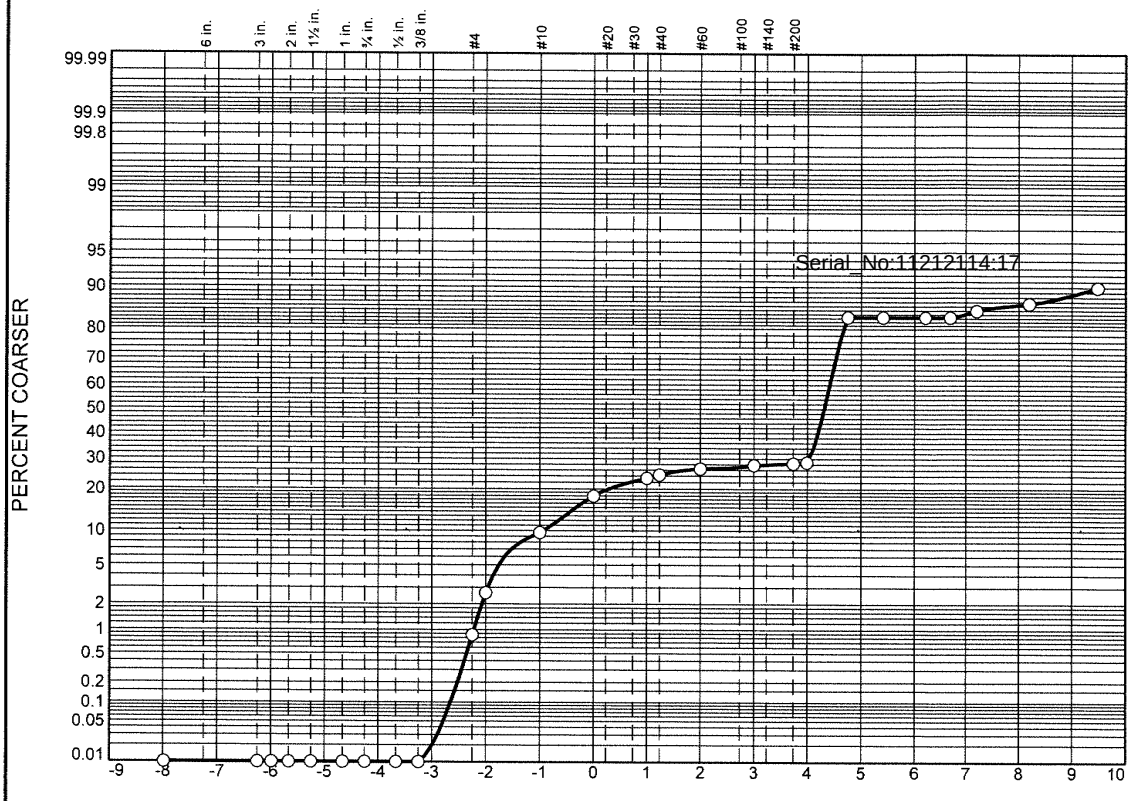
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		4.5	10.3	7.5	4.4	2.4	1.0	1.0	16.3	54.9	1.0	1.3	2.2	59.4	9.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0053	0.0380	0.0408	0.0447	0.0481	0.0515	0.0557	1.3124	1.9694	2.6994	3.8226

Fineness Modulus	C_u	C_c
1.20	10.61	6.83

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.6	7.0	8.3	5.4	3.1	1.3	1.3	54.3	0.0	0.9	2.1	13.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.2453	0.0544	0.0503	0.0434	0.0067			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|209|SED|01 **Sample No.:** L2151379-15

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|209|SED|01

Sample Number: L2151379-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 34.67
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
34.67	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.30	0.00	99.1
		#5	0.61	0.00	97.4
		#10	2.43	0.00	90.4
		#18	2.87	0.00	82.1
		#35	1.87	0.00	76.7
		#40	0.37	0.00	75.6
		#60	0.72	0.00	73.6
		#120	0.42	0.00	72.3
		#200	0.25	0.00	71.6
		#230	0.10	0.00	71.3

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 71.3
Weight of hydrometer sample =34.67
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0371	16.7
5.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0234	16.7
15.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0135	16.7
30.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0096	16.7
60.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0068	15.0
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	13.4
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	10.1

Fractional Components

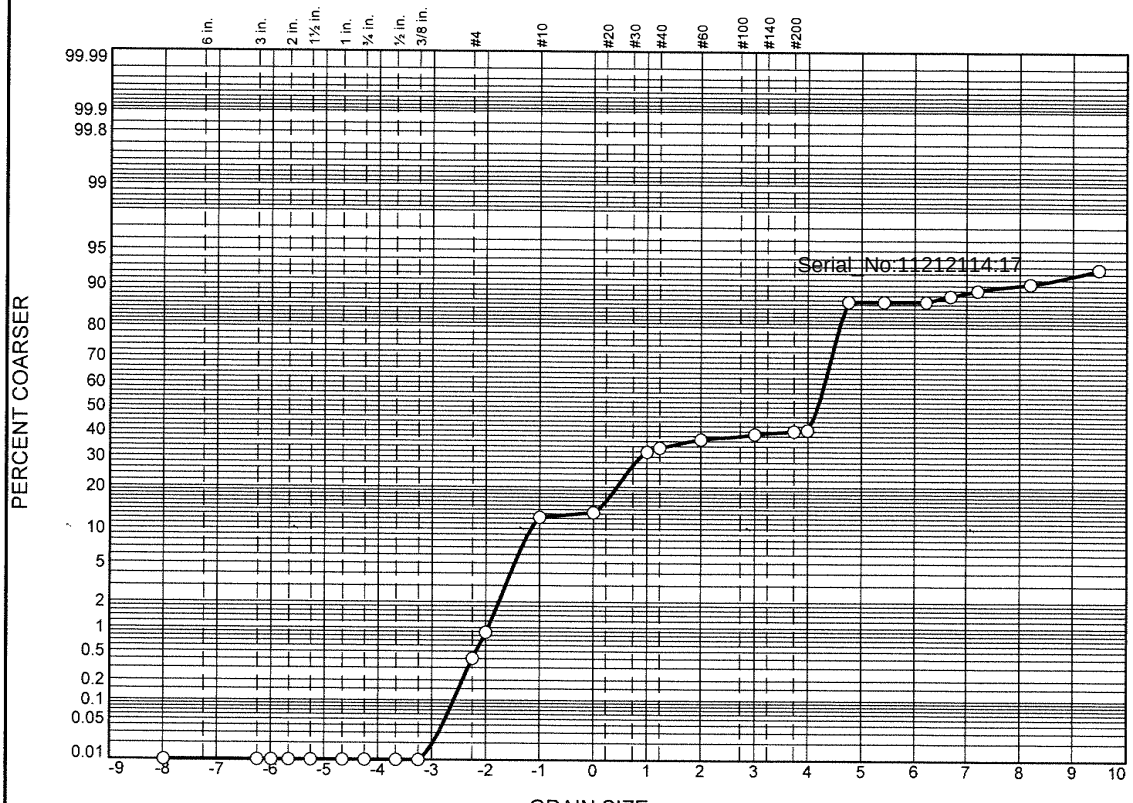
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.6	7.0	8.3	5.4	3.1	1.3	1.3	19.4	54.3	0.0	0.9	2.1	57.3	13.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0067	0.0391	0.0434	0.0468	0.0503	0.0544	0.8164	1.2453	1.9089	3.3847

Fineness Modulus
1.00

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.9	11.3	1.1	18.5	4.8	2.2	2.0	45.9	0.0	1.9	1.5	9.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8892	0.0756	0.0550	0.0461	0.0384	0.0040	6.96	18.69

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|211|SED|01 **Sample No.:** L2151379-16

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|211|SED|01

Sample Number: L2151379-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 39.81
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
39.81	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.16	0.00	99.6
		#5	0.19	0.00	99.1
		#10	4.51	0.00	87.8
		#18	0.44	0.00	86.7
		#35	7.37	0.00	68.2
		#40	0.60	0.00	66.7
		#60	1.31	0.00	63.4
		#120	0.88	0.00	61.2
		#200	0.47	0.00	60.0
		#230	0.20	0.00	59.5

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 59.5
Weight of hydrometer sample =39.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0369	13.3
5.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0233	13.3
15.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0135	13.3
30.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0096	12.1
60.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0068	10.9
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	9.7
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	7.3

Alpha Analytical

Fractional Components

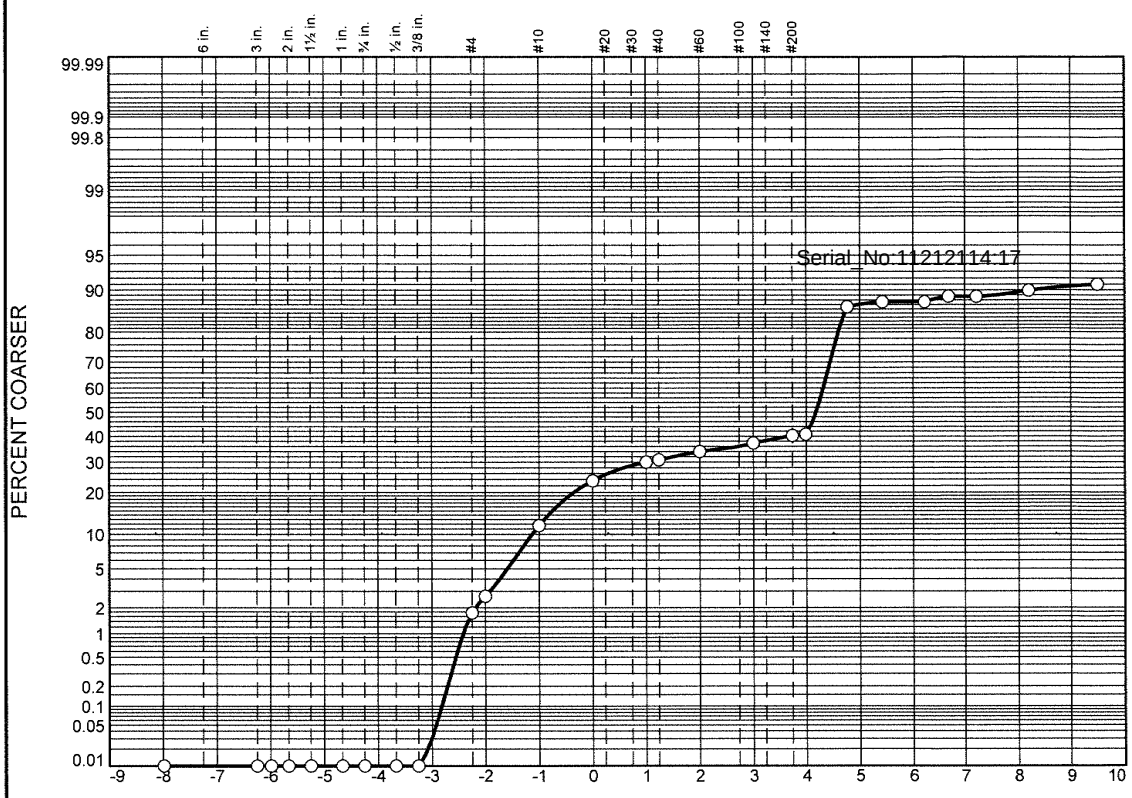
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.9	11.3	1.1	18.5	4.8	2.2	2.0	28.6	45.9	0.0	1.9	1.5	49.3	9.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0040	0.0384	0.0415	0.0461	0.0503	0.0550	0.0756	0.7354	0.8892	2.2247	2.7585

Fineness Modulus	C_u	C_c
1.23	18.69	6.96

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.7	9.0	11.9	6.4	3.9	3.4	3.8	46.0	0.6	1.1	0.8	10.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.6832	0.0787	0.0550	0.0459	0.0381	0.0032	8.42	24.77

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|213|SED|01 **Sample No.:** L2151379-17

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|213|SED|01

Sample Number: L2151379-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 42.78
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
42.78	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.75	0.00	98.2
		#5	0.39	0.00	97.3
		#10	3.85	0.00	88.3
		#18	5.09	0.00	76.4
		#35	2.74	0.00	70.0
		#40	0.38	0.00	69.1
		#60	1.32	0.00	66.1
		#120	1.44	0.00	62.7
		#200	1.28	0.00	59.7
		#230	0.20	0.00	59.2

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 59.2
Weight of hydrometer sample =42.78
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0060	1.0061	0.0135	6.0	14.7	0.0367	13.5
5.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0233	12.3
15.00	20.6	1.0055	1.0056	0.0135	5.5	14.8	0.0135	12.3
30.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0096	11.2
60.00	20.6	1.0050	1.0051	0.0135	5.0	15.0	0.0068	11.2
240.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0034	10.1
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	9.0

Fractional Components

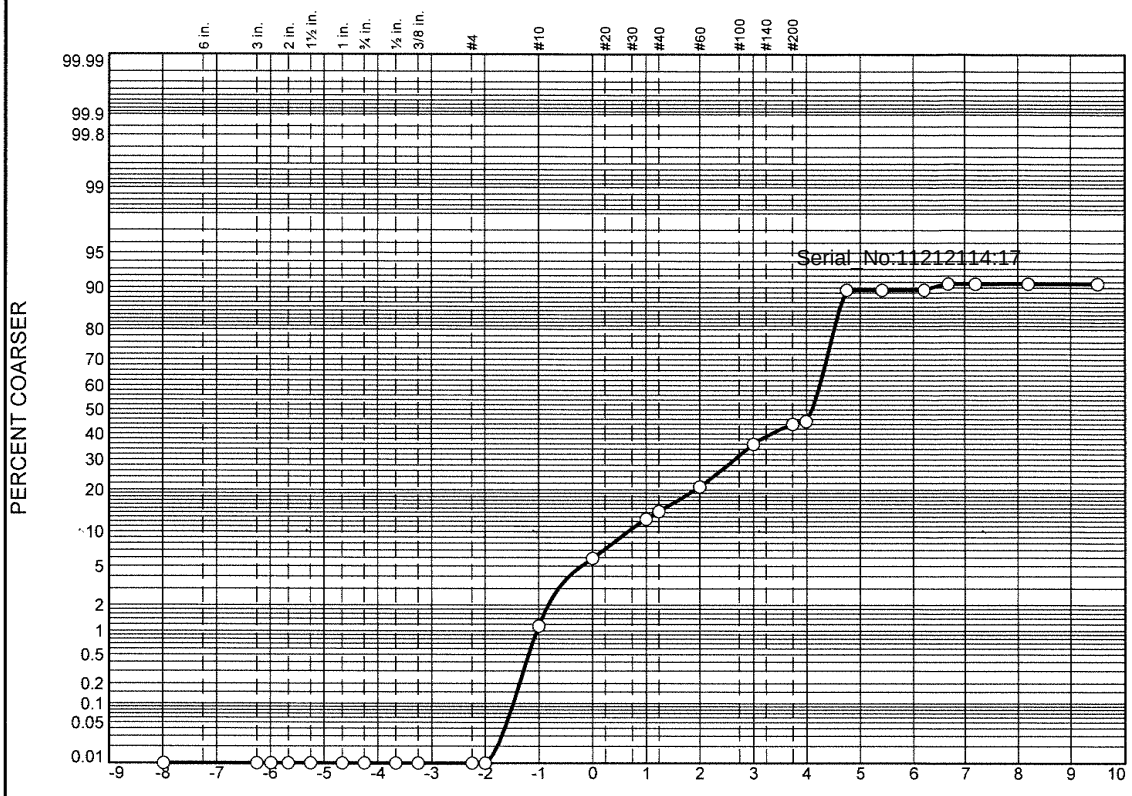
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.7	9.0	11.9	6.4	3.9	3.4	3.8	29.4	46.0	0.6	1.1	0.8	48.5	10.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0032	0.0381	0.0412	0.0459	0.0501	0.0550	0.0787	1.2717	1.6832	2.1813	3.0097

Fineness Modulus	C_u	C_c
1.29	24.77	8.42

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.1	4.8	6.6	8.4	15.0	9.5	44.1	0.0	1.2		9.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3950	0.0991	0.0582	0.0483	0.0410	0.0122	1.93	8.13

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|215|SED|01 **Sample No.:** L2151379-18

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|215|SED|01

Sample Number: L2151379-18

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 38.33
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
38.33	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.44	0.00	98.9
		#18	1.82	0.00	94.1
		#35	2.54	0.00	87.5
		#40	0.65	0.00	85.8
		#60	2.57	0.00	79.1
		#120	5.74	0.00	64.1
		#200	3.09	0.00	56.0
		#230	0.44	0.00	54.9

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 54.9
Weight of hydrometer sample =38.33
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0372	10.5
5.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0235	10.5
15.00	20.6	1.0045	1.0046	0.0135	4.5	15.1	0.0136	10.5
30.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0097	9.3
60.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0068	9.3
240.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0034	9.3
1440.00	20.6	1.0040	1.0041	0.0135	4.0	15.2	0.0014	9.3

Alpha Analytical

Fractional Components

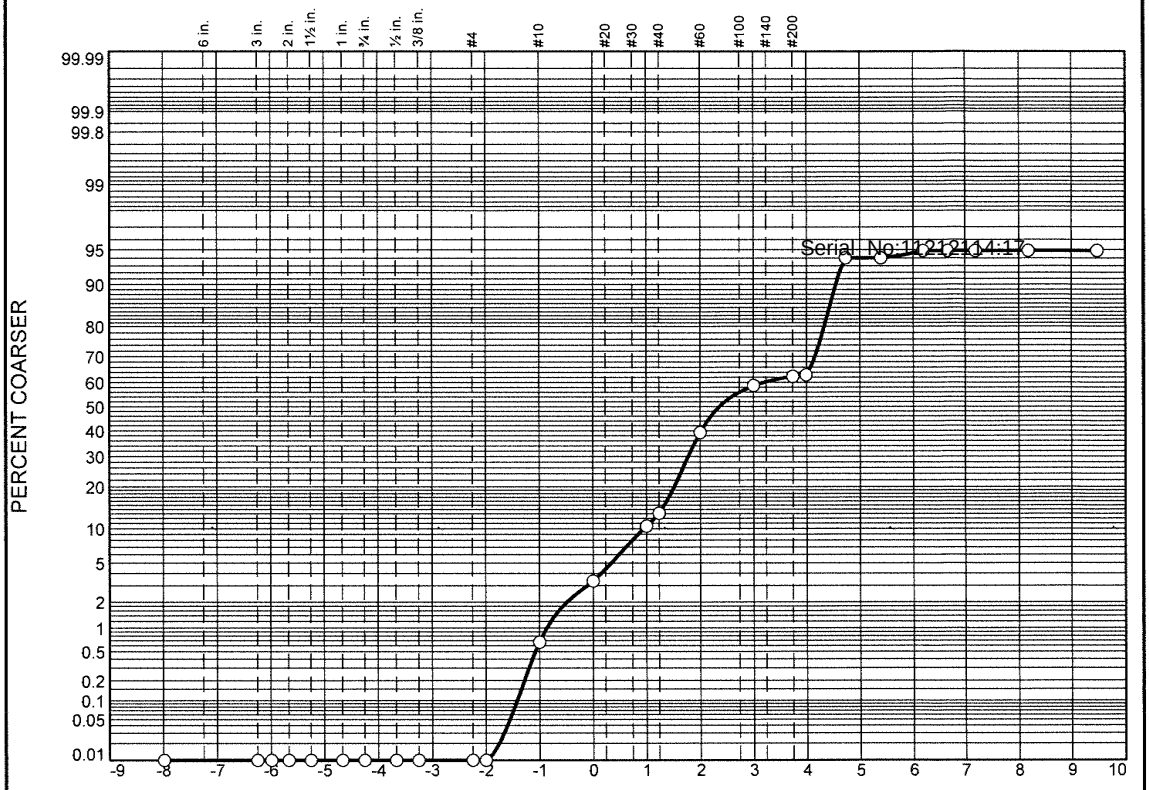
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.1	4.8	6.6	8.4	15.0	9.5	44.3	44.1	0.0	1.2		45.3	9.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0122	0.0410	0.0438	0.0483	0.0527	0.0582	0.0991	0.2653	0.3950	0.6314	1.1535

Fineness Modulus	C_u	C_c
0.65	8.13	1.93

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.7	2.7	7.1	28.8	19.4	4.5	30.9	0.5	0.3	0.0	5.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3962	0.2466	0.1946	0.0559	0.0465	0.0426	0.30	5.79

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|217|SED|01 **Sample No.:** L2151379-19

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|217|SED|01

Sample Number: L2151379-19

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 48.04
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
48.04	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.32	0.00	99.3
		#18	1.29	0.00	96.6
		#35	3.42	0.00	89.5
		#40	1.27	0.00	86.9
		#60	12.56	0.00	60.7
		#120	9.33	0.00	41.3
		#200	1.77	0.00	37.6
		#230	0.29	0.00	37.0

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 37.0
Weight of hydrometer sample =35.56
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0375	5.9
5.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0237	5.9
15.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0138	5.1
30.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0097	5.1
60.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0069	5.1
240.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0034	5.1
1440.00	20.6	1.0030	1.0031	0.0135	3.0	15.5	0.0014	5.1

Alpha Analytical

Fractional Components

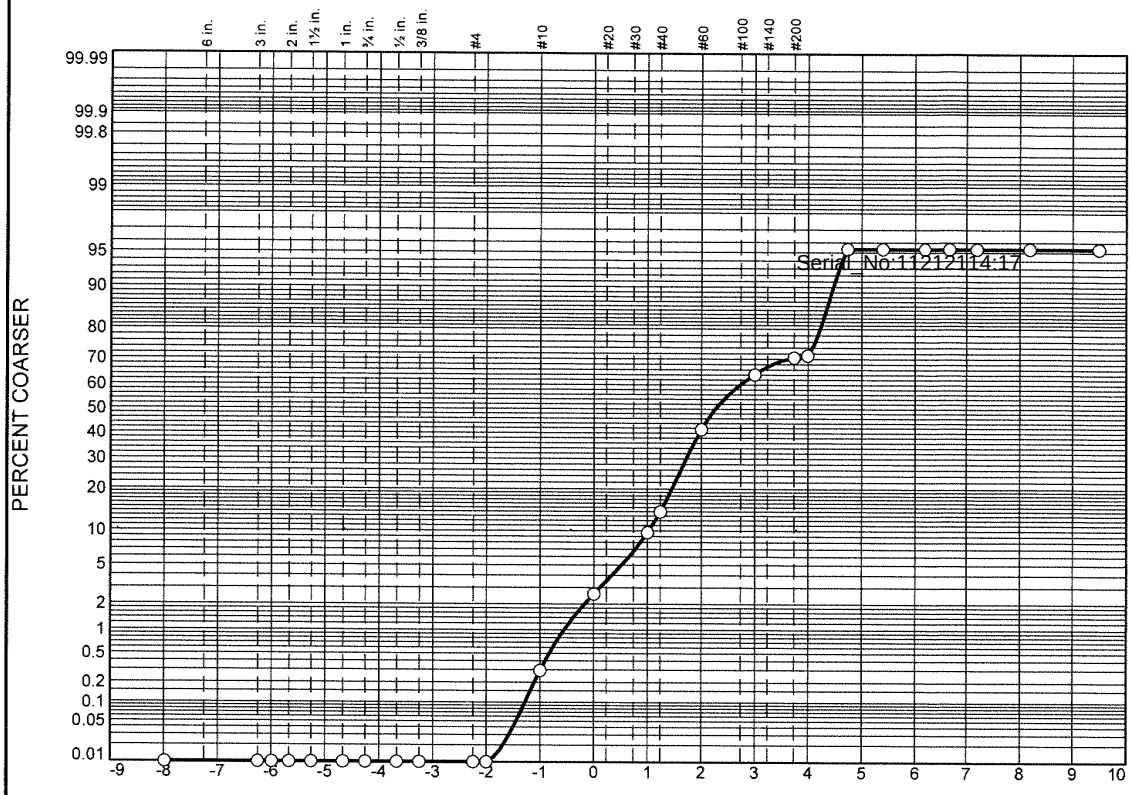
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.7	2.7	7.1	28.8	19.4	4.5	62.5	30.9	0.5	0.3	0.0	31.7	5.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0426	0.0465	0.0496	0.0559	0.1084	0.1946	0.2466	0.3491	0.3962	0.5176	0.7896

Fineness Modulus	C_u	C_c
0.95	5.79	0.30

Serial_No:11212114:17

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	2.3	7.1	31.7	22.7	7.3	23.9	0.0	0.0		4.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4119	0.2565	0.2082	0.0812	0.0494	0.0451	0.57	5.69

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|219|SED|01 **Sample No.:** L2151379-20

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/19/2021

Location: 3664|2021|ECR-B|219|SED|01

Sample Number: L2151379-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 74.78
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
74.78	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2 1/2"	0.00	0.00	100.0
		2"	0.00	0.00	100.0
		1 1/2"	0.00	0.00	100.0
		1"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		1/2"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.22	0.00	99.7
		#18	1.70	0.00	97.4
		#35	5.31	0.00	90.3
		#40	3.18	0.00	86.1
		#60	20.55	0.00	58.6
		#120	16.97	0.00	35.9
		#200	4.77	0.00	29.5
		#230	0.55	0.00	28.8

Serial_No:11212114:17

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 28.8
Weight of hydrometer sample =35.27
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0375	4.7
5.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0237	4.7
15.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0137	4.7
30.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0097	4.7
60.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0069	4.7
240.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0034	4.7
1440.00	20.6	1.0035	1.0036	0.0135	3.5	15.4	0.0014	4.7

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	2.3	7.1	31.7	22.7	7.3	71.1	23.9	0.0	0.0		23.9	4.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0384	0.0451	0.0494	0.0534	0.0812	0.1504	0.2082	0.2565	0.3655	0.4119	0.4922	0.6999

Fineness Modulus	C_u	C_c
0.99	5.69	0.57

Serial_No:11212114:17

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

TOC

CHAIN OF CUSTODY

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ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151379

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51379-01	3664|2021 ECR-B-390	09-01-21	0629	SE	JPM	☒	
-02	3664|2021 ECR-B-332	09-01-21	1324	SE	JPM	☒	
-03	3664|2021 ECR-B-379	09-01-21	1723	SE	JPM	☒	
-04	3664|2021 ECR-B-1302	09-01-21	1941	SE	JPM	☒	
-05	3664|2021 ECR-B-336	09-02-21	1534	SE	JPM	☒	
-06	3664|2021 ECR-B-338	09-02-21	1911	SE	JPM	☒	
-07	3664|2021 ECR-B-340-01	09-03-21	0216	SE	JPM	☒	
-08	3664|2021 ECR-B-340-02	09-03-21	0216	SE	JPM	☒	
-09	3664|2021 ECR-B-342	09-03-21	0446	SE	JPM	☒	
-10	3664|2021 ECR-B-344	09-03-21	1038	SE	JPM	☒	

Container Type: G
Preservative: A

Relinquished By:	Date/Time	Received By:	Date/Time
	09-03-21		9/9/21
	9/22/21		9/22/21
	9/22/21 1700		9/22/21 1700
Christopher Shrimpton	9/22/21 2000	Joseph C. Bujnicki	9/22/21 2000
Joseph C. Bujnicki	9/22/21 2119	Kim L Brick	9/22/21 2119

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

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CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151379

Project Information

Project Name: 3664

Project Location: Offshore MA

Project #: 3664

Project Manager: Jason Clermont

ALPHA Quote #: ref: 11026

Client Information

Client: CSA Ocean Sciences

Address: 8502 SW Kansas Avenue

Stuart, FL 34997

Phone: cell: (252) 258-1626

Fax:

Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Report Information

☐ FAX ☐ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #

Regulatory Requirements/Report Limits

State/Fed Program Criteria

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID		Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size												Sample Specific Comments
51379-01	3664|2021	330	09-01-21	0628	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-02	3664|2021	332	09-01-21	1324	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-03	3664|2021	334	09-01-21	1723	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-04	3664|2021	C-1302	09-01-21	1941	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-05	3664|2021	336	09-02-21	1534	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-06	3664|2021	338	09-02-21	1915	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-07	3664|2021	340-01	09-03-21	0216	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-08	3664|2021	340-02	09-03-21	0216	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-09	3664|2021	342	09-03-21	0446	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-10	3664|2021	344	09-03-21	1038	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Container Type: 9P

Preservative: 3

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/9/21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1220	[signature]	9/22 1220
Meghan Murphy	9/22/21 2000	Joseph C. Bezzio Jr.	9/22/21 2000
Joseph C. Bezzio Jr.	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

TOC

CHAIN OF CUSTODY

PAGE OF

Westborough, MA TEL 508-898-9220 FAX 508-898-9193
Mansfield, MA TEL 508-822-9300 FAX 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Data Rec'd in Lab: 9/22/21
ALPHA Job #: L2151379

Report Information ☐ FAX ☐ ADEx
Data Deliverables ☒ EMAIL ☐ Add'l Deliverables
Billing Information ☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51379-11	3664|2021 - ECR-B-201	08-25-21	1635	SE	JM	☒	
-12	3664|2021 - ECR-B-203	08-25-21	11:37	SE	JM	☒	
-13	3664|2021 - ECR-B-205	08-26-21	09:39	SE	JM	☒	
-14	3664|2021 ECR-B 207	08-26-21	0513	SE	JM	☒	
-15	3664|2021 ECR-B-209	08-25-21	0217	SE	JM	☒	
-16	3664|2021 ECR-B-211	08-25-21	0325	SE	JM	☒	
-17	3664|2021 ECR-B-213	08-26-21	0056	SE	JM	☒	
-18	3664|2021 ECR-B-215	08-27-21	1938	SE	JM	☒	
-19	3664|2021 ECR-B-217	08-27-21	1725	SE	JM	☒	
-20	3664|2021 ECR-B-219-01	08-27-21	1325	SE	JM	☒	

Container Type	G												
Preservative	A												

Relinquished By:	Date/Time	Received By:	Date/Time
	08-25-21		9/9/21
	9/22/21		9/22/21
Meghan Murphy	9/22/21 1725		9/22/21 1725
Joseph C. Bujnicki	9/22/21 2119	Kin L. Bailey	9/22/21 2000 / 9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

GS

CHAIN OF CUSTODY

PAGE OF

ALPHA

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151379

Report Information
☐ FAX
☐ ADEx

Data Deliverables
☒ EMAIL
☐ Add'l Deliverables

Billing Information
☒ Same as Client info
PO #:

Regulatory Requirements/Report Limits
State/Fed Program
Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size	Sample Specific Comments
51379-11	3664|2021 ECR-B- 201	08-29-21	1635	SE	JAM	☒	
-12	3664|2021 ECR-B- 203	08-29-21	12:37	SE	JAM	☒	
-13	3664|2021 ECR-B- 205	08-29-21	09:39	SE	JAM	☒	
-14	3664|2021 ECR-B- 207	08-29-21	0513	SE	JAM	☒	
-15	3664|2021 ECR-B 209	08-29-21	0217	SE	JAM	☒	
-16	3664|2021 ECR-B 211	08-29-21	0325	SE	JAM	☒	
-17	3664|2021 ECR-B 213	08-28-21	0056	SE	JAM	☒	
-18	3664|2021 ECR-B 215	08-27-21	1938	SE	JAM	☒	
-19	3664|2021 ECR-B 217	08-27-21	1725	SE	JAM	☒	
-20	3664|2021 ECR-B 219-01	08-27-21	1325	SE	JAM	☒	

Container Type: 2P
Preservative: A

Relinquished By	Date/Time	Received By	Date/Time
T.M.	9/9/21	[signature]	9/9/21
[signature] AK	9/22/21 1720	[signature] AK	9/22/21 1720
Meghan Murphy	9/22/21 2000	Joseph C. Bergin Jr.	9/22/21 2000
Joseph C. Bergin Jr.	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

ANALYTICAL REPORT

Lab Number:	L2151380
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/22/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151380-01	3664|2021|ECR-B|219|SED|02	SEDIMENT	OFFSHORE MA / NY	08/27/21 13:25	09/22/21
L2151380-02	3664|2021|ECR-B|221|SED|01	SEDIMENT	OFFSHORE MA / NY	08/27/21 11:46	09/22/21
L2151380-03	3664|2021|ECR-C|1207|SED|01	SEDIMENT	OFFSHORE MA / NY	08/27/21 08:27	09/22/21
L2151380-04	3664|2021|ECR-B|245|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 07:49	09/22/21
L2151380-05	3664|2021|ECR-B|247|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 10:14	09/22/21
L2151380-06	3664|2021|ECR-B|302|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 13:17	09/22/21
L2151380-07	3664|2021|ECR-B|304|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 15:42	09/22/21
L2151380-08	3664|2021|ECR-B|306|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 18:51	09/22/21
L2151380-09	3664|2021|ECR-B|308|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 21:31	09/22/21
L2151380-10	3664|2021|ECR-B|310|SED|01	SEDIMENT	OFFSHORE MA / NY	08/30/21 23:06	09/22/21
L2151380-11	3664|2021|ECR-B|346|SED|01	SEDIMENT	OFFSHORE MA / NY	09/09/21 16:45	09/22/21
L2151380-12	3664|2021|ECR-B|348|SED|01	SEDIMENT	OFFSHORE MA / NY	09/03/21 21:43	09/22/21
L2151380-13	3664|2021|ECR-B|350|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 07:33	09/22/21
L2151380-14	3664|2021|ECR-B|402|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 12:23	09/22/21
L2151380-15	3664|2021|ECR-B|404|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 14:47	09/22/21
L2151380-16	3664|2021|ECR-B|406|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 19:03	09/22/21
L2151380-17	3664|2021|ECR-B|408|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 23:21	09/22/21
L2151380-18	3664|2021|ECR-B|410|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 05:11	09/22/21
L2151380-19	3664|2021|ECR-B|412|SED|01	SEDIMENT	OFFSHORE MA / NY	09/04/21 05:07	09/22/21
L2151380-20	3664|2021|ECR-B|414|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 11:20	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size

The WG1565633-1 Laboratory Duplicate RPD for granule (111%), % very coarse sand (116%), % very fine sand (132%), silt (45%) and clay (111%), performed on L2151380-12, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

Total Organic Carbon

The WG1567680-3 Laboratory Duplicate RPD (Rep2 - 41%), performed on L2151380-03, is outside the acceptance criteria of 25%. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

The WG1568073-3 Laboratory Duplicate RPD (Rep2 - 60%) and (Average - 38%), performed on L2151380-11, is outside the acceptance criteria of 25%. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/22/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-01
Client ID: 3664|2021|ECR-B|219|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 13:25
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.645		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	0.694		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	0.670		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.600		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	5.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	31.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	21.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	27.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	10.0		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.20		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-02
Client ID: 3664|2021|ECR-B|221|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 11:46
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.67		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.72		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.70		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.600		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	5.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	5.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	4.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	55.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	21.1		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-03
Client ID: 3664|2021|ECR-C|1207|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/27/21 08:27
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.155		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	0.123		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	0.139		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	23.7		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	40.1		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	7.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.800		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	14.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-04
Client ID: 3664|2021|ECR-B|245|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 07:49
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.53		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.63		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.58		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	3.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	3.40		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	2.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	69.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	16.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-05
Client ID: 3664|2021|ECR-B|247|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 10:14
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.47		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.45		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.46		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.100		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	1.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	1.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	1.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	71.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	21.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-06
Client ID: 3664|2021|ECR-B|302|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 13:17
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.27		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.33		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.30		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	4.40		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	3.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	2.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	8.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	64.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	14.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-07
Client ID: 3664|2021|ECR-B|304|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 15:42
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.07		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.02		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.04		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	2.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	1.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	1.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	11.0		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	67.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	14.1		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-08
Client ID: 3664|2021|ECR-B|306|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 18:51
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.09		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	1.09		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	1.09		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.900		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	3.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	3.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	3.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	20.0		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	54.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-09
Client ID: 3664|2021|ECR-B|308|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 21:31
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.759		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	0.804		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	0.782		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.400		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	1.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	0.900		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	2.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	33.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	53.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	7.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-10
Client ID: 3664|2021|ECR-B|310|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 08/30/21 23:06
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.605		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	0.577		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	0.591		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.300		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	0.900		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	0.800		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	3.20		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	40.6		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	47.0		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	7.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-11
Client ID: 3664|2021|ECR-B|346|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/09/21 16:45
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.220		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Rep2)	0.289		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Average)	0.254		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	22.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.700		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	1.20		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	44.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	16.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.800		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	10.6		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-12
Client ID: 3664|2021|ECR-B|348|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/03/21 21:43
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.030		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.049		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.040		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	5.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	16.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	9.40		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.900		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	35.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	28.8		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-13
Client ID: 3664|2021|ECR-B|350|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 07:33
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.093		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Rep2)	0.107		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Average)	0.100		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	8.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	5.20		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	9.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	32.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	25.1		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-14
Client ID: 3664|2021|ECR-B|402|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 12:23
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.491		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Rep2)	0.410		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Average)	0.450		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	22.8		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	9.40		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.800		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	5.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	11.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	2.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.400		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	40.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	7.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-15
Client ID: 3664|2021|ECR-B|404|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 14:47
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.249		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.243		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.246		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	8.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	9.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	28.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	23.7		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-16
Client ID: 3664|2021|ECR-B|406|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 19:03
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.124		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Rep2)	0.120		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Average)	0.122		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	15.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	7.40		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	11.6		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	31.0		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	14.8		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	10.8		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-17
Client ID: 3664|2021|ECR-B|408|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 23:21
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.223		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.214		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.218		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	13.5		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.60		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	4.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	30.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	28.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	10.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-18
Client ID: 3664|2021|ECR-B|410|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 05:11
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.186		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.138		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.162		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	21.4		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.20		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.50		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	11.7		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	23.6		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	12.1		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.9		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.80		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-19
Client ID: 3664|2021|ECR-B|412|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/04/21 05:07
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.139		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.125		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.132		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	43.6		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.8		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	7.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	14.2		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	8.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.00		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

SAMPLE RESULTS

Lab ID: L2151380-20
Client ID: 3664|2021|ECR-B|414|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 11:20
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.114		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.113		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.114		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.30		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.10		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Coarse Sand	11.7		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Medium Sand	42.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Fine Sand	25.3		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.90		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.7		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.70		%	0.100	NA	1	-	11/01/21 13:00	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151380
Report Date: 11/22/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-10 Batch: WG1567680-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/04/21 11:03	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 11,13-14,16 Batch: WG1568073-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/06/21 12:20	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 12,15,17-20 Batch: WG1568131-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP

Lab Control Sample Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 Batch: WG1567680-2								
Total Organic Carbon (Rep1)	102		-		75-125	-		25
Total Organic Carbon (Rep2)	96		-		75-125	-		25
Total Organic Carbon (Average)	99		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11,13-14,16 Batch: WG1568073-2								
Total Organic Carbon (Rep1)	110		-		75-125	-		25
Total Organic Carbon (Rep2)	106		-		75-125	-		25
Total Organic Carbon (Average)	108		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 12,15,17-20 Batch: WG1568131-2								
Total Organic Carbon (Rep1)	104		-		75-125	-		25
Total Organic Carbon (Rep2)	101		-		75-125	-		25
Total Organic Carbon (Average)	103		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1567680-4 QC Sample: L2151380-03 Client ID: 3664|2021|ECR-C|1207|SED|01												
Total Organic Carbon (Rep1)	0.155	0.664	0.849	104		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.123	0.643	0.810	107		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 11,13-14,16 QC Batch ID: WG1568073-4 QC Sample: L2151380-11 Client ID: 3664|2021|ECR-B|346|SED|01												
Total Organic Carbon (Rep1)	0.220	0.701	0.897	96		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.289	0.866	1.03	86		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 12,15,17-20 QC Batch ID: WG1568131-4 QC Sample: L2156454-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	0.086	0.647	0.768	105		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.074	0.661	0.818	112		-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151380
Report Date: 11/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1565633-1 QC Sample: L2151380-12 Client ID: 3664|2021|ECR-B|348|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	ND	%	NC		20
Granule (2.0-4.0 mm)	0.200	0.700	%	**111**	Q	20
% Very Coarse Sand	3.00	0.800	%	**116**	Q	20
% Coarse Sand	5.70	4.90	%	15		20
% Medium Sand	16.5	16.7	%	1		20
% Fine Sand	9.40	8.20	%	14		20
% Very Fine Sand	0.900	4.40	%	**132**	Q	20
Silt - (3.9-62.5 um)	35.5	56.0	%	**45**	Q	20
Clay - (<3.9 um)	28.8	8.30	%	**111**	Q	20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1567680-3 QC Sample: L2151380-03 Client ID: 3664|2021|ECR-C|1207|SED|01						
Total Organic Carbon (Rep1)	0.155	0.144	%	7		25
Total Organic Carbon (Rep2)	0.123	0.186	%	**41**	Q	25
Total Organic Carbon (Average)	0.139	0.165	%	17		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151380
Report Date: 11/22/21

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 11,13-14,16 3664|2021|ECR-B|346|SED|01	QC Batch ID: WG1568073-3	QC Sample: L2151380-11	Client ID:			
Total Organic Carbon (Rep1)	0.220	0.190	%	15		25
Total Organic Carbon (Rep2)	0.289	0.155	%	**60**	Q	25
Total Organic Carbon (Average)	0.254	0.172	%	**38**	Q	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 12,15,17-20	QC Batch ID: WG1568131-3	QC Sample: L2156454-01	Client ID: DUP Sample			
Total Organic Carbon (Rep1)	0.086	0.075	%	14		25
Total Organic Carbon (Rep2)	0.074	0.069	%	7		25
Total Organic Carbon (Average)	0.080	0.072	%	11		25

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
C	Absent
D	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151380-01A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151380-01B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-02A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-02B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-03A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-03B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-04A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151380-04B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11222113:50

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151380-05A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151380-05B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-06A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151380-06B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-07A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-07B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-08A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151380-08B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-09A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151380-09B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11222113:50

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151380-10A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151380-10B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-11A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-11B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-12A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151380-12B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-13A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-13B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-14A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151380-14B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11222113:50

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151380-15A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151380-15B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-16A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-16B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-17A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151380-17B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-18A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151380-18B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151380-19A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151380-19B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Serial_No:11222113:50

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151380
Report Date: 11/22/21

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151380-20A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151380-20B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151380
Project Number:	3664	**Report Date:**	11/22/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

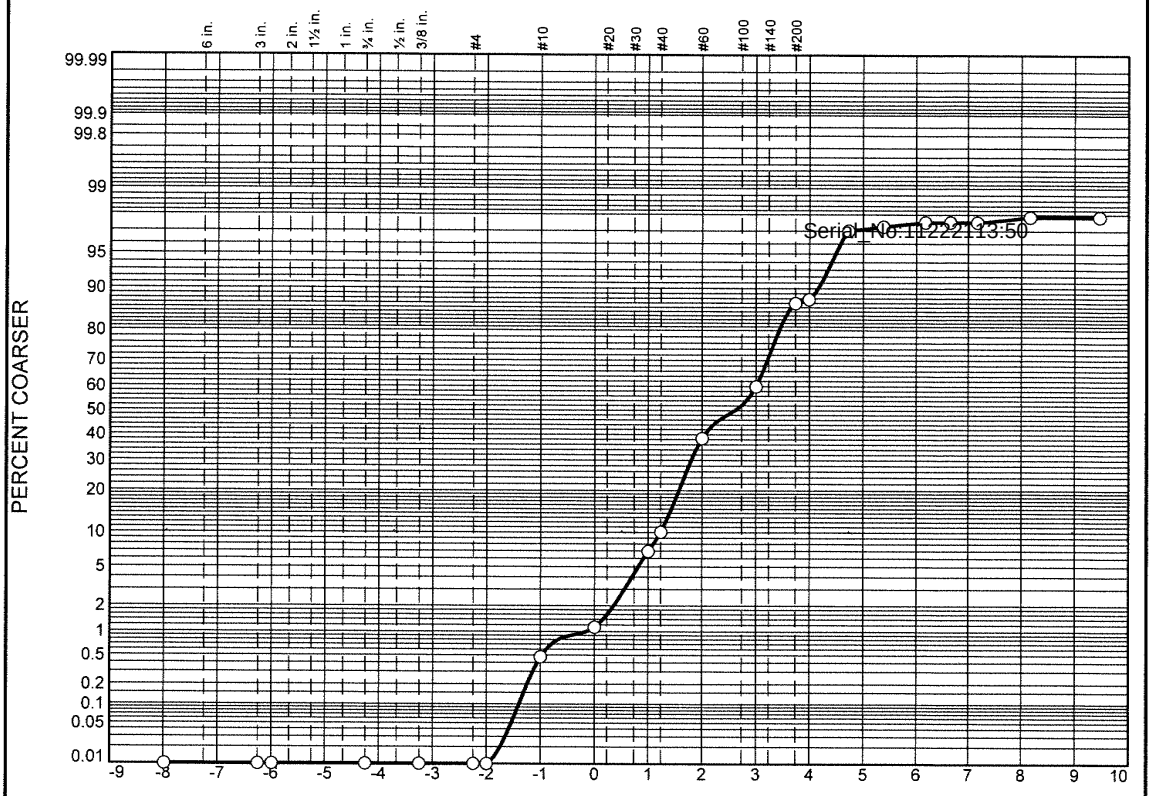
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	0.6	5.8	31.5	21.5	28.0	9.3	0.3	0.1	0.2	2.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3697	0.2419	0.1632	0.1079	0.0822	0.0557	0.86	4.35

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|219|SED|02 **Sample No.:** L2151380-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|219|SED|02

Sample Number: L2151380-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 50.65
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
50.65	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.24	0.00	99.5
		#18	0.33	0.00	98.9
		#35	2.93	0.00	93.1
		#40	1.58	0.00	90.0
		#60	14.38	0.00	61.6
		#120	10.87	0.00	40.1
		#200	13.71	0.00	13.1
		#230	0.43	0.00	12.2

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.2
Weight of hydrometer sample =35.04
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0377	3.0
5.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0240	2.7
15.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0139	2.4
30.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0098	2.4
60.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0070	2.4
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	2.1
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	2.1

Fractional Components

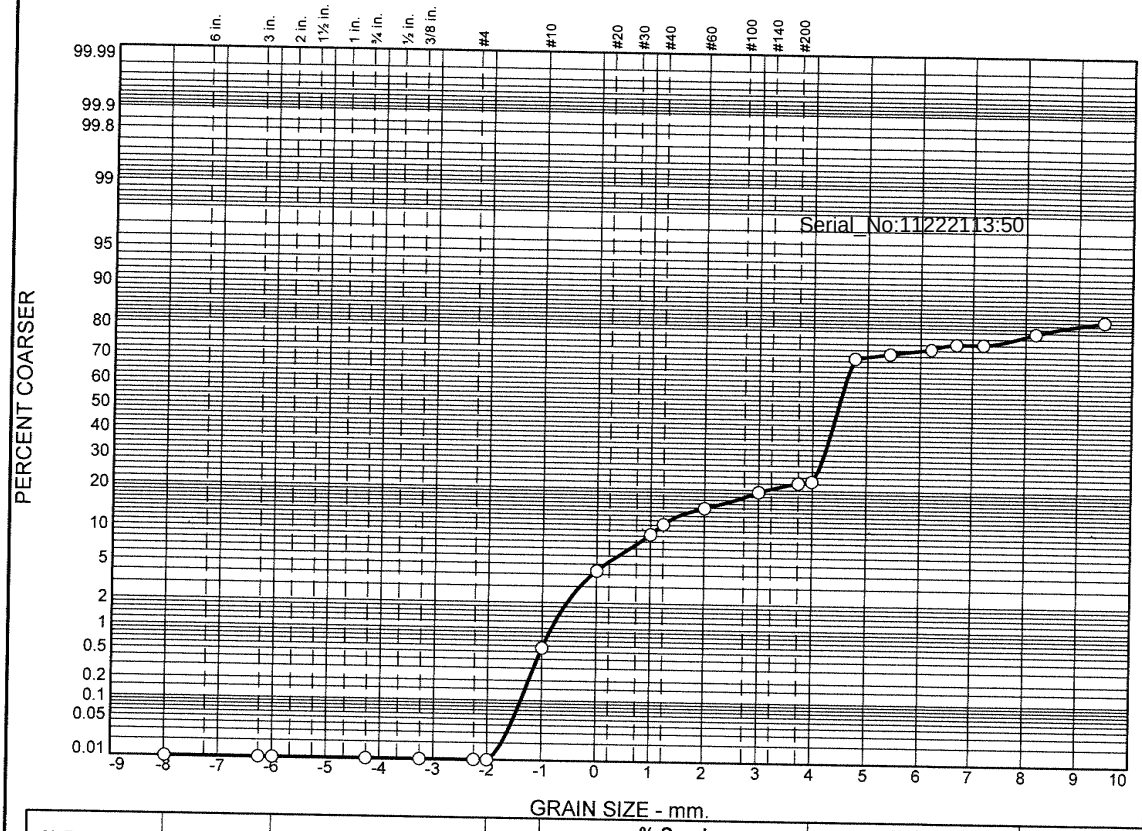
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	0.6	5.8	31.5	21.5	28.0	87.4	9.3	0.3	0.1	0.2	9.9	2.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0446	0.0557	0.0822	0.0925	0.1079	0.1248	0.1632	0.2419	0.3360	0.3697	0.4255	0.5684

Fineness Modulus	C_u	C_c
0.85	4.35	0.86

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.6	3.7	5.0	5.6	4.5	3.5	48.7	2.4	2.2	2.7	21.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2426	0.0498	0.0457	0.0373				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|221|SED|01 **Sample No.:** L2151380-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|221|SED|01

Sample Number: L2151380-02

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 19.52
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
19.52	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.11	0.00	99.4
		#18	0.73	0.00	95.7
		#35	0.97	0.00	90.7
		#40	0.37	0.00	88.8
		#60	0.72	0.00	85.1
		#120	0.88	0.00	80.6
		#200	0.55	0.00	77.8
		#230	0.10	0.00	77.3

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 77.3
Weight of hydrometer sample =35.55
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0085	1.0083	0.0139	8.5	14.0	0.0367	29.1
5.00	18.8	1.0080	1.0078	0.0139	8.0	14.2	0.0233	27.3
15.00	18.8	1.0075	1.0073	0.0139	7.5	14.3	0.0135	25.6
30.00	18.8	1.0070	1.0068	0.0139	7.0	14.4	0.0096	23.8
60.00	18.8	1.0070	1.0068	0.0139	7.0	14.4	0.0068	23.8
240.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0034	20.3
1440.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0014	16.8

Fractional Components

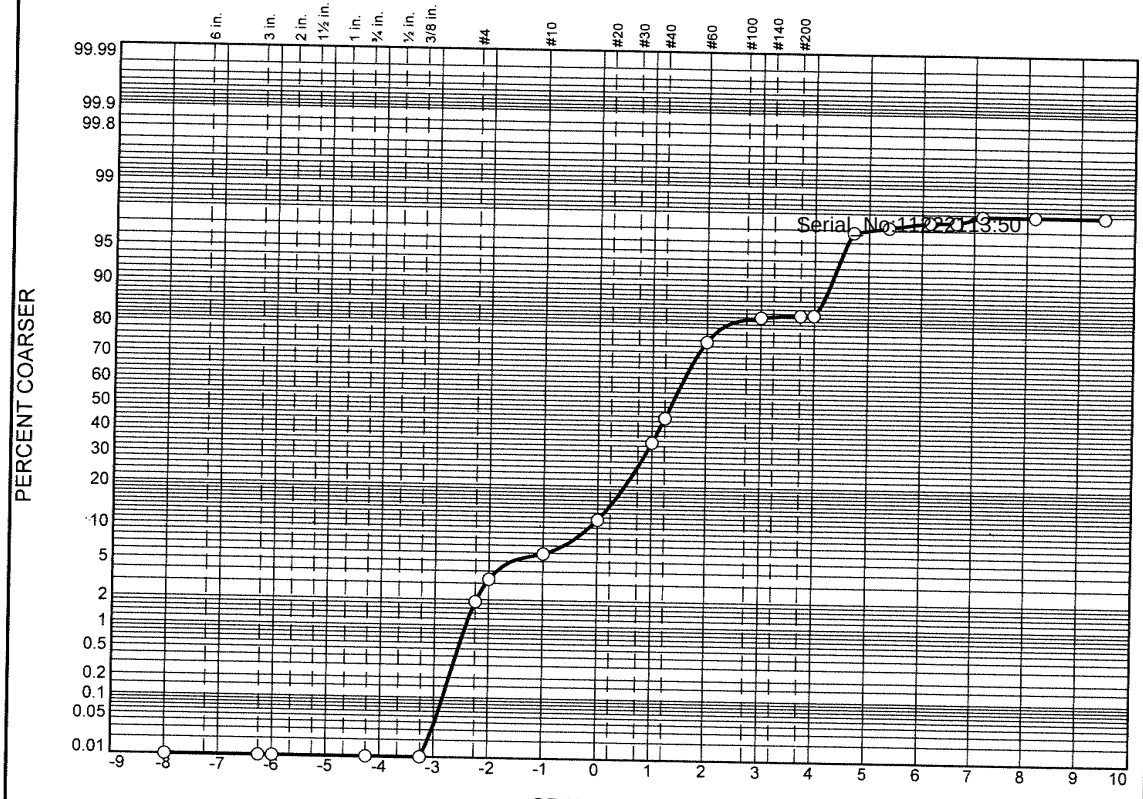
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.6	3.7	5.0	5.6	4.5	3.5	22.3	48.7	2.4	2.2	2.7	56.0	21.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0032	0.0373	0.0419	0.0457	0.0498	0.1123	0.2426	0.4692	0.8919

Fineness Modulus
0.43

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.3	2.6	5.7	23.7	40.1	7.5	0.9	13.2	0.5	0.3	0.1	2.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8412	0.4614	0.3956	0.2853	0.0592	0.0512	3.44	9.00

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-C|1207|SED|01 **Sample No.:** L2151380-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-C|1207|SED|01
Sample Number: L2151380-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 72.36
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
72.36	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	1.37	0.00	98.1
		#5	1.02	0.00	96.7
		#10	1.88	0.00	94.1
		#18	4.09	0.00	88.4
		#35	17.16	0.00	64.7
		#40	7.20	0.00	54.8
		#60	21.82	0.00	24.6
		#120	5.47	0.00	17.1
		#200	0.46	0.00	16.4
		#230	0.04	0.00	16.4

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.4
Weight of hydrometer sample =35.68
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0381	3.2
5.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0242	2.8
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	2.4
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	2.4
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.1
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.1
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.1

Fractional Components

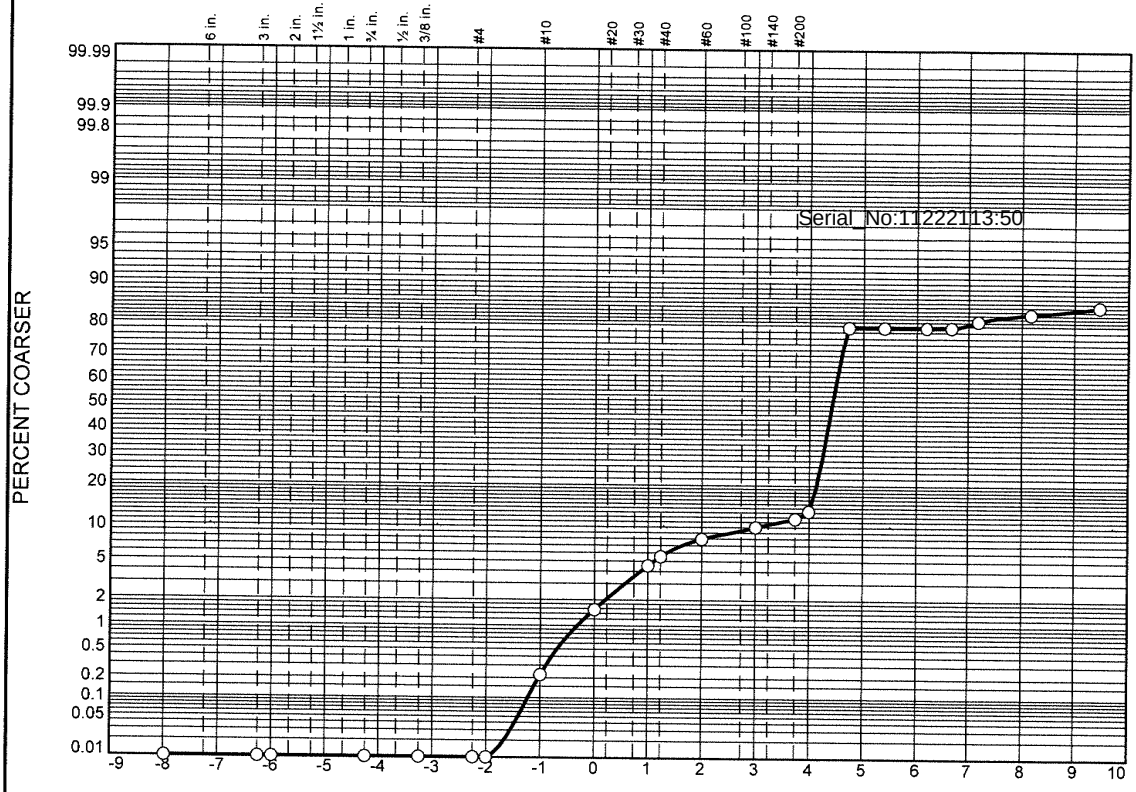
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.3	2.6	5.7	23.7	40.1	7.5	0.9	77.9	13.2	0.5	0.3	0.1	14.1	2.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0432	0.0512	0.0592	0.2042	0.2853	0.3403	0.3956	0.4614	0.7047	0.8412	1.1110	2.9674

Fineness Modulus	C_u	C_c
1.93	9.00	3.44

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	1.3	3.0	3.4	2.1	3.5	65.8	0.0	1.2	2.5	17.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0606	0.0493	0.0467	0.0414	0.0015			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|245|SED|01 **Sample No.:** L2151380-04

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|245|SED|01

Sample Number: L2151380-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 27.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
27.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.06	0.00	99.8
		#18	0.36	0.00	98.5
		#35	0.81	0.00	95.5
		#40	0.27	0.00	94.5
		#60	0.66	0.00	92.1
		#120	0.56	0.00	90.0
		#200	0.44	0.00	88.4
		#230	0.44	0.00	86.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 86.8
Weight of hydrometer sample =35.86
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0377	20.7
5.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0239	20.7
15.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0138	20.7
30.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0097	20.7
60.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0069	18.7
240.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0035	16.8
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	14.8

Fractional Components

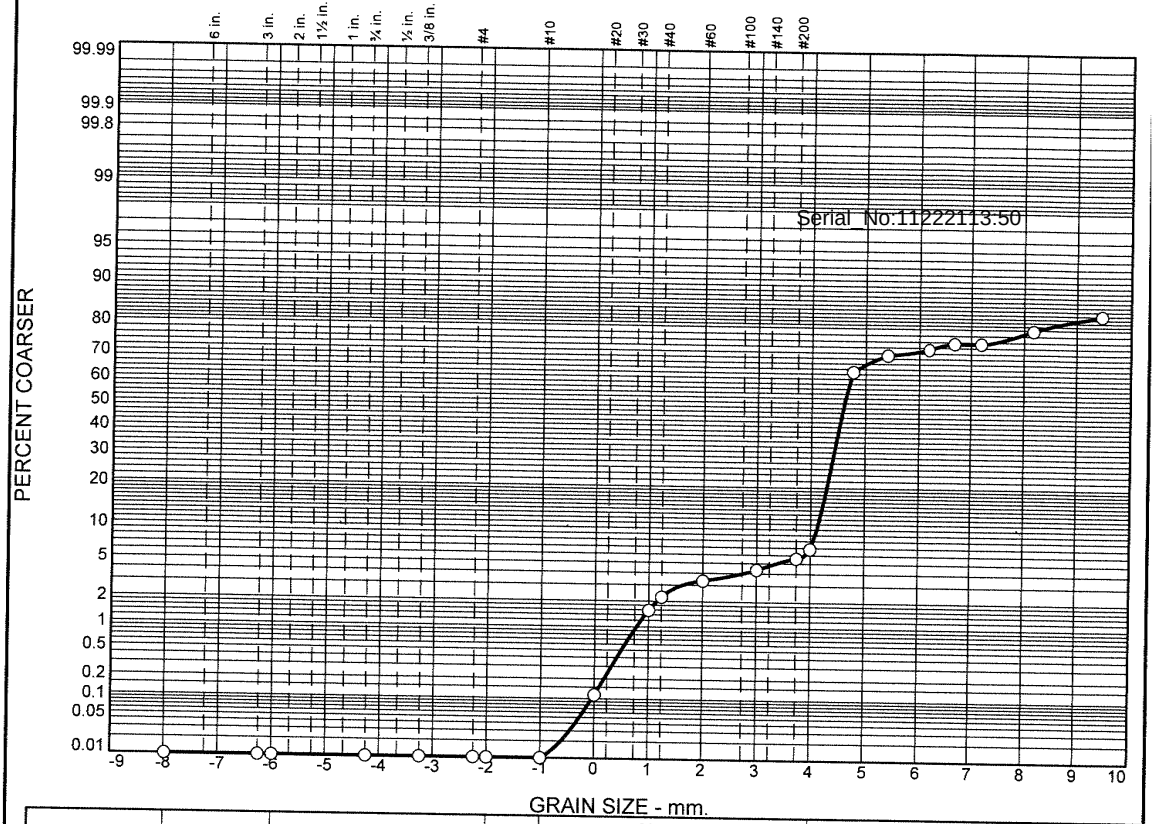
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	1.3	3.0	3.4	2.1	3.5	13.3	65.8	0.0	1.2	2.5	69.5	17.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0015	0.0084	0.0414	0.0442	0.0467	0.0493	0.0568	0.0606	0.1252	0.4624

Serial_No:11222113:50

Fineness Modulus
0.21

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.0	0.1	1.5	1.7	1.0	2.7	60.8	4.8	2.8	3.3	21.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0535	0.0442	0.0414	0.0263				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|247|SED|01 **Sample No.:** L2151380-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|247|SED|01

Sample Number: L2151380-05

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 26.13
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
26.13	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.00	0.00	100.0
		#18	0.03	0.00	99.9
		#35	0.38	0.00	98.4
		#40	0.17	0.00	97.8
		#60	0.29	0.00	96.7
		#120	0.26	0.00	95.7
		#200	0.33	0.00	94.4
		#230	0.32	0.00	93.2

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 93.2
Weight of hydrometer sample =35.38
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0085	1.0083	0.0139	8.5	14.0	0.0367	35.2
5.00	18.8	1.0070	1.0068	0.0139	7.0	14.4	0.0235	28.8
15.00	18.8	1.0065	1.0063	0.0139	6.5	14.6	0.0137	26.7
30.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0097	24.6
60.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0069	24.6
240.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0035	20.4
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	16.2

Fractional Components

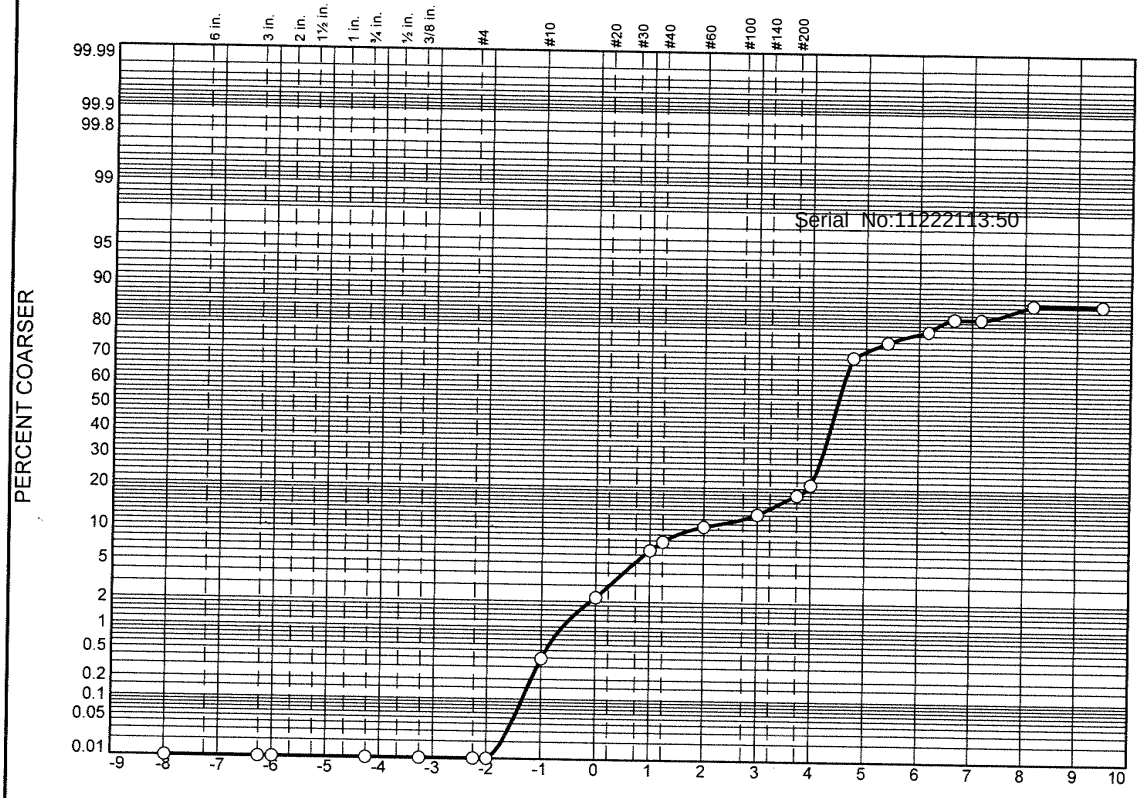
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.0	0.1	1.5	1.7	1.0	2.7	7.0	60.8	4.8	2.8	3.3	71.7	21.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0033	0.0263	0.0385	0.0414	0.0442	0.0509	0.0535	0.0576	0.0975

Fineness Modulus
0.08

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.4	1.8	4.4	3.9	2.6	8.2	51.5	6.0	4.1	3.0	14.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1010	0.0496	0.0455	0.0370	0.0045			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|302|SED|01 **Sample No.:** L2151380-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|302|SED|01
Sample Number: L2151380-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.27
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.27	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.13	0.00	99.6
		#18	0.61	0.00	97.8
		#35	1.44	0.00	93.4
		#40	0.42	0.00	92.2
		#60	0.88	0.00	89.5
		#120	0.89	0.00	86.9
		#200	1.61	0.00	82.0
		#230	1.01	0.00	79.0

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 79.0
Weight of hydrometer sample =35.78
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0085	1.0083	0.0139	8.5	14.0	0.0367	29.5
5.00	18.8	1.0070	1.0068	0.0139	7.0	14.4	0.0235	24.2
15.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0137	20.6
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	17.1
60.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0069	17.1
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	13.5
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	13.5

Fractional Components

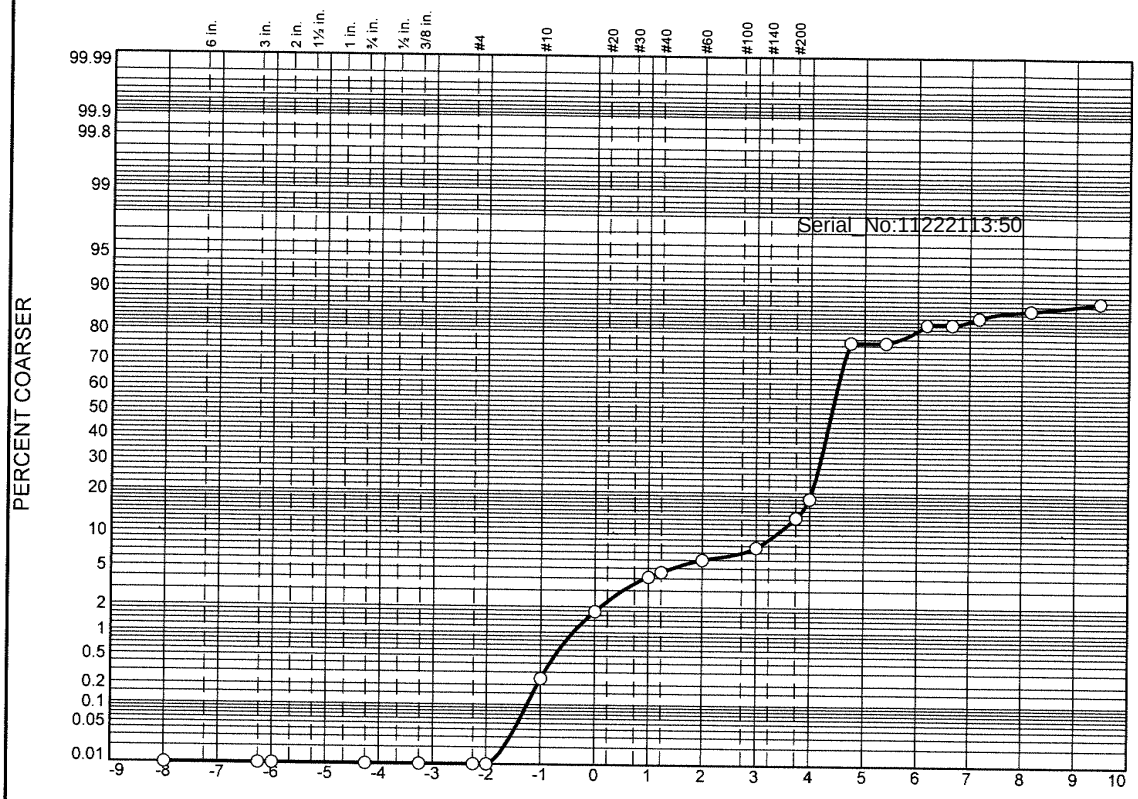
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.4	1.8	4.4	3.9	2.6	8.2	20.9	51.5	6.0	4.1	3.0	64.6	14.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0045	0.0131	0.0370	0.0417	0.0455	0.0496	0.0650	0.1010	0.2855	0.6098

Fineness Modulus
0.29

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	1.6	2.3	1.9	1.7	11.0	58.2	3.8	2.7	2.5	14.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0689	0.0509	0.0476	0.0408	0.0059			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|304\|SED\|01 **Sample No.:** L2151380-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|304|SED|01

Sample Number: L2151380-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 36.93
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.93	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.09	0.00	99.8
		#18	0.56	0.00	98.2
		#35	0.87	0.00	95.9
		#40	0.17	0.00	95.4
		#60	0.53	0.00	94.0
		#120	0.64	0.00	92.3
		#200	2.09	0.00	86.6
		#230	1.78	0.00	81.8

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 81.8
Weight of hydrometer sample =35.89
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0065	1.0063	0.0139	6.5	14.6	0.0374	23.1
5.00	18.8	1.0065	1.0063	0.0139	6.5	14.6	0.0237	23.1
15.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0138	17.6
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	17.6
60.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0070	15.8
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	14.0
1440.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0014	12.1

Fractional Components

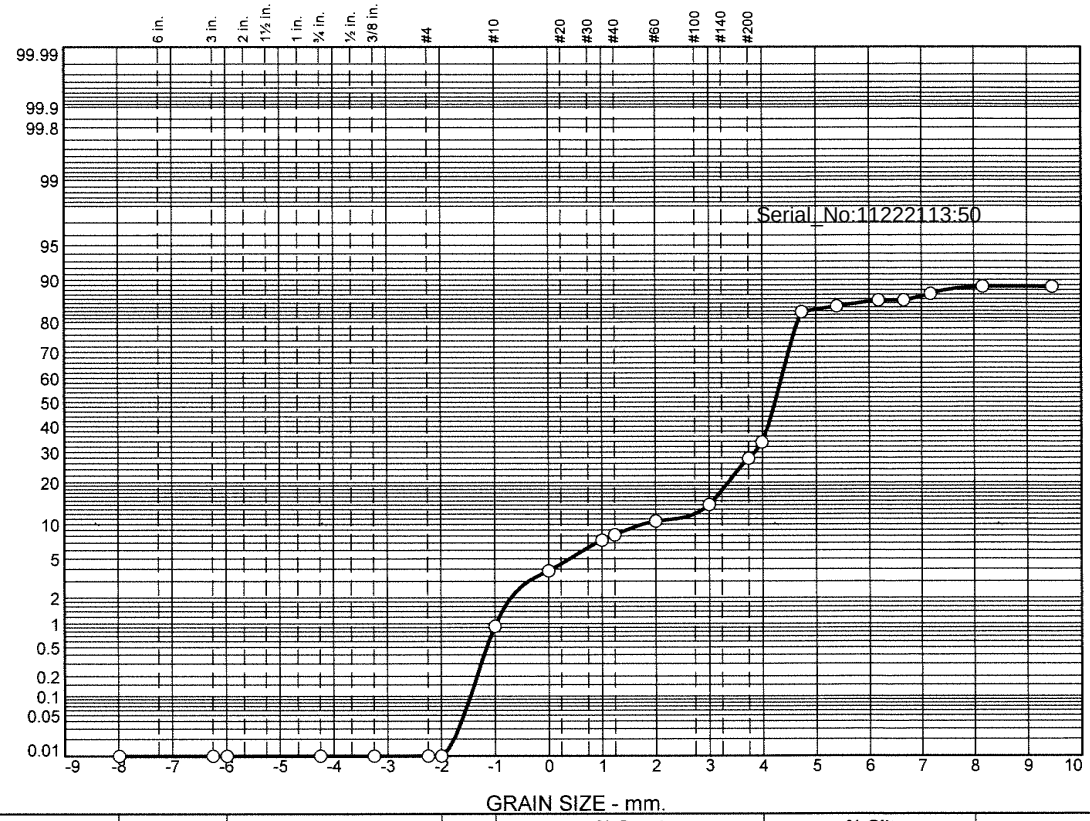
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	1.6	2.3	1.9	1.7	11.0	18.5	58.2	3.8	2.7	2.5	67.2	14.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0059	0.0165	0.0408	0.0444	0.0476	0.0509	0.0611	0.0689	0.0962	0.3670

Fineness Modulus
0.17

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.9	2.9	3.6	3.1	3.6	20.0	49.3	2.0	1.2	2.0	11.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1187	0.0580	0.0529	0.0446	0.0183			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|306|SED|01 **Sample No.:** L2151380-08

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|306|SED|01

Sample Number: L2151380-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 46.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
46.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.43	0.00	99.1
		#18	1.34	0.00	96.2
		#35	1.63	0.00	92.6
		#40	0.38	0.00	91.8
		#60	1.09	0.00	89.5
		#120	1.63	0.00	85.9
		#200	6.29	0.00	72.3
		#230	2.75	0.00	66.3

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 66.3
Weight of hydrometer sample =35.97
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0060	1.0058	0.0139	6.0	14.7	0.0376	17.2
5.00	18.8	1.0055	1.0053	0.0139	5.5	14.8	0.0239	15.8
15.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0138	14.3
30.00	18.8	1.0050	1.0048	0.0139	5.0	15.0	0.0098	14.3
60.00	18.8	1.0045	1.0043	0.0139	4.5	15.1	0.0070	12.8
240.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0035	11.3
1440.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0014	11.3

Fractional Components

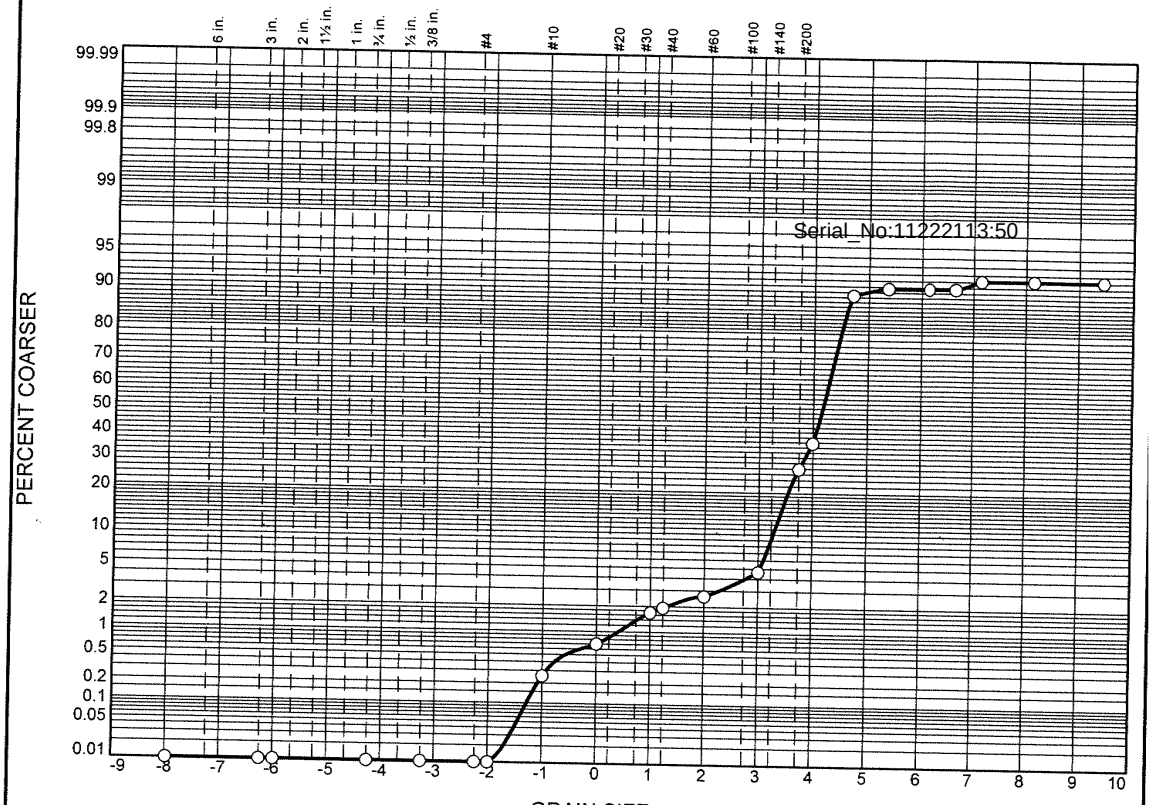
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.9	2.9	3.6	3.1	3.6	20.0	33.2	49.3	2.0	1.2	2.0	54.5	11.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0183	0.0396	0.0446	0.0487	0.0529	0.0580	0.0973	0.1187	0.2934	0.7625

Fineness Modulus
0.32

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.3	0.4	1.0	0.9	2.1	33.6	51.8	0.6	1.0	0.4	7.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.0932	0.0613	0.0561	0.0484	0.0416	0.0320	1.19	1.91

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|308|SED|01 **Sample No.:** L2151380-09

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|308|SED|01

Sample Number: L2151380-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 47.33
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
47.33	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.12	0.00	99.7
		#18	0.21	0.00	99.3
		#35	0.47	0.00	98.3
		#40	0.11	0.00	98.1
		#60	0.32	0.00	97.4
		#120	0.98	0.00	95.3
		#200	10.96	0.00	72.2
		#230	4.63	0.00	62.4

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 62.4
Weight of hydrometer sample =35.71
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0382	10.7
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	9.3
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	9.3
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	9.3
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	7.9
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	7.9
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	7.9

Fractional Components

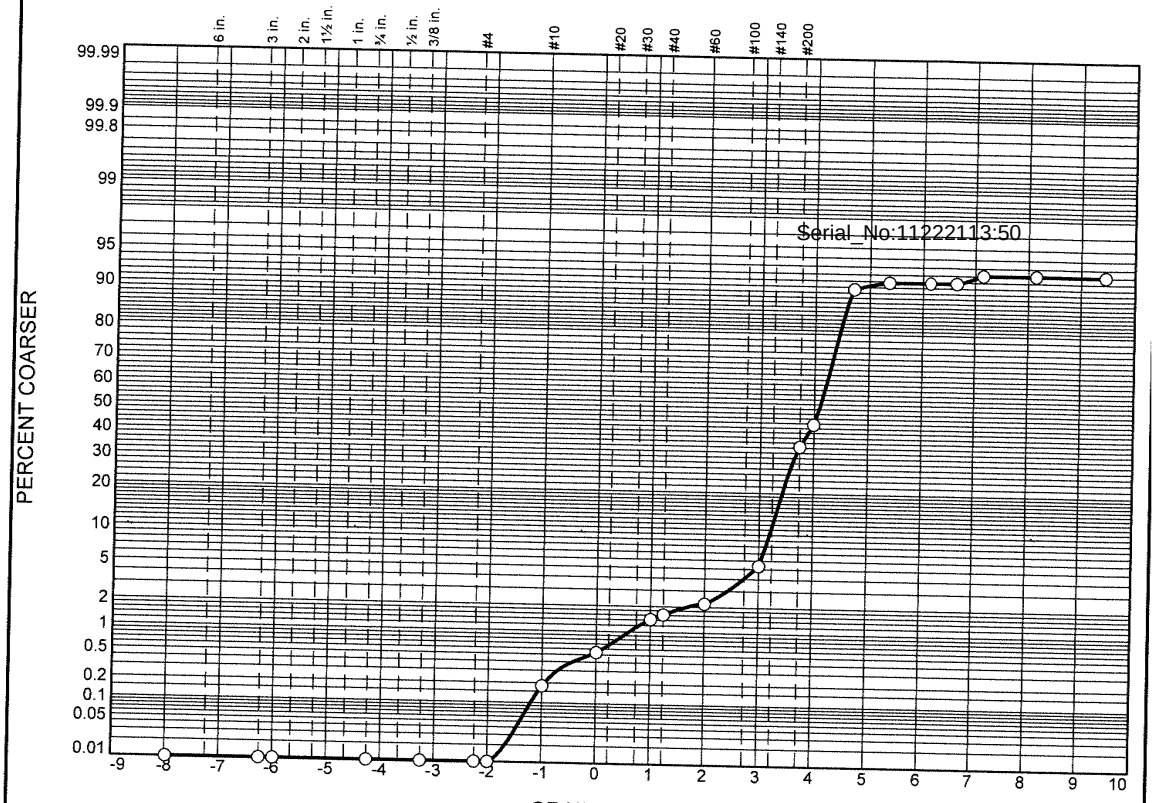
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.3	0.4	1.0	0.9	2.1	33.6	38.0	51.8	0.6	1.0	0.4	53.8	7.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0320	0.0416	0.0442	0.0484	0.0521	0.0561	0.0613	0.0856	0.0932	0.1032	0.1226

Fineness Modulus	C_u	C_c
0.09	1.91	1.19

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.3	0.9	0.8	3.2	40.6	45.3	0.5	0.9	0.3	7.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.1000	0.0696	0.0597	0.0502	0.0428	0.0389	0.93	1.79

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|310|SED|01 **Sample No.:** L2151380-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|310|SED|01

Sample Number: L2151380-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 50.13
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
50.13	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.09	0.00	99.8
		#18	0.18	0.00	99.5
		#35	0.44	0.00	98.6
		#40	0.10	0.00	98.4
		#60	0.28	0.00	97.8
		#120	1.60	0.00	94.6
		#200	15.52	0.00	63.7
		#230	4.57	0.00	54.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 54.6
Weight of hydrometer sample =35.47
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0382	9.4
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	8.2
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	8.2
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	8.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	7.0
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	7.0
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	7.0

Fractional Components

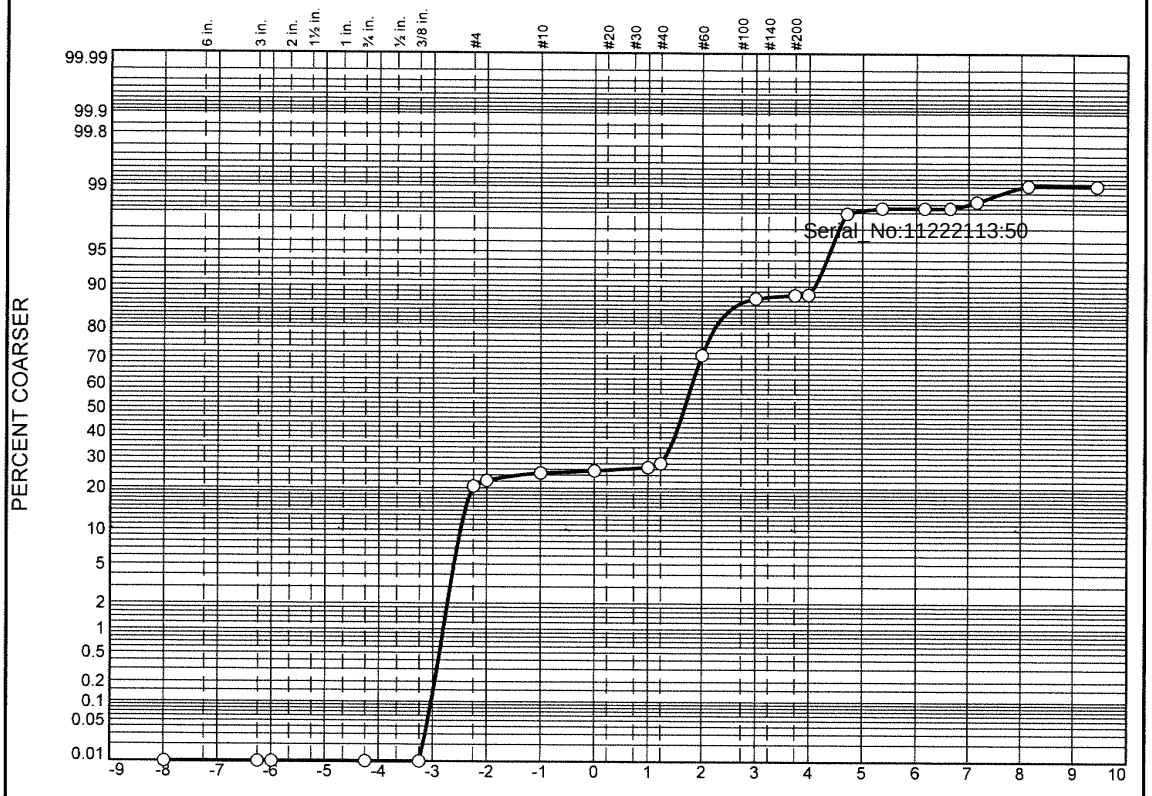
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.3	0.9	0.8	3.2	40.6	45.8	45.3	0.5	0.9	0.3	47.0	7.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0389	0.0428	0.0456	0.0502	0.0545	0.0597	0.0696	0.0933	0.1000	0.1092	0.1306

Fineness Modulus	C_u	C_c
0.08	1.79	0.93

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			22.3	2.5	0.7	1.2	44.4	16.5	0.9	9.6	0.1	0.2	0.6	1.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			5.2246	0.3474	0.3133	0.2538	0.1728	0.0578	3.21	6.01

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|346|SED|01 **Sample No.:** L2151380-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|346|SED|01

Sample Number: L2151380-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 85.81
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
85.81	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	17.62	0.00	79.5
		#5	1.48	0.00	77.7
		#10	2.14	0.00	75.2
		#18	0.64	0.00	74.5
		#35	1.07	0.00	73.3
		#40	1.10	0.00	72.0
		#60	36.99	0.00	28.9
		#120	14.12	0.00	12.4
		#200	0.58	0.00	11.7
		#230	0.10	0.00	11.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.6
Weight of hydrometer sample =35.02
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0040	1.0038	0.0139	4.0	15.2	0.0382	2.0
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	1.8
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	1.8
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	1.8
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.5
240.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0036	1.0
1440.00	18.8	1.0020	1.0018	0.0139	2.0	15.8	0.0014	1.0

Fractional Components

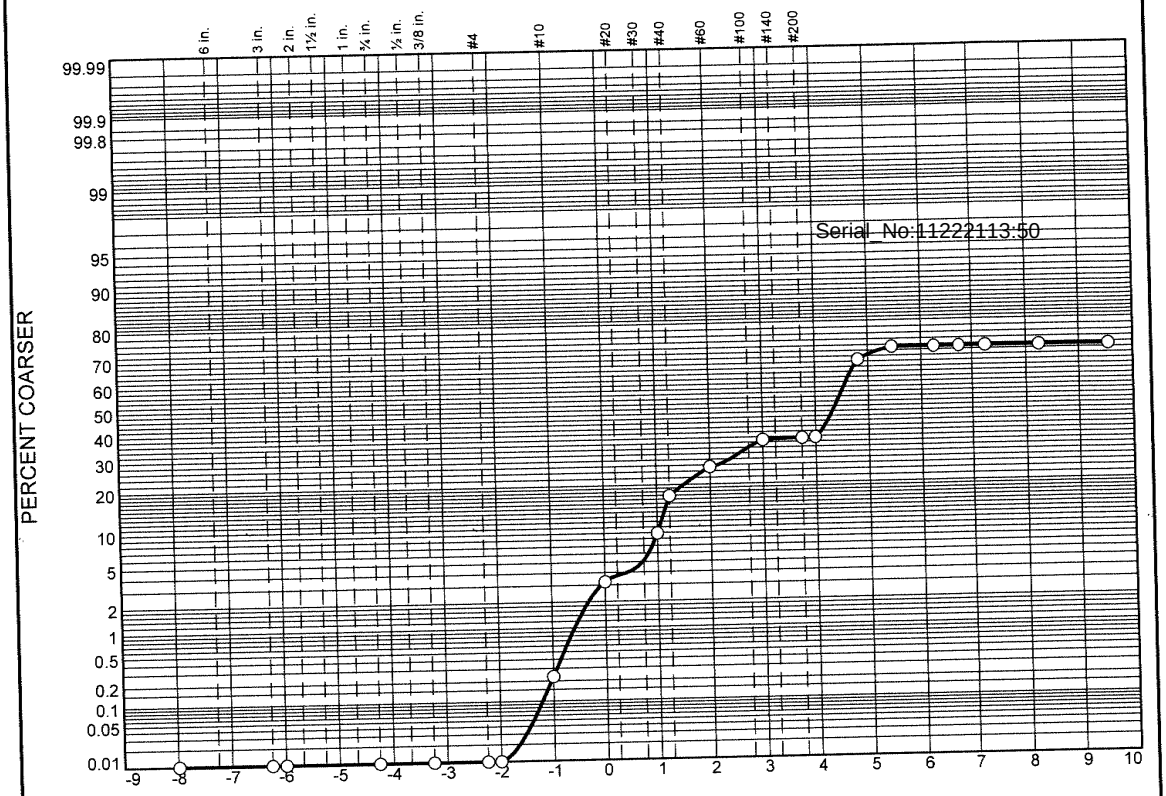
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		22.3	2.5	0.7	1.2	44.4	16.5	0.9	63.7	9.6	0.1	0.2	0.6	10.5	1.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0476	0.0578	0.1728	0.2116	0.2538	0.2841	0.3133	0.3474	4.8094	5.2246	5.6056	6.0967

Fineness Modulus	C_u	C_c
2.38	6.01	3.21

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	3.0	5.7	16.5	9.4	0.9	32.9	2.6	0.0	0.0	28.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4401	0.0553	0.0470	0.0271				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|348\|SED\|01 **Sample No.:** L2151380-12

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|348|SED|01

Sample Number: L2151380-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 25.99
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
25.99	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.06	0.00	99.8
		#18	0.78	0.00	96.8
		#35	1.47	0.00	91.1
		#40	2.08	0.00	83.1
		#60	2.22	0.00	74.6
		#120	2.44	0.00	65.2
		#200	0.15	0.00	64.6
		#230	0.03	0.00	64.5

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 64.5
Weight of hydrometer sample =35.30
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0115	1.0113	0.0139	11.5	13.3	0.0357	33.2
5.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0229	28.8
15.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0132	28.8
30.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0093	28.8
60.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0066	28.8
240.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0033	28.8
1440.00	18.8	1.0100	1.0098	0.0139	10.0	13.6	0.0013	28.8

Fractional Components

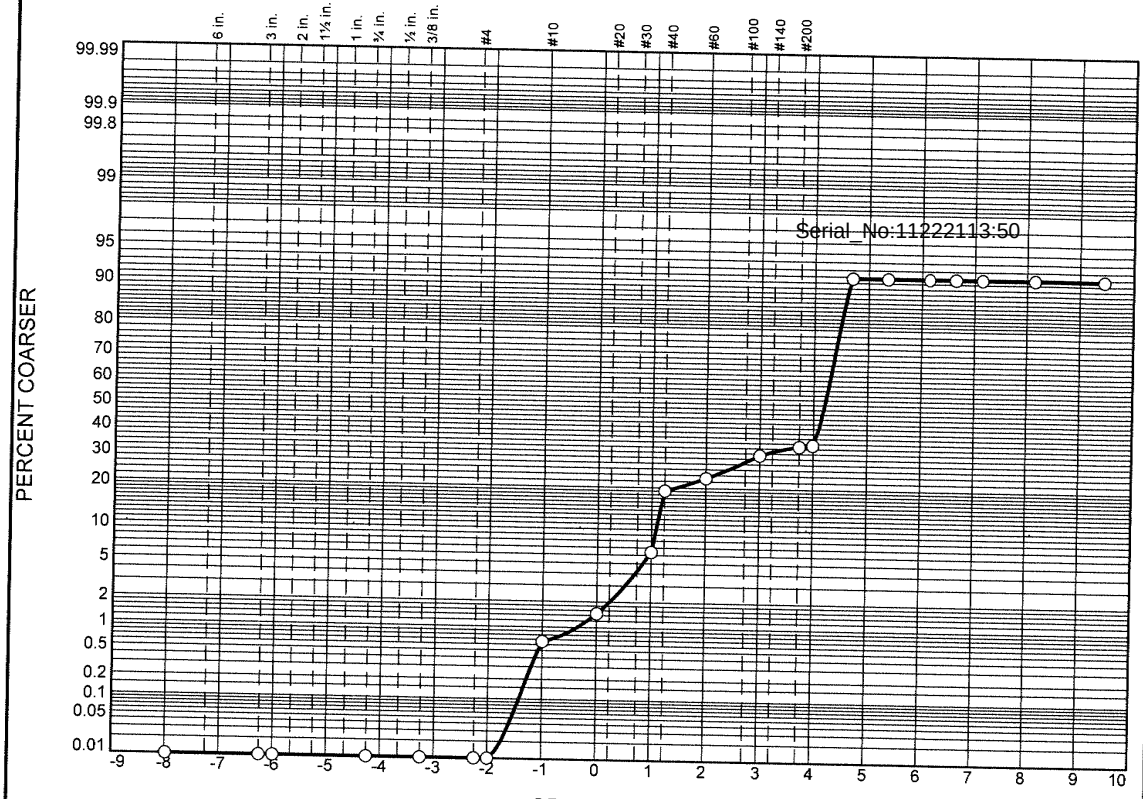
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	3.0	5.7	16.5	9.4	0.9	35.5	32.9	2.6	0.0	0.0	35.5	28.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0271	0.0406	0.0470	0.0553	0.3507	0.4401	0.4859	0.6088

Fineness Modulus
0.62

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.7	0.8	4.9	16.7	8.2	4.5	55.9	0.0	0.0	0.0	8.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4443	0.0593	0.0547	0.0483	0.0429	0.0400	0.98	1.48

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|348|SED|01 **Sample No.:** WG1565633-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|348|SED|01
Sample Number: WG1565633-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 25.90
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Serial_No:11222113:50

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
25.90	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.17	0.00	99.3
		#18	0.21	0.00	98.5
		#35	1.28	0.00	93.6
		#40	3.28	0.00	80.9
		#60	1.03	0.00	76.9
		#120	2.13	0.00	68.7
		#200	0.90	0.00	65.3
		#230	0.16	0.00	64.6

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 64.6
Weight of hydrometer sample =35.24
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	8.3
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	8.3
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	8.3
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	8.3
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	8.3
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	8.3
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	8.3

Fractional Components

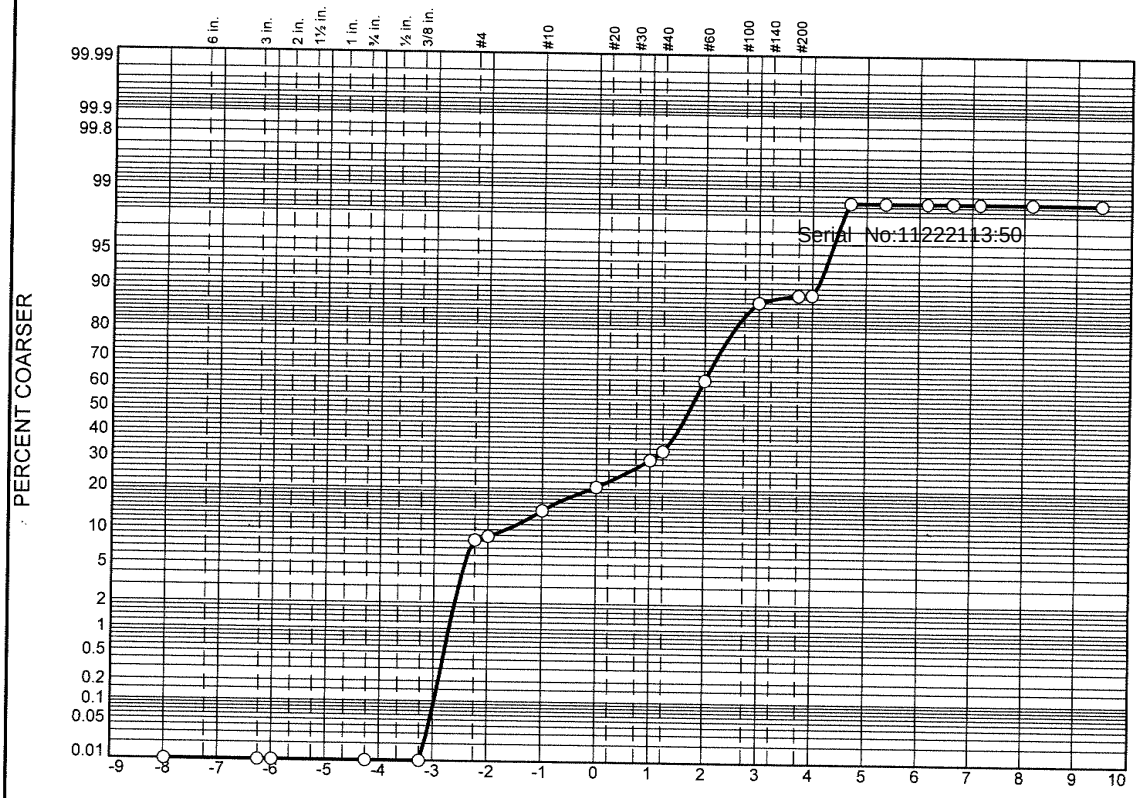
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.7	0.8	4.9	16.7	8.2	4.5	35.1	55.9	0.0	0.0	0.0	55.9	8.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0400	0.0429	0.0450	0.0483	0.0514	0.0547	0.0593	0.3670	0.4443	0.4714	0.5559

Fineness Modulus	C_u	C_c
0.56	1.48	0.98

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			8.8	5.2	6.5	9.1	32.4	25.1	1.7	9.7	0.0	0.0		1.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.8311	0.3576	0.3017	0.2172	0.1417	0.0591	2.23	6.05

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|350|SED|01 **Sample No.:** L2151380-13

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|350|SED|01

Sample Number: L2151380-13

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 86.37
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
86.37	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	7.06	0.00	91.8
		#5	0.55	0.00	91.2
		#10	4.52	0.00	86.0
		#18	5.58	0.00	79.5
		#35	7.86	0.00	70.4
		#40	2.90	0.00	67.0
		#60	25.12	0.00	38.0
		#120	21.61	0.00	12.9
		#200	1.34	0.00	11.4
		#230	0.09	0.00	11.3

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.3
Weight of hydrometer sample =35.00
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.5
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.5
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.5
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.5
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.5
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.5
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.5

Fractional Components

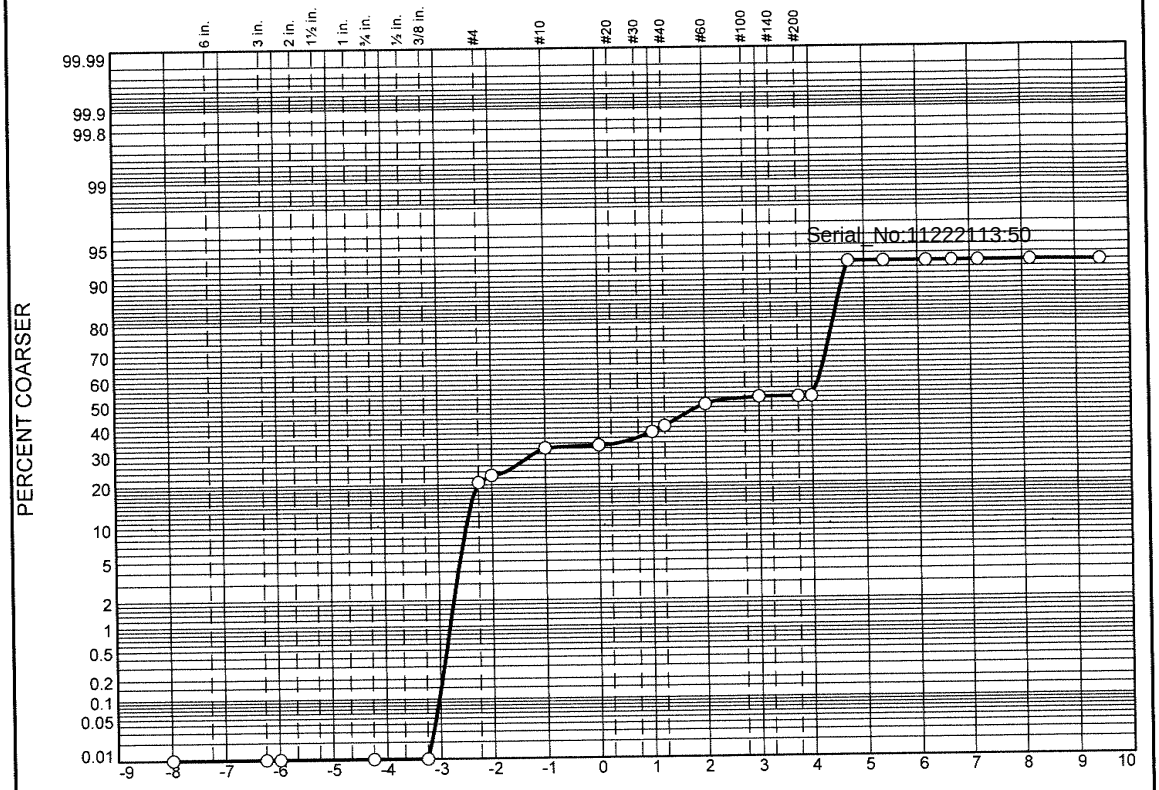
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		8.8	5.2	6.5	9.1	32.4	25.1	1.7	74.8	9.7	0.0	0.0		9.7	1.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0496	0.0591	0.1417	0.1713	0.2172	0.2584	0.3017	0.3576	1.0546	1.8311	3.1842	5.3984

Fineness Modulus	C_u	C_c
2.00	6.05	2.23

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			22.8	9.4	0.8	5.1	11.2	2.9	0.5	40.2	0.0	0.0	0.0	7.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			5.2259	0.4366	0.2333	0.0518	0.0448	0.0415	0.15	10.53

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|402|SED|01 **Sample No.:** L2151380-14

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|402|SED|01

Sample Number: L2151380-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 79.87
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
79.87	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	16.48	0.00	79.4
		#5	1.70	0.00	77.2
		#10	7.57	0.00	67.8
		#18	0.63	0.00	67.0
		#35	4.02	0.00	61.9
		#40	1.89	0.00	59.6
		#60	7.10	0.00	50.7
		#120	2.28	0.00	47.8
		#200	0.08	0.00	47.7
		#230	0.07	0.00	47.6

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 47.6
Weight of hydrometer sample =35.88
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	7.1
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	7.1
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	7.1
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	7.1
60.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0070	7.1
240.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0035	7.1
1440.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0014	7.1

Fractional Components

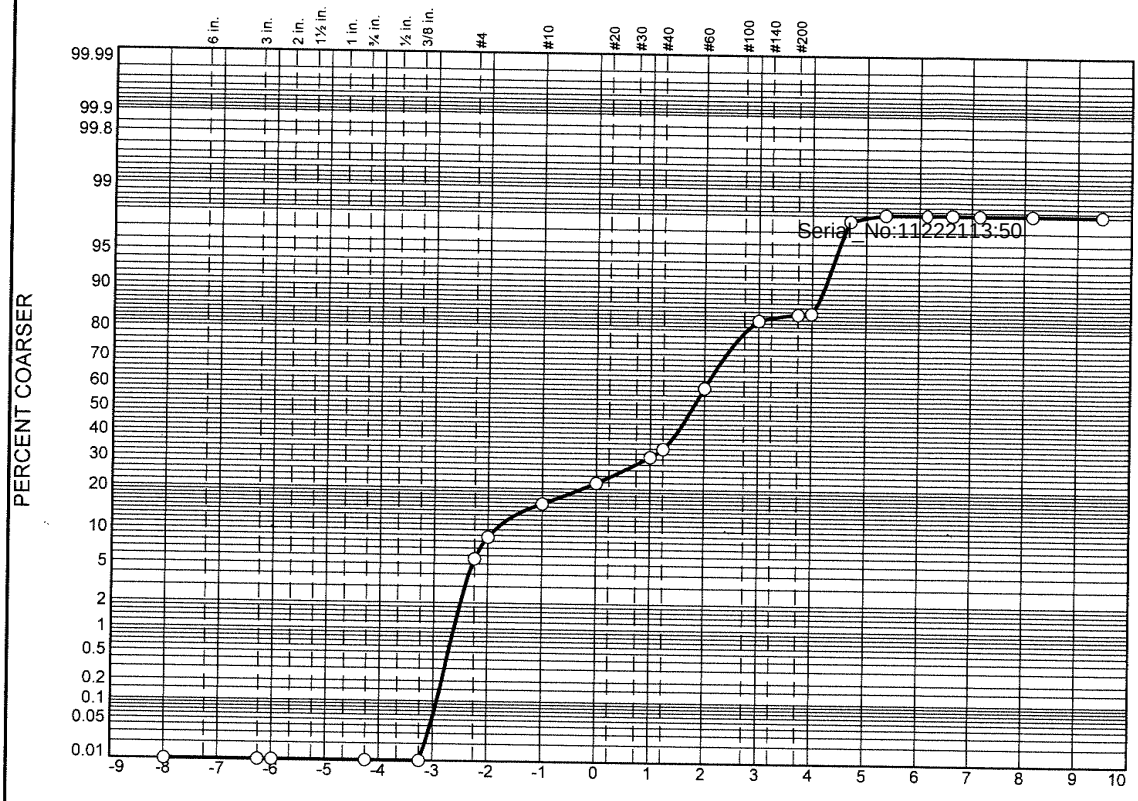
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		22.8	9.4	0.8	5.1	11.2	2.9	0.5	20.5	40.2	0.0	0.0	0.0	40.2	7.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0415	0.0448	0.0473	0.0518	0.0567	0.2333	0.4366	4.8181	5.2259	5.6047	6.0947

Fineness Modulus	C_u	C_c
2.17	10.53	0.15

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			8.7	7.0	6.1	9.0	28.2	23.7	2.1	13.1	0.1	0.0		2.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.2177	0.3575	0.2941	0.1991	0.0619	0.0533	2.08	6.71

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|404|SED|01 **Sample No.:** L2151380-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|404|SED|01
Sample Number: L2151380-15

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 78.17
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
78.17	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	4.38	0.00	94.4
		#5	2.41	0.00	91.3
		#10	5.52	0.00	84.3
		#18	4.72	0.00	78.2
		#35	7.01	0.00	69.2
		#40	2.41	0.00	66.2
		#60	19.70	0.00	41.0
		#120	18.52	0.00	17.3
		#200	1.32	0.00	15.6
		#230	0.19	0.00	15.3

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 15.3
Weight of hydrometer sample =35.46
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	2.3
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	2.0
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	2.0
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	2.0
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	2.0
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	2.0
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	2.0

Alpha Analytical

Fractional Components

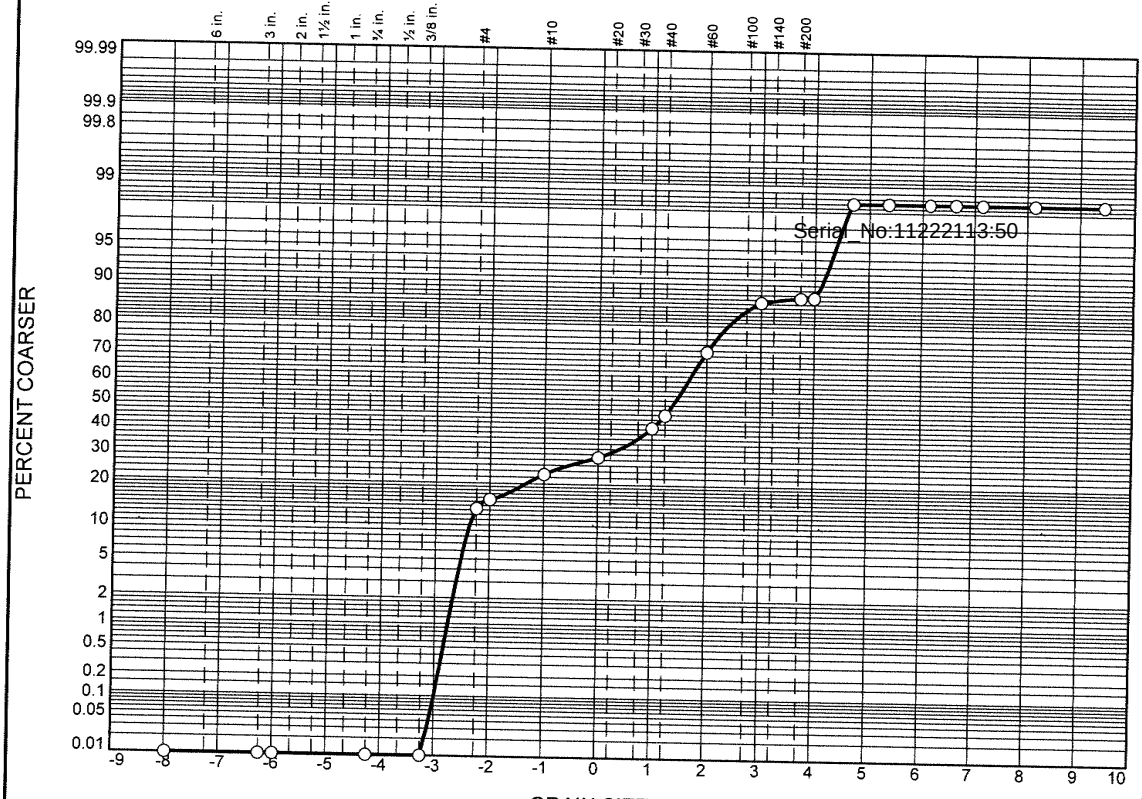
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		8.7	7.0	6.1	9.0	28.2	23.7	2.1	69.1	13.1	0.1	0.0		13.2	2.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0457	0.0533	0.0619	0.1455	0.1991	0.2455	0.2941	0.3575	1.1956	2.2177	3.6514	4.8804

Fineness Modulus	C_u	C_c
1.97	6.71	2.08

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			15.5	7.4	6.0	11.6	31.0	14.8	1.3	10.8	0.0	0.0	0.0	1.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.3561	0.5090	0.3856	0.2587	0.1422	0.0570	2.31	8.93

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664\|2021\|ECR-B\|406\|SED\|01 **Sample No.:** L2151380-16

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|406|SED|01

Sample Number: L2151380-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 78.30
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
78.30	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	10.40	0.00	86.7
		#5	1.73	0.00	84.5
		#10	5.80	0.00	77.1
		#18	4.71	0.00	71.1
		#35	9.06	0.00	59.5
		#40	4.15	0.00	54.2
		#60	20.10	0.00	28.5
		#120	11.62	0.00	13.7
		#200	0.84	0.00	12.6
		#230	0.09	0.00	12.5

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 12.5
Weight of hydrometer sample =35.59
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.6
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.6
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.6
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.6
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.6
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.6
1440.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0014	1.6

Fractional Components

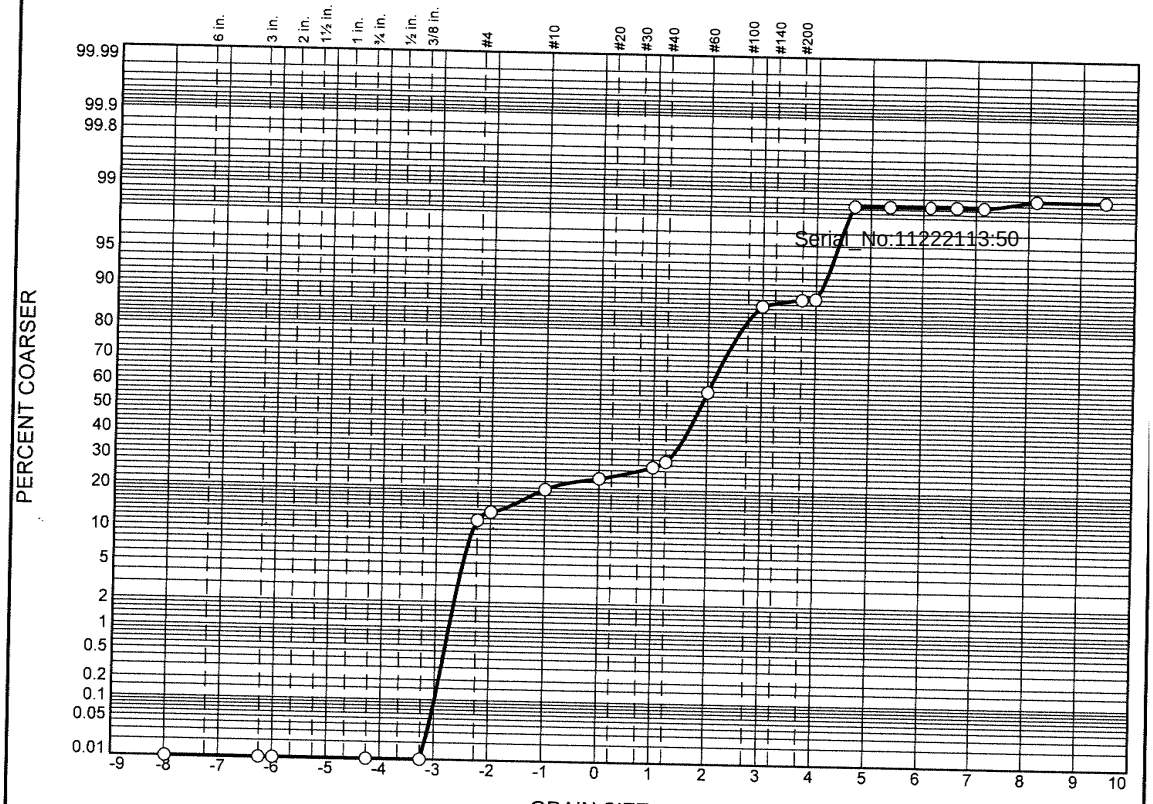
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		15.5	7.4	6.0	11.6	31.0	14.8	1.3	64.7	10.8	0.0	0.0	0.0	10.8	1.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0486	0.0570	0.1422	0.1908	0.2587	0.3170	0.3856	0.5090	2.5084	4.3561	5.1513	5.7561

Fineness Modulus	C_u	C_c
2.45	8.93	2.31

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			13.5	6.1	3.6	4.1	30.4	28.9	1.8	10.1	0.0	0.0	0.2	1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.1123	0.3267	0.2796	0.2048	0.1371	0.0584	2.20	5.60

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|408|SED|01 **Sample No.:** L2151380-17

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|408|SED|01

Sample Number: L2151380-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 99.10
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
99.10	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	11.52	0.00	88.4
		#5	1.81	0.00	86.5
		#10	6.09	0.00	80.4
		#18	3.56	0.00	76.8
		#35	4.03	0.00	72.7
		#40	1.97	0.00	70.8
		#60	28.18	0.00	42.3
		#120	28.68	0.00	13.4
		#200	1.47	0.00	11.9
		#230	0.19	0.00	11.7

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.7
Weight of hydrometer sample =35.61
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.5
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.5
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.5
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.5
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.5
240.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0035	1.2
1440.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0014	1.2

Fractional Components

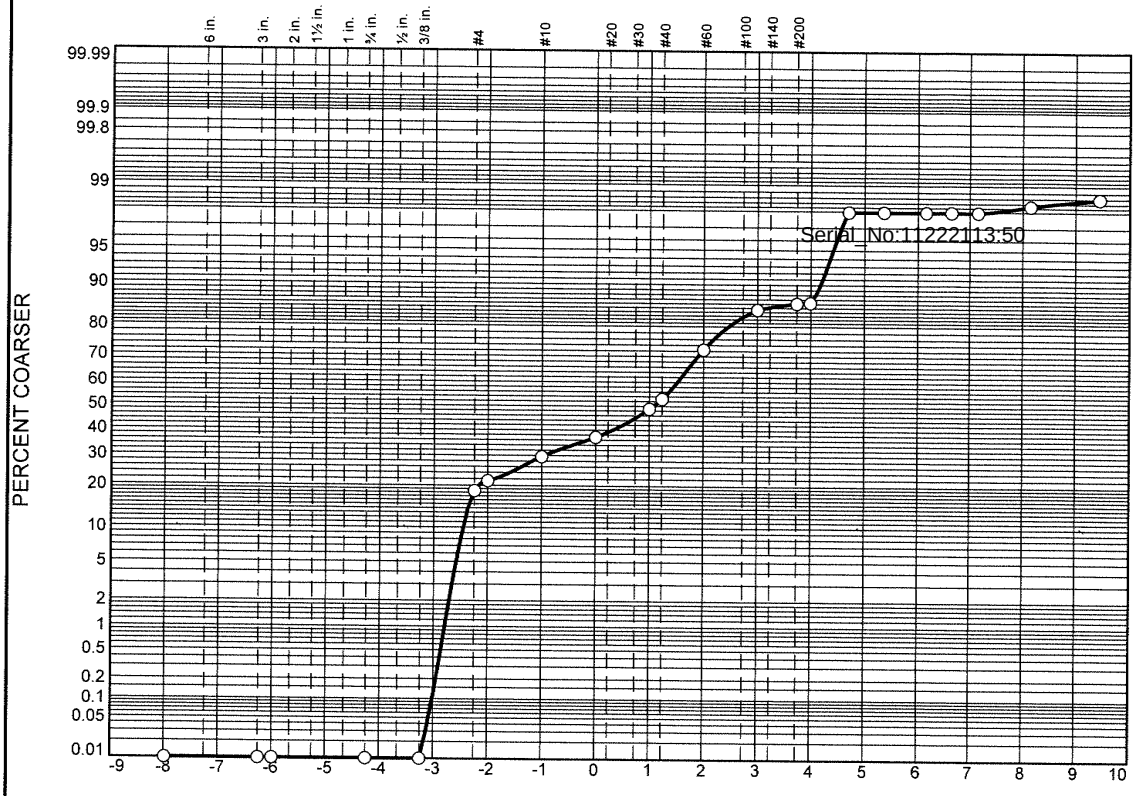
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		13.5	6.1	3.6	4.1	30.4	28.9	1.8	68.8	10.1	0.0	0.0	0.2	10.3	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0493	0.0584	0.1371	0.1640	0.2048	0.2415	0.2796	0.3267	1.9112	3.1123	4.9915	5.6598

Fineness Modulus	C_u	C_c
2.06	5.60	2.20

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			21.4	8.2	7.5	11.7	23.6	12.1	1.9	11.6	0.0	0.0	0.2	1.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			5.0643	0.7989	0.4747	0.2688	0.1111	0.0551	1.64	14.51

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|410|SED|01 **Sample No.:** L2151380-18

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|410|SED|01

Sample Number: L2151380-18

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 89.77
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
89.77	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		3/8"	0.00	0.00	100.0
		#4	16.52	0.00	81.6
		#5	2.68	0.00	78.6
		#10	7.34	0.00	70.4
		#18	6.72	0.00	62.9
		#35	10.52	0.00	51.2
		#40	3.80	0.00	47.0
		#60	17.41	0.00	27.6
		#120	10.88	0.00	15.5
		#200	1.38	0.00	13.9
		#230	0.19	0.00	13.7

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.7
Weight of hydrometer sample =35.98
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0384	2.0
5.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0243	2.0
15.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0140	2.0
30.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0099	2.0
60.00	18.8	1.0035	1.0033	0.0139	3.5	15.4	0.0070	2.0
240.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0035	1.7
1440.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0014	1.4

Fractional Components

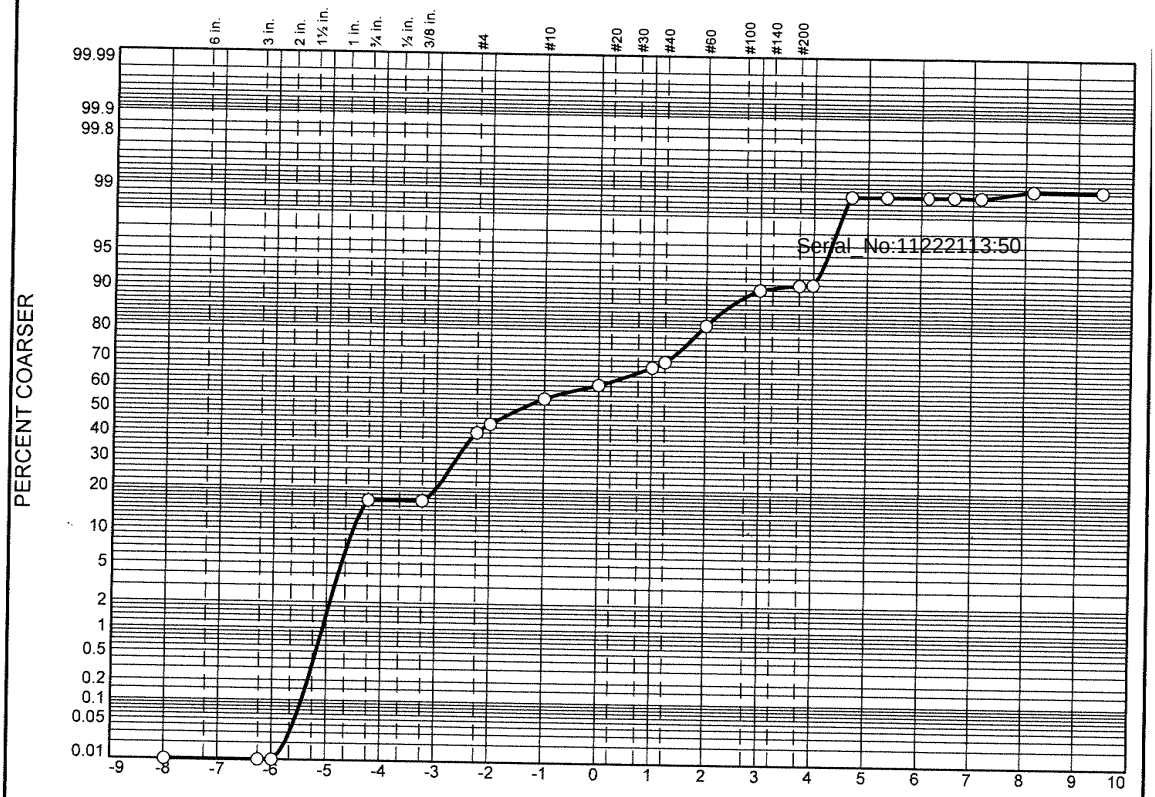
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		21.4	8.2	7.5	11.7	23.6	12.1	1.9	56.8	11.6	0.0	0.0	0.2	11.8	1.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0469	0.0551	0.1111	0.1807	0.2688	0.3491	0.4747	0.7989	4.5271	5.0643	5.4741	5.9859

Fineness Modulus	C_u	C_c
2.74	14.51	1.64

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			43.6	10.8	6.0	7.1	14.2	8.3	1.1	7.7	0.0	0.0	0.2	1.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○			20.0014	4.7431	2.7361	0.4153	0.2072	0.1257	0.29	37.74

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|412|SED|01 **Sample No.:** L2151380-19

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/22/2021

Location: 3664|2021|ECR-B|412|SED|01

Sample Number: L2151380-19

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 114.87
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
114.87	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	18.88	0.00	83.6
		3/8"	0.00	0.00	83.6
		#4	27.02	0.00	60.0
		#5	4.14	0.00	56.4
		#10	12.49	0.00	45.6
		#18	6.83	0.00	39.6
		#35	8.18	0.00	32.5
		#40	2.42	0.00	30.4
		#60	13.85	0.00	18.3
		#120	9.61	0.00	10.0
		#200	0.99	0.00	9.1
		#230	0.15	0.00	9.0

Serial_No:11222113:50

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.0
Weight of hydrometer sample =35.28
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0386	1.2
5.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0244	1.2
15.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0141	1.2
30.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0100	1.2
60.00	18.8	1.0030	1.0028	0.0139	3.0	15.5	0.0070	1.2
240.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0035	0.9
1440.00	18.8	1.0025	1.0023	0.0139	2.5	15.6	0.0014	0.9

Fractional Components

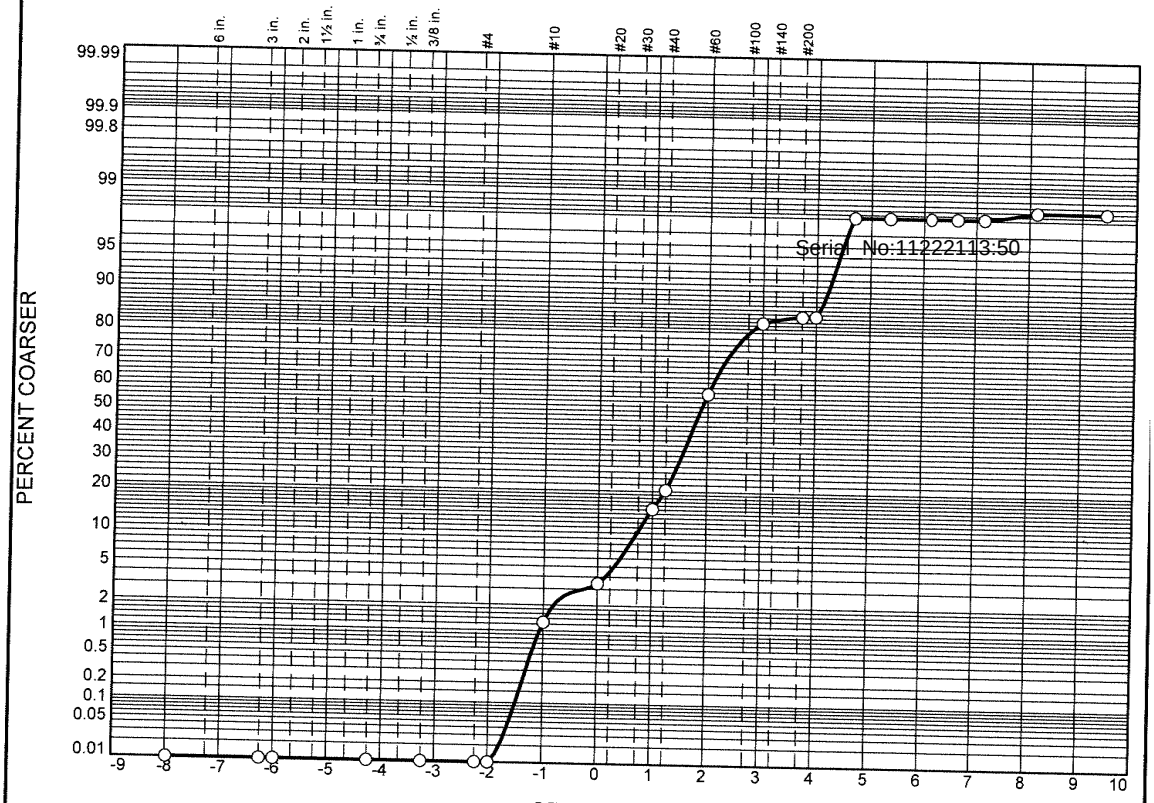
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		43.6	10.8	6.0	7.1	14.2	8.3	1.1	36.7	7.7	0.0	0.0	0.2	7.9	1.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0521	0.1257	0.2072	0.2699	0.4153	1.0474	2.7361	4.7431	7.8881	20.0014	22.9376	26.5946

Fineness Modulus	C_u	C_c
4.16	37.74	0.29

Serial_No:11222113:50

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.3	2.1	11.7	42.3	25.3	2.0	13.3	0.0	0.0	0.3	1.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5019	0.3114	0.2754	0.2013	0.0616	0.0537	2.42	5.80

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|414|SED|01 **Sample No.:** L2151380-20

Alpha Analytical

Mansfield, MA

Remarks:

Figure

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

TOC

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ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151380

Report Information — ☐ FAX ☐ ADEx
Data Deliverables — ☒ EMAIL ☐ Add'l Deliverables
Billing Information — ☒ Same as Client info PO #

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51380-01	3664|2021 ECR-B-219-02	08-27-21	1325	SE	JPM	☒	
-02	3664|2021 ECR-B-221	08-27-21	1146	SE	JPM	☒	
-03	3664|2021 ECR-B-1207	08-27-21	0827	SE	JPM	☒	
-04	3664|2021 ECR-B-245	08-30-21	0749	SE	JPM	☒	
-05	3664|2021 ECR-B-247	08-30-21	10:14	SE	JPM	☒	
-06	3664|2021 ECR-B-302	08-30-21	13:17	SE	JPM	☒	
-07	3664|2021 ECR-B-304	08-30-21	15:42	SE	JPM	☒	
-08	3664|2021 ECR-B-306	08-30-21	18:51	SE	JPM	☒	
-09	3664|2021 ECR-B-308	08-30-21	21:31	SE	JPM	☒	
-10	3664|2021 ECR-B-310	08-30-21	2306	SE		☒	

Container Type: G
Preservative: A

Relinquished By:	Date/Time	Received By:	Date/Time
	08-05-21		9/9/21
	9/22/21		9/22/21
	9/22/21 1700		9/22/21
Meghan Sampling	9/22/21 2000		
Joseph C. Bysiewicz	9/23/21 2119	Joseph C. Bysiewicz / Kim L. Bailey	9/22/21 2000 / 9/23/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

GS

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ALPHA

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: 3664

Project Location: Offshore MA

Project #: 3664

Project Manager: Jason Clermont

ALPHA Quote #: ref: 11026

Client Information

Client: CSA Ocean Sciences

Address: 8502 SW Kansas Avenue

Stuart, FL 34997

Phone: cell: (252) 258-1626

Fax:

Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151380

Report Information

☐ FAX ☒ EMAIL
☐ ADEx ☐ Add'l Deliverables

Data Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size												Sample Specific Comments
51380-11	3664|2021 ECR-B 219-02	8-27-21	1325	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-12	3664|2021 ECR-B 221	08-27-21	1146	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-13	3664|2021 ECR-C-1207	08-27-21	0827	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-14	3664|2021 ECR-B-245	08-30-21	0749	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-15	3664|2021 ECR-B-247	08-30-21	1014	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-16	3664|2021 ECR-B-302	08-30-21	1317	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-17	3664|2021 ECR-B-304	08-30-21	1542	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-18	3664|2021 ECR-B-306	08-30-21	1851	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-19	3664|2021 ECR-B-308	08-30-21	2131	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-20	3664|2021 ECR-B-310	08-30-21	2306	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Container Type: P
Preservative: A

Relinquished By	Date/Time	Received By	Date/Time
[signature]	9/9/21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1720	[signature]	9/22/21 1720
Meghan Ampley	9/22/21 2000	Joseph C. Bezig Jr.	9/22/21 2000
Joseph C. Bezig Jr.	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

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Westborough, MA
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Project Information

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☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151380

Report Information

☐ FAX
☐ ADEx

Data Deliverables

☒ EMAIL
☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51380-11	3664|2021 ECR-B-346	09-03-21	1645	SE	JAM	☒	
-12	3664|2021 ECR-B-348	09-03-21	2143	SE	JAM	☒	
-13	3664|2021 ECR-B-350	09-04-21	0733	SE	JAM	☒	
-14	3664|2021 ECR-B-402	09-04-21	1223	SE	JAM	☒	
-15	3664|2021 ECR-B-404	09-04-21	1447	SE	JAM	☒	
-16	3664|2021 ECR-B-406	09-04-21	1903	SE	JAM	☒	
-17	3664|2021 ECR-B-408	09-04-21	2321	SE	JAM	☒	
-18	3664|2021 ECR-B-410	09-05-21	0511	SE	JAM	☒	
-19	3664|2021 ECR-B-412	09-04-21	0507	SE	JAM	☒	
-20	3664|2021 ECR-B-414	09-05-21	~~2011~~ 1120	SE	JAM	☒	

Container Type	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	09-09-21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1700	[signature]	9/22/21 1700
Meghan Campley	9/22/21 2000	Joseph C. Bergin Jr.	9/22/21 2000
Joseph C. Bergin Jr.	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

GS

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151380

Report Information ☐ FAX ☐ ADEx
Data Deliverables ☒ EMAIL ☐ Add'l Deliverables
Billing Information ☒ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program: Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

Sample Specific Comments

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size
51380 -11	3664|2021 ECR-B 346	09-03-21	1045	SE		☒
-12	3664|2021 348	09-03-21	2143	SE		☒
-13	3664|2021 350	09-04-21	0733	SE		☒
-14	3664|2021 402	09-04-21	1223	SE		☒
-15	3664|2021 404	09-04-21	1447	SE		☒
-16	3664|2021 406	09-04-21	1903	SE		☒
-17	3664|2021 408	09-04-21	2321	SE		☒
-18	3664|2021 410	09-05-21	0511	SE		☒
-19	3664|2021 412	09-05-21	0507	SE		☒
-20	3664|2021 414	09-05-21	1120	SE		☒

Container Type	P												
Preservative	A												

Relinquished By:	Date/Time	Received By:	Date/Time
	9/9/21		9/9/21
	9/22/21		9/22/21
	9/22/21 1700		9/22/21 1700
Christina Hamptey	9/22/21 2000	Joseph C. Bisignano	9/22/21 2000
Joseph C. Bisignano	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Serial_No:11242113:01

ANALYTICAL REPORT

Lab Number:	L2151381
Client:	CSA Ocean Sciences Inc. 513 Broadway Newport, RI 02840
ATTN:	Jason Clermont
Phone:	(252) 258-1626
Project Name:	BEACON WIND
Project Number:	3664
Report Date:	11/24/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151381
Report Date: 11/24/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2151381-01	3664|2021|ECR-B|416|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 20:11	09/22/21
L2151381-02	3664|2021|ECR-B|422|SED|01	SEDIMENT	OFFSHORE MA / NY	09/06/21 09:15	09/22/21
L2151381-03	3664|2021|ECR-B|424|SED|01	SEDIMENT	OFFSHORE MA / NY	09/06/21 15:02	09/22/21
L2151381-04	3664|2021|ECR-B|426|SED|01	SEDIMENT	OFFSHORE MA / NY	09/06/21 17:15	09/22/21
L2151381-05	3664|2021|ECR-B|428|SED|01	SEDIMENT	OFFSHORE MA / NY	09/06/21 20:10	09/22/21
L2151381-06	3664|2021|ECR-B|430|SED|01	SEDIMENT	OFFSHORE MA / NY	09/06/21 22:38	09/22/21
L2151381-07	3664|2021|ECR-B|432|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 01:55	09/22/21
L2151381-08	3664|2021|ECR-B|434|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 06:30	09/22/21
L2151381-09	3664|2021|ECR-B|436|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 09:35	09/22/21
L2151381-10	3664|2021|ECR-B|438|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 13:13	09/22/21
L2151381-11	3664|2021|ECR-B|440|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 23:07	09/22/21
L2151381-12	3664|2021|ECR-B|440|SED|02	SEDIMENT	OFFSHORE MA / NY	09/07/21 23:07	09/22/21
L2151381-13	3664|2021|ECR-B|444|SED|01	SEDIMENT	OFFSHORE MA / NY	09/08/21 02:36	09/22/21
L2151381-14	3664|2021|ECR-B|460|SED|01	SEDIMENT	OFFSHORE MA / NY	09/08/21 20:55	09/22/21
L2151381-15	3664|2021|ECR-B|460|SED|02	SEDIMENT	OFFSHORE MA / NY	09/08/21 20:55	09/22/21
L2151381-16	3664|2021|ECR-B|462|SED|01	SEDIMENT	OFFSHORE MA / NY	09/08/21 16:00	09/22/21
L2151381-17	3664|2021|ECR-B|464|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 00:59	09/22/21
L2151381-18	3664|2021|ECR-B|466|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 08:43	09/22/21
L2151381-19	3664|2021|ECR-B|442|SED|01	SEDIMENT	OFFSHORE MA / NY	09/07/21 18:40	09/22/21
L2151381-20	3664|2021|ECR-B|468|SED|01	SEDIMENT	OFFSHORE MA / NY	09/05/21 15:55	09/22/21

Project Name:	BEACON WIND	**Lab Number:**	L2151381
Project Number:	3664	**Report Date:**	11/24/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND	**Lab Number:**	L2151381
Project Number:	3664	**Report Date:**	11/24/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size

The WG1565763-1 Laboratory Duplicate RPD for granule (33%) and % very fine sand (29%), performed on L2151381-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2151381-13 and -15: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG1568668-5 MS recoveries (Rep1 - 255%) / (Rep2 - 209%) performed on L2151381-14, are outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria, indicating the sample batch was in control, and all sample results were accepted.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 11/24/21

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-01
Client ID: 3664|2021|ECR-B|416|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 20:11
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.046		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.040		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.043		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.700		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	27.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	32.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	15.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.400		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.2		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	4.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-02
Client ID: 3664|2021|ECR-B|422|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/06/21 09:15
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.116		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.143		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.130		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	17.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	40.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	24.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-03
Client ID: 3664|2021|ECR-B|424|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/06/21 15:02
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.130		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.116		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.123		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	3.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	12.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	31.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	38.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-04
Client ID: 3664|2021|ECR-B|426|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/06/21 17:15
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.163		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.155		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.159		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	19.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	31.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	32.3		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-05
Client ID: 3664|2021|ECR-B|428|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/06/21 20:10
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.118		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.113		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.116		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.300		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.300		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	0.700		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	8.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	72.8		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	5.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.10		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-06
Client ID: 3664|2021|ECR-B|430|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/06/21 22:38
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.036		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.039		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.038		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	0.300		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	19.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	69.0		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-07
Client ID: 3664|2021|ECR-B|432|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 01:55
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.097		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.090		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.094		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	9.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	7.20		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	15.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	51.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	3.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	6.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-08
Client ID: 3664|2021|ECR-B|434|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 06:30
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.192		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.219		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.206		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.300		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	4.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	38.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	39.8		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.20		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-09
Client ID: 3664|2021|ECR-B|436|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 09:35
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.115		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.091		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.103		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	15.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	11.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	10.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	22.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	14.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	7.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-10
Client ID: 3664|2021|ECR-B|438|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 13:13
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.105		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.106		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.106		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.200		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	0.200		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	1.10		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	17.8		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	69.0		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	6.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-11
Client ID: 3664|2021|ECR-B|440|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 23:07
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.043		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.022		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.033		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	28.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	39.3		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	2.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	6.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-12
Client ID: 3664|2021|ECR-B|440|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 23:07
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.028		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.034		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.031		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	1.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	6.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	29.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	51.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	3.10		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.100		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	4.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.10		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-13
Client ID: 3664|2021|ECR-B|444|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/08/21 02:36
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.104		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.071		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.088		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	39.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	10.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	16.3		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	11.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.600		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	5.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-14
Client ID: 3664|2021|ECR-B|460|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/08/21 20:55
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.132		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.135		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.134		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	16.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	11.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	26.2		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	16.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	8.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-15
Client ID: 3664|2021|ECR-B|460|SED|02
Sample Location: OFFSHORE MA / NY
Date Collected: 09/08/21 20:55
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.26		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.319		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.792		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	16.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	15.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	12.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	14.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	19.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	10.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.10		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-16
Client ID: 3664|2021|ECR-B|462|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/08/21 16:00
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.319		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	0.249		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	0.284		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	10.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	9.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	10.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	33.8		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	15.3		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.60		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-17
Client ID: 3664|2021|ECR-B|464|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 00:59
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.302		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.312		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.307		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	15.2		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.3		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	15.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	24.4		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	9.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-18
Client ID: 3664|2021|ECR-B|466|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 08:43
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.456		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	0.363		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	0.410		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	14.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	8.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	13.4		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	27.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	14.6		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.50		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	9.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.30		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-19
Client ID: 3664|2021|ECR-B|442|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/07/21 18:40
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.033		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.036		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.035		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	11.2		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	39.9		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	37.5		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	3.00		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.200		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	6.80		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.900		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

SAMPLE RESULTS

Lab ID: L2151381-20
Client ID: 3664|2021|ECR-B|468|SED|01
Sample Location: OFFSHORE MA / NY
Date Collected: 09/05/21 15:55
Date Received: 09/22/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.057		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	0.041		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	0.049		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.700		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.40		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Coarse Sand	10.7		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Coarse Sand	51.1		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Medium Sand	23.4		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Fine Sand	3.90		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.400		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	6.70		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	0.700		%	0.100	NA	1	-	11/01/21 18:57	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND
Project Number: 3664
Lab Number: L2151381
Report Date: 11/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 19-20 Batch: WG1568131-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/06/21 11:23	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 01-13,15,17-18 Batch: WG1568135-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/06/21 10:50	1,9060A	SP
Total Organic Carbon - Mansfield Lab for sample(s): 14,16 Batch: WG1568668-1										
Total Organic Carbon (Rep1)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Rep2)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP
Total Organic Carbon (Average)	ND		%	0.010	0.010	1	-	11/08/21 12:18	1,9060A	SP

Lab Control Sample Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151381
Report Date: 11/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 19-20 Batch: WG1568131-2								
Total Organic Carbon (Rep1)	104		-		75-125	-		25
Total Organic Carbon (Rep2)	101		-		75-125	-		25
Total Organic Carbon (Average)	103		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13,15,17-18 Batch: WG1568135-2								
Total Organic Carbon (Rep1)	103		-		75-125	-		25
Total Organic Carbon (Rep2)	105		-		75-125	-		25
Total Organic Carbon (Average)	104		-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 14,16 Batch: WG1568668-2								
Total Organic Carbon (Rep1)	109		-		75-125	-		25
Total Organic Carbon (Rep2)	97		-		75-125	-		25
Total Organic Carbon (Average)	103		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND
Project Number: 3664

Lab Number: L2151381
Report Date: 11/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 19-20 QC Batch ID: WG1568131-4 QC Sample: L2156454-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	0.086	0.647	0.768	105		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.074	0.661	0.818	112		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13,15,17-18 QC Batch ID: WG1568135-4 QC Sample: L2151381-07 Client ID: 3664|2021|ECR-B|432|SED|01												
Total Organic Carbon (Rep1)	0.097	0.666	0.798	105		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.090	0.607	0.760	110		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13,15,17-18 QC Batch ID: WG1568135-5 QC Sample: L2151381-11 Client ID: 3664|2021|ECR-B|440|SED|01												
Total Organic Carbon (Rep1)	0.043	0.563	0.632	105		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.022	0.387	0.431	106		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 14,16 QC Batch ID: WG1568668-4 QC Sample: L2151376-01 Client ID: MS Sample												
Total Organic Carbon (Rep1)	0.193	0.652	0.821	96		-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.149	0.691	0.855	102		-	-		75-125	-		25
Total Organic Carbon - Mansfield Lab Associated sample(s): 14,16 QC Batch ID: WG1568668-5 QC Sample: L2151381-14 Client ID: 3664|2021|ECR-B|460|SED|01												
Total Organic Carbon (Rep1)	0.132	0.576	1.60	**255**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.135	1.05	2.34	**209**	Q	-	-		75-125	-		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151381
Report Date: 11/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-20 QC Batch ID: WG1565763-1 QC Sample: L2151381-01 Client ID: 3664|2021|ECR-B|416|SED|01						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	ND	%	NC		20
Granule (2.0-4.0 mm)	0.700	0.500	%	**33**	Q	20
% Very Coarse Sand	5.90	6.20	%	5		20
% Coarse Sand	27.6	27.7	%	0		20
% Medium Sand	32.1	32.9	%	2		20
% Fine Sand	15.7	15.4	%	2		20
% Very Fine Sand	0.400	0.300	%	**29**	Q	20
Silt - (3.9-62.5 um)	13.2	13.1	%	1		20
Clay - (<3.9 um)	4.40	3.90	%	12		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 19-20 QC Batch ID: WG1568131-3 QC Sample: L2156454-01 Client ID: DUP Sample						
Total Organic Carbon (Rep1)	0.086	0.075	%	14		25
Total Organic Carbon (Rep2)	0.074	0.069	%	7		25
Total Organic Carbon (Average)	0.080	0.072	%	11		25

Project Name: BEACON WIND
Project Number: 3664

Lab Duplicate Analysis
Batch Quality Control

Lab Number: L2151381
Report Date: 11/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-13,15,17-18 QC Batch ID: WG1568135-3 QC Sample: L2151381-07 Client ID: 3664|2021|ECR-B|432|SED|01					
Total Organic Carbon (Rep1)	0.097	0.083	%	16	25
Total Organic Carbon (Rep2)	0.090	0.071	%	24	25
Total Organic Carbon (Average)	0.094	0.077	%	19	25
Total Organic Carbon - Mansfield Lab Associated sample(s): 14,16 QC Batch ID: WG1568668-3 QC Sample: L2151376-01 Client ID: DUP Sample					
Total Organic Carbon (Rep1)	0.193	0.170	%	13	25
Total Organic Carbon (Rep2)	0.149	0.167	%	11	25
Total Organic Carbon (Average)	0.171	0.168	%	2	25

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Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
C	Absent
D	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151381-01A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151381-01B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-02A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151381-02B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-03A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151381-03B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-04A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151381-04B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151381-05A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151381-05B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-06A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)()
L2151381-06B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-07A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151381-07B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-08A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151381-08B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-09A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2151381-09B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2151381-10A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151381-10B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-11A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2151381-11B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-12A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2151381-12B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-13A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2151381-13B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-14A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151381-14B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2151381-15A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151381-15B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-16A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2151381-16B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-17A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151381-17B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-18A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151381-18B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)
L2151381-19A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2151381-19B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

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Lab Number: L2151381
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Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2151381-20A	Plastic 8oz unpreserved for Grain Size	C	NA		25.6	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2151381-20B	Glass 120ml/4oz unpreserved	D	NA		4.7	Y	Absent		A2-TOC-9060-2REPS(28)

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND	**Lab Number:**	L2151381
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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151381
Project Number:	3664	**Report Date:**	11/24/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A	- Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
C	- Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
D	- Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
E	- Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
F	- The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
G	- The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
H	- The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
I	- The lower value for the two columns has been reported due to obvious interference.
J	- Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
M	- Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
ND	- Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND	**Lab Number:**	L2151381
Project Number:	3664	**Report Date:**	11/24/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND	**Lab Number:**	L2151381
Project Number:	3664	**Report Date:**	11/24/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

LIMITATION OF LIABILITIES

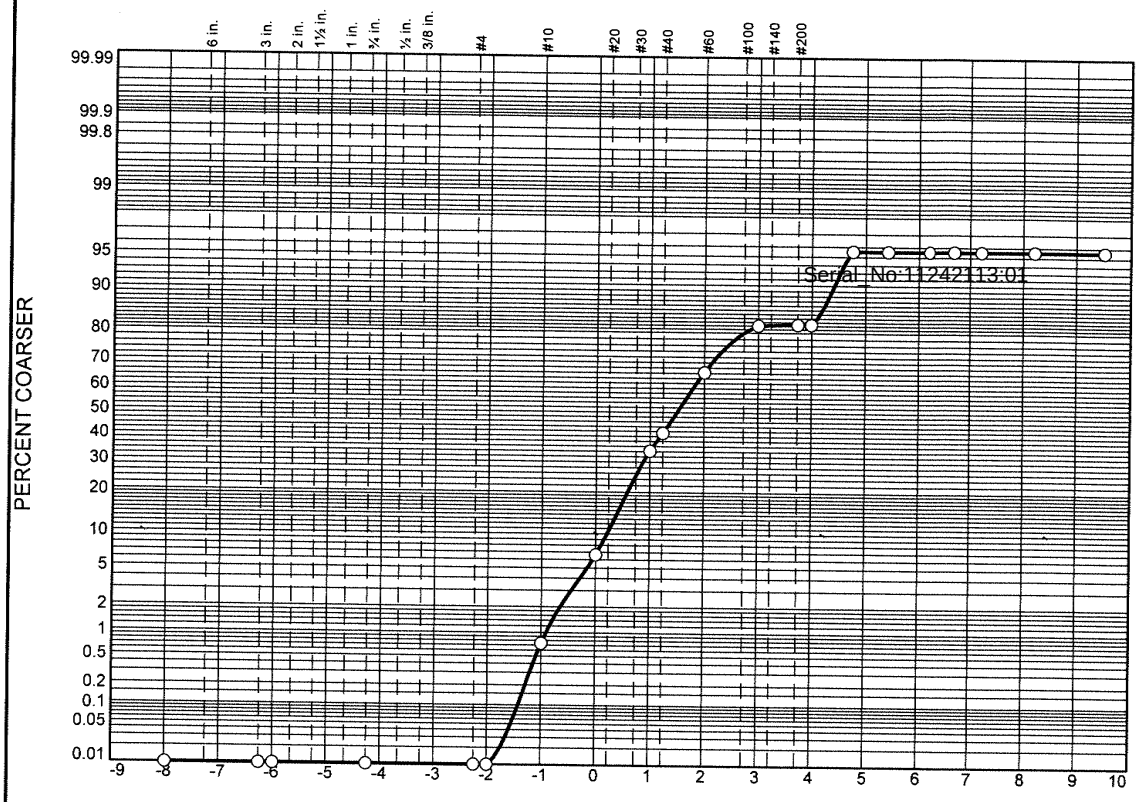
Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Serial_No:11242113:01

ASTM D6913/D7928
GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.7	5.9	27.6	32.1	15.7	0.4	13.2	0.0	0.0	0.0	4.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7464	0.4381	0.3543	0.2265	0.0562	0.0483	2.42	9.06

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|416|SED|01 **Sample No.:** L2151381-01

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|416|SED|01

Sample Number: L2151381-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 46.31
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
46.31	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.34	0.00	99.3
		#18	2.73	0.00	93.4
		#35	12.76	0.00	65.8
		#40	3.31	0.00	58.7
		#60	11.57	0.00	33.7
		#120	7.26	0.00	18.0
		#200	0.16	0.00	17.7
		#230	0.00	0.00	17.7

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.7
Weight of hydrometer sample =35.32
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0370	4.4
5.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0234	4.4
15.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0135	4.4
30.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0095	4.4
60.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0068	4.4
240.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0034	4.4
1440.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0014	4.4

Alpha Analytical

Fractional Components

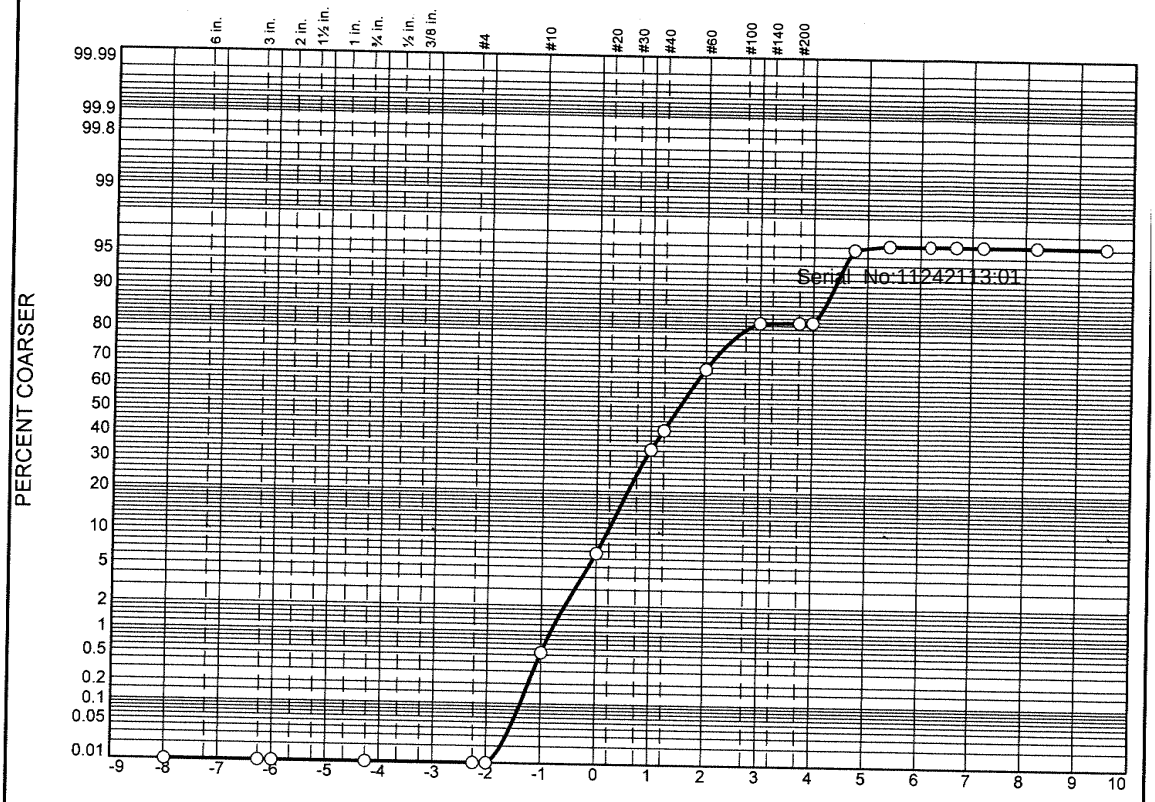
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.7	5.9	27.6	32.1	15.7	0.4	81.7	13.2	0.0	0.0	0.0	13.2	4.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0389	0.0483	0.0562	0.1493	0.2265	0.2888	0.3543	0.4381	0.6657	0.7464	0.8639	1.1137

Fineness Modulus	C_u	C_c
1.68	9.06	2.42

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	6.2	27.7	32.9	15.4	0.3	12.9	0.2	0.0		3.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7521	0.4448	0.3630	0.2328	0.0572	0.0488	2.50	9.11

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|416|SED|01 **Sample No.:** WG1565763-1

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|416|SED|01

Sample Number: WG1565763-1

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 46.46
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
46.46	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.25	0.00	99.5
		#18	2.87	0.00	93.3
		#35	12.87	0.00	65.6
		#40	3.60	0.00	57.8
		#60	11.70	0.00	32.7
		#120	7.13	0.00	17.3
		#200	0.09	0.00	17.1
		#230	0.02	0.00	17.1

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.1
Weight of hydrometer sample =35.69
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0370	4.2
5.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0235	3.9
15.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0136	3.9
30.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0096	3.9
60.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0068	3.9
240.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0034	3.9
1440.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0014	3.9

Fractional Components

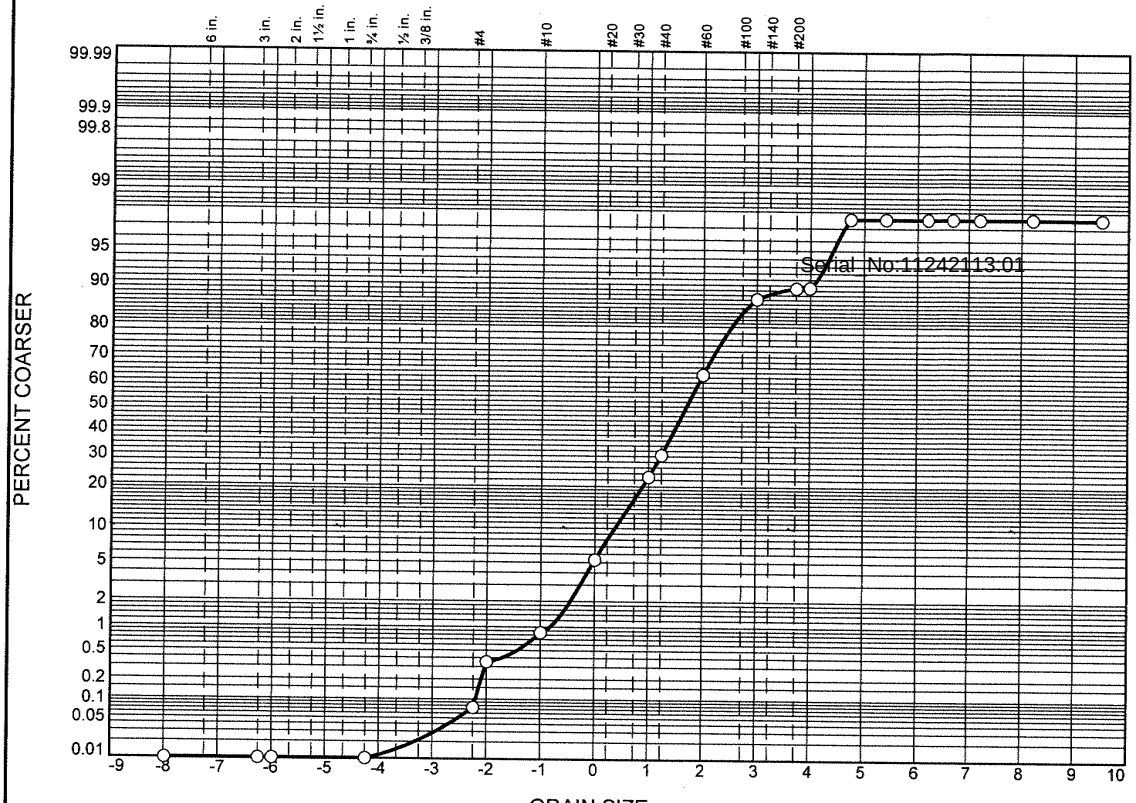
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	6.2	27.7	32.9	15.4	0.3	82.5	12.9	0.2	0.0		13.1	3.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0394	0.0488	0.0572	0.1571	0.2328	0.2963	0.3630	0.4448	0.6688	0.7521	0.8720	1.1062

Fineness Modulus	C_u	C_c
1.70	9.11	2.50

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.5	4.4	17.6	40.1	24.1	2.5	8.0	0.0	0.0	0.0	2.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.6299	0.3597	0.3078	0.2198	0.1420	0.0604	2.22	5.95

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|422|SED|01 **Sample No.:** L2151381-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|422|SED|01

Sample Number: L2151381-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 122.09
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
122.09	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.09	0.00	99.9
		#5	0.34	0.00	99.6
		#10	0.61	0.00	99.1
		#18	5.44	0.00	94.7
		#35	21.43	0.00	77.1
		#40	9.20	0.00	69.6
		#60	39.85	0.00	37.0
		#120	29.41	0.00	12.9
		#200	2.75	0.00	10.6
		#230	0.16	0.00	10.5

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.5
Weight of hydrometer sample =35.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0371	2.4
5.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0235	2.4
15.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0136	2.4
30.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0096	2.4
60.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0068	2.4
240.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0034	2.4
1440.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0014	2.4

Alpha Analytical

Fractional Components

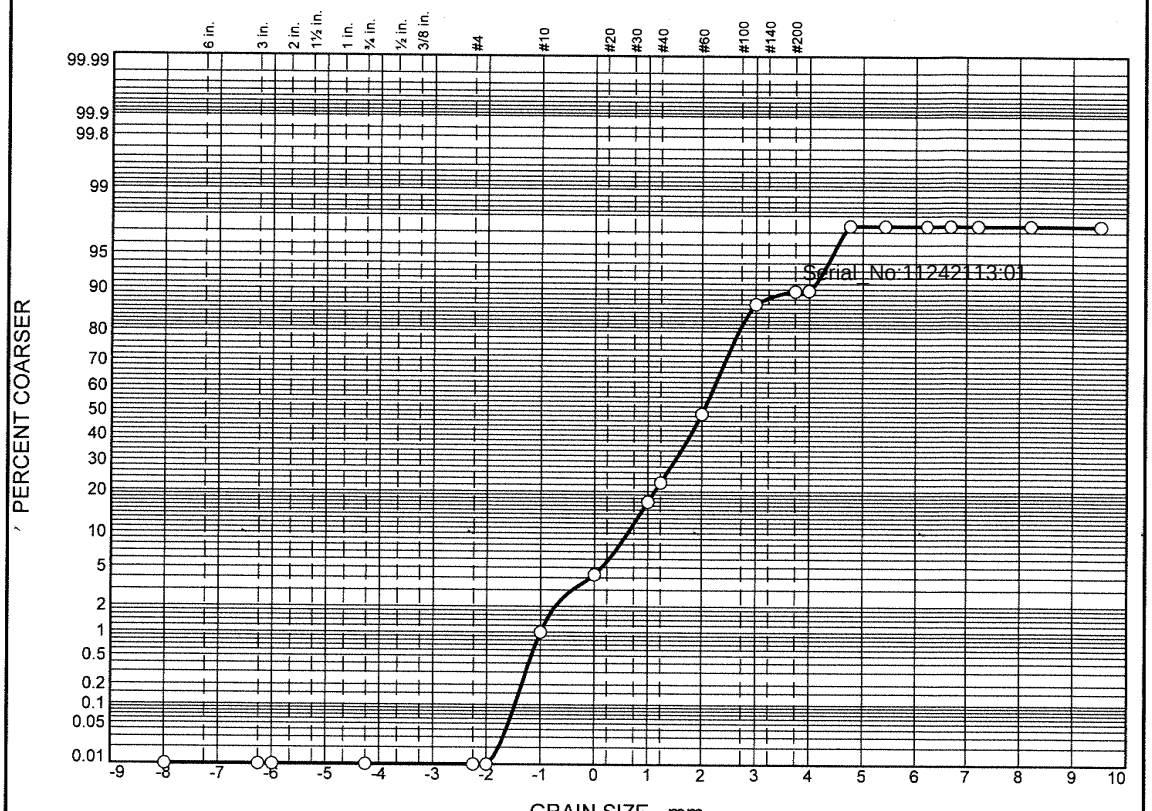
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	0.5	4.4	17.6	40.1	24.1	2.5	88.7	8.0	0.0	0.0	0.0	8.0	2.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0468	0.0604	0.1420	0.1722	0.2198	0.2631	0.3078	0.3597	0.5387	0.6299	0.7714	1.0211

Fineness Modulus	C_u	C_c
1.56	5.95	2.22

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.0	3.3	12.7	31.9	38.1	2.8	7.6	0.0	0.0		2.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5338	0.2889	0.2459	0.1852	0.1355	0.0614	1.93	4.70

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|424|SED|01 **Sample No.:** L2151381-03

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|424|SED|01

Sample Number: L2151381-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 111.21
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
111.21	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	1.11	0.00	99.0
		#18	3.65	0.00	95.7
		#35	14.17	0.00	83.0
		#40	6.25	0.00	77.4
		#60	29.18	0.00	51.1
		#120	42.41	0.00	13.0
		#200	2.92	0.00	10.4
		#230	0.12	0.00	10.3

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.3
Weight of hydrometer sample =35.37
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0370	2.6
5.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0234	2.6
15.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0135	2.6
30.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0095	2.6
60.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0068	2.6
240.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0034	2.6
1440.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0014	2.6

Alpha Analytical

Fractional Components

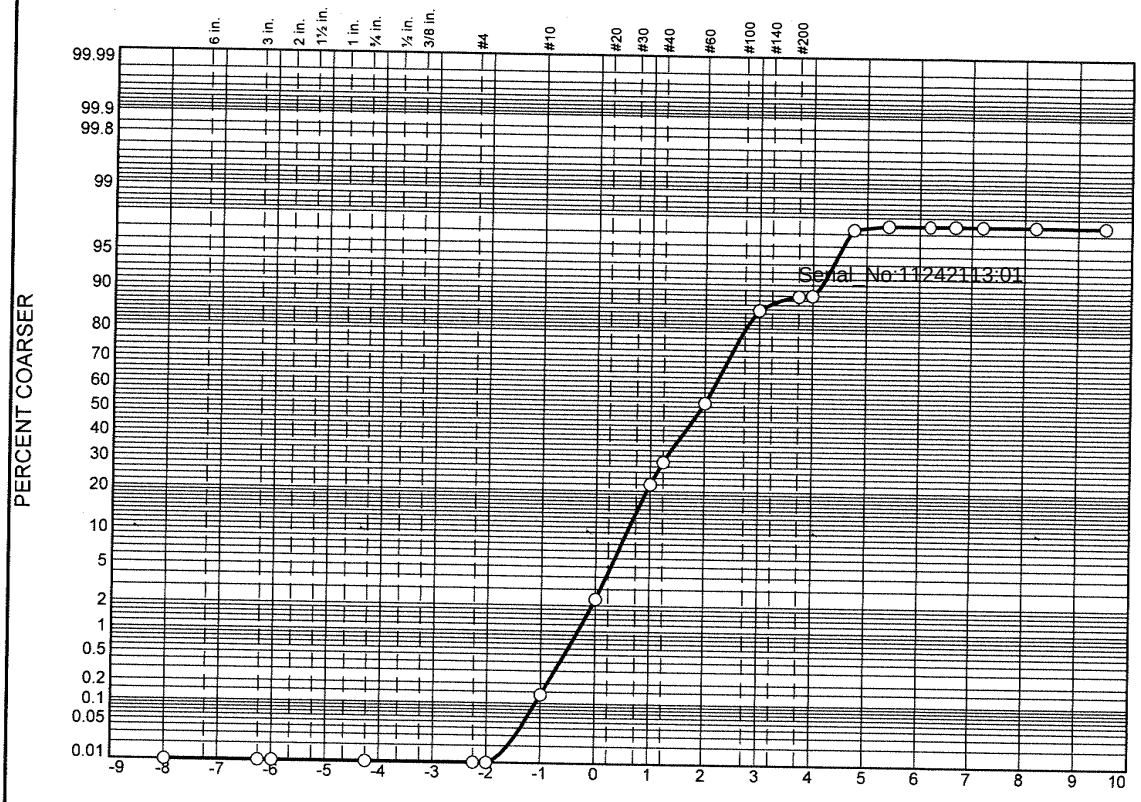
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.0	3.3	12.7	31.9	38.1	2.8	88.8	7.6	0.0	0.0		7.6	2.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0464	0.0614	0.1355	0.1548	0.1852	0.2137	0.2459	0.2889	0.4574	0.5338	0.6487	0.9101

Fineness Modulus	C_u	C_c
1.35	4.70	1.93

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	2.3	19.6	31.5	32.3	3.3	8.3	0.1	0.0		2.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5863	0.3337	0.2677	0.1877	0.1295	0.0585	1.81	5.71

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|426|SED|01 **Sample No.:** L2151381-04

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|426|SED|01
Sample Number: L2151381-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.41
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.41	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.15	0.00	99.9
		#18	2.45	0.00	97.6
		#35	21.65	0.00	78.0
		#40	8.33	0.00	70.5
		#60	26.53	0.00	46.5
		#120	35.59	0.00	14.2
		#200	3.40	0.00	11.1
		#230	0.17	0.00	11.0

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.0
Weight of hydrometer sample =35.93
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0055	1.0055	0.0136	5.5	14.8	0.0370	2.7
5.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0235	2.5
15.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0136	2.5
30.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0096	2.5
60.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0068	2.5
240.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0034	2.5
1440.00	20.4	1.0050	1.0050	0.0136	5.0	15.0	0.0014	2.5

Fractional Components

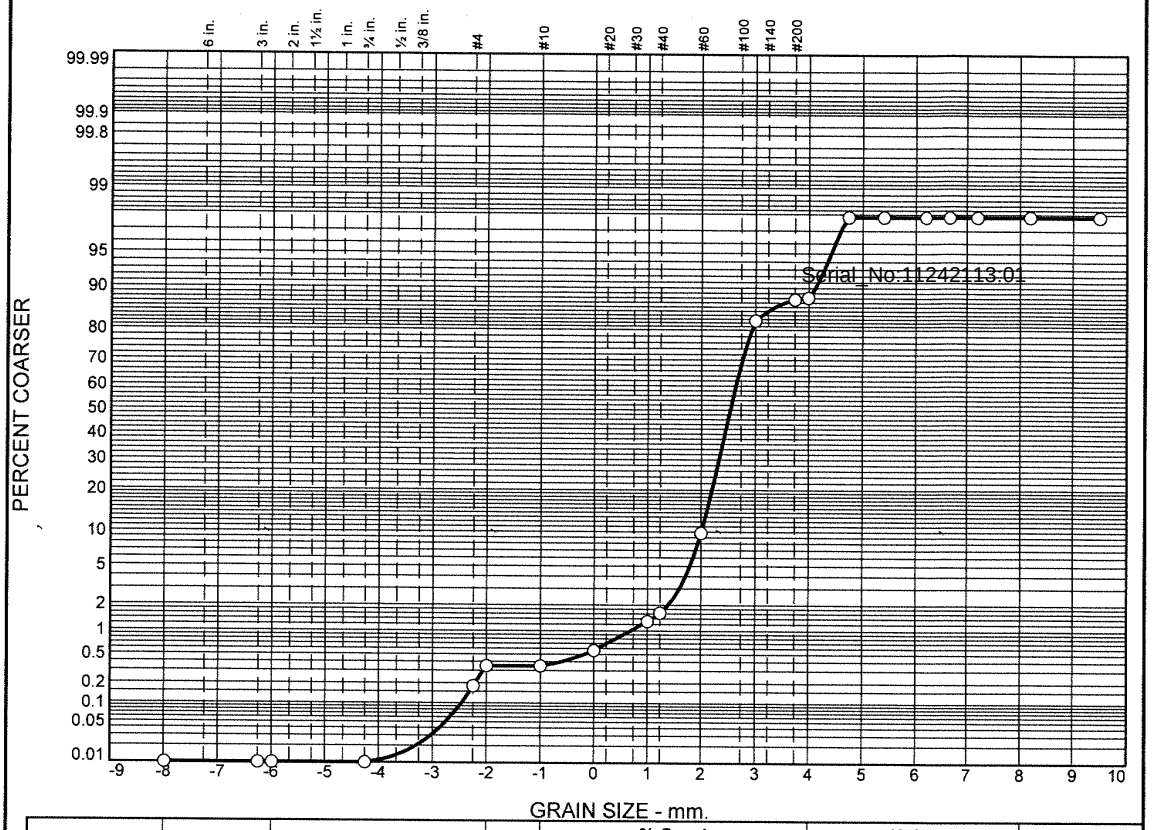
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	2.3	19.6	31.5	32.3	3.3	89.0	8.3	0.1	0.0		8.4	2.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0454	0.0585	0.1295	0.1521	0.1877	0.2231	0.2677	0.3337	0.5219	0.5863	0.6732	0.8225

Fineness Modulus	C_u	C_c
1.41	5.71	1.81

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.3	0.0	0.3	0.7	8.5	72.8	5.6	9.7	0.0	0.0	0.0	2.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2299	0.1846	0.1722	0.1474	0.1059	0.0573	2.05	3.22

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|428|SED|01 **Sample No.:** L2151381-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|428|SED|01

Sample Number: L2151381-05

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 83.11
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
83.11	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.15	0.00	99.8
		#5	0.14	0.00	99.7
		#10	0.00	0.00	99.7
		#18	0.18	0.00	99.4
		#35	0.61	0.00	98.7
		#40	0.27	0.00	98.4
		#60	6.77	0.00	90.2
		#120	60.51	0.00	17.4
		#200	4.24	0.00	12.3
		#230	0.33	0.00	11.9

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.9
Weight of hydrometer sample =35.90
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0375	2.1
5.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0237	2.1
15.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0137	2.1
30.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0097	2.1
60.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0068	2.1
240.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0034	2.1
1440.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0014	2.1

Alpha Analytical

Fractional Components

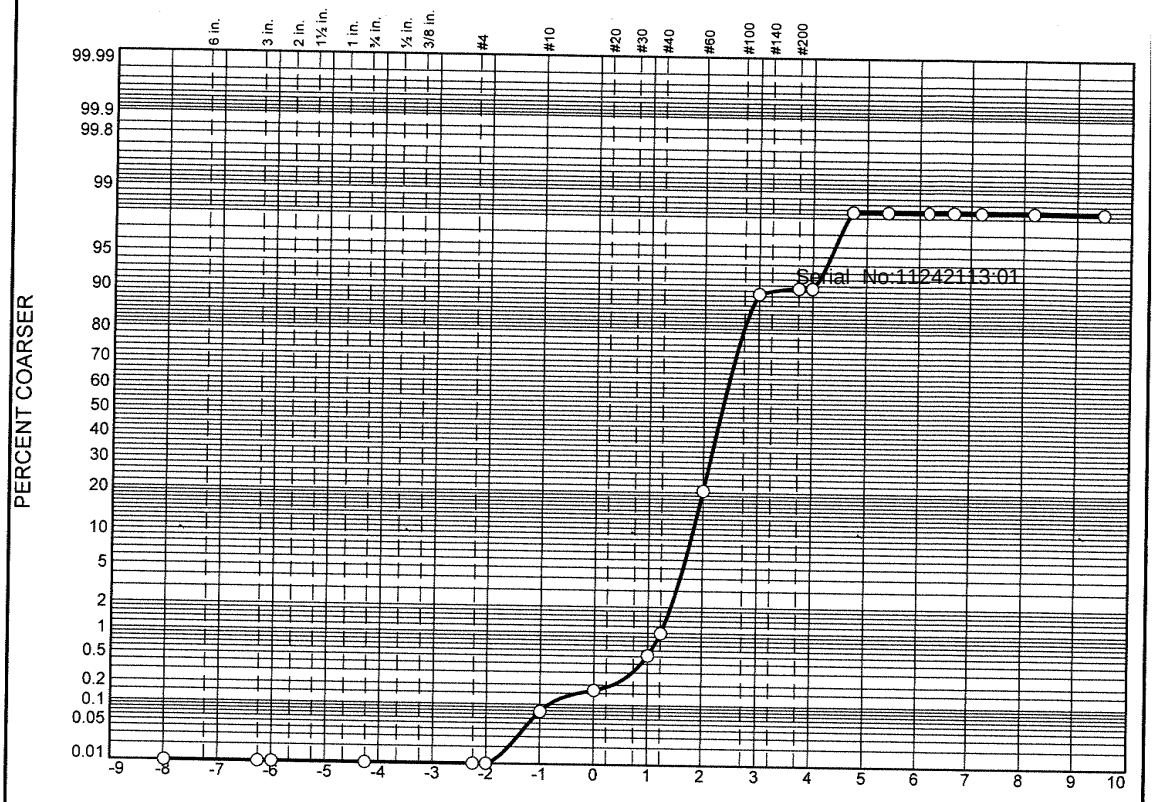
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.3	0.0	0.3	0.7	8.5	72.8	5.6	87.9	9.7	0.0	0.0	0.0	9.7	2.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0470	0.0573	0.1059	0.1309	0.1474	0.1603	0.1722	0.1846	0.2170	0.2299	0.2488	0.2885

Fineness Modulus	C_u	C_c
0.74	3.22	2.05

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.1	0.1	0.3	19.9	69.0	1.2	7.7	0.0	0.0		1.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2655	0.2133	0.1988	0.1701	0.1407	0.1040	1.30	2.05

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|430|SED|01 **Sample No.:** L2151381-06

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|430|SED|01

Sample Number: L2151381-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 90.53
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
90.53	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.07	0.00	99.9
		#18	0.08	0.00	99.8
		#35	0.32	0.00	99.5
		#40	0.43	0.00	99.0
		#60	17.60	0.00	79.6
		#120	62.43	0.00	10.6
		#200	1.01	0.00	9.5
		#230	0.00	0.00	9.5

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.5
Weight of hydrometer sample =35.75
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0375	1.7
5.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0237	1.7
15.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0137	1.7
30.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0097	1.7
60.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0068	1.7
240.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0034	1.7
1440.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0014	1.7

Fractional Components

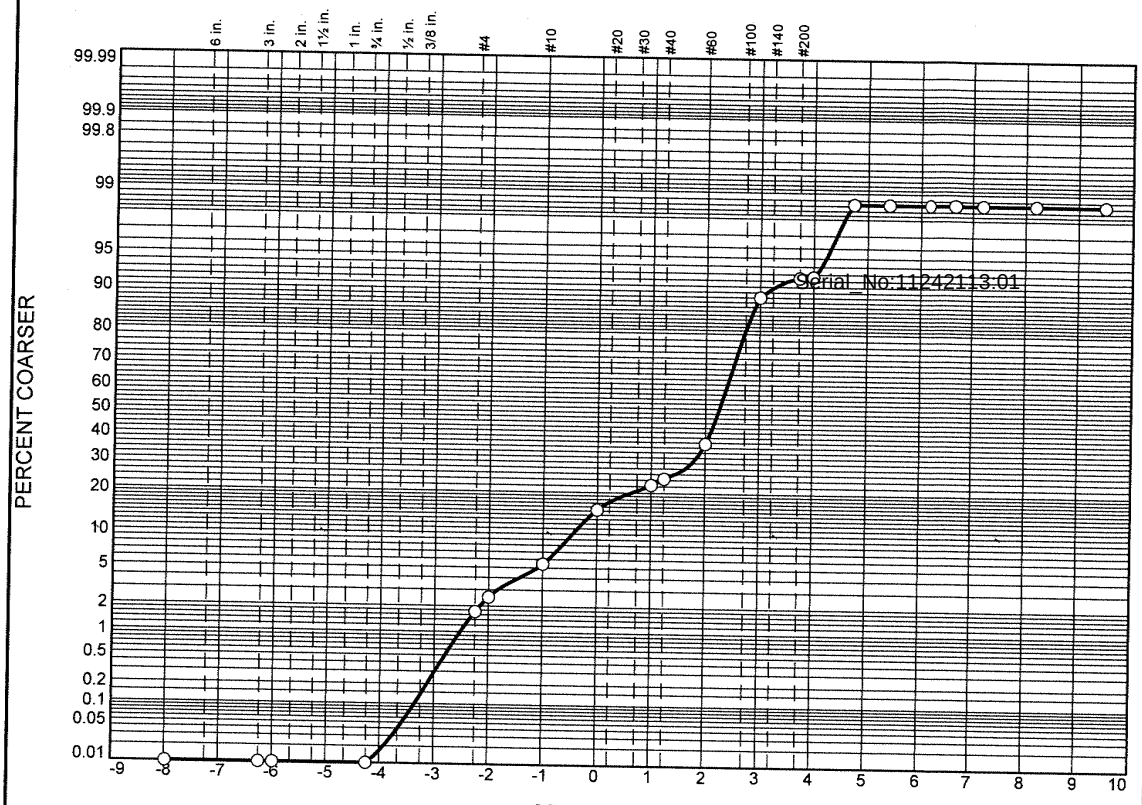
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.1	0.1	0.3	19.9	69.0	1.2	90.5	7.7	0.0	0.0		7.7	1.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0496	0.1040	0.1407	0.1525	0.1701	0.1848	0.1988	0.2133	0.2511	0.2655	0.2855	0.3205

Fineness Modulus	C_u	C_c
0.89	2.05	1.30

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.5	2.9	9.8	7.2	15.1	51.5	3.7	5.9	0.0	0.0	0.0	1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0153	0.2406	0.2131	0.1728	0.1391	0.1143	1.08	2.10

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|432|SED|01 **Sample No.:** L2151381-07

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|432|SED|01

Sample Number: L2151381-07

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.07
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.07	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	1.90	0.00	98.3
		#5	0.86	0.00	97.5
		#10	3.22	0.00	94.6
		#18	10.79	0.00	84.8
		#35	7.88	0.00	77.6
		#40	2.28	0.00	75.5
		#60	14.33	0.00	62.5
		#120	56.69	0.00	11.0
		#200	3.80	0.00	7.6
		#230	0.17	0.00	7.4

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.4
Weight of hydrometer sample =35.46
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0375	1.4
5.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0237	1.4
15.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0137	1.4
30.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0097	1.4
60.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0068	1.4
240.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0034	1.4
1440.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0014	1.4

Alpha Analytical

Fractional Components

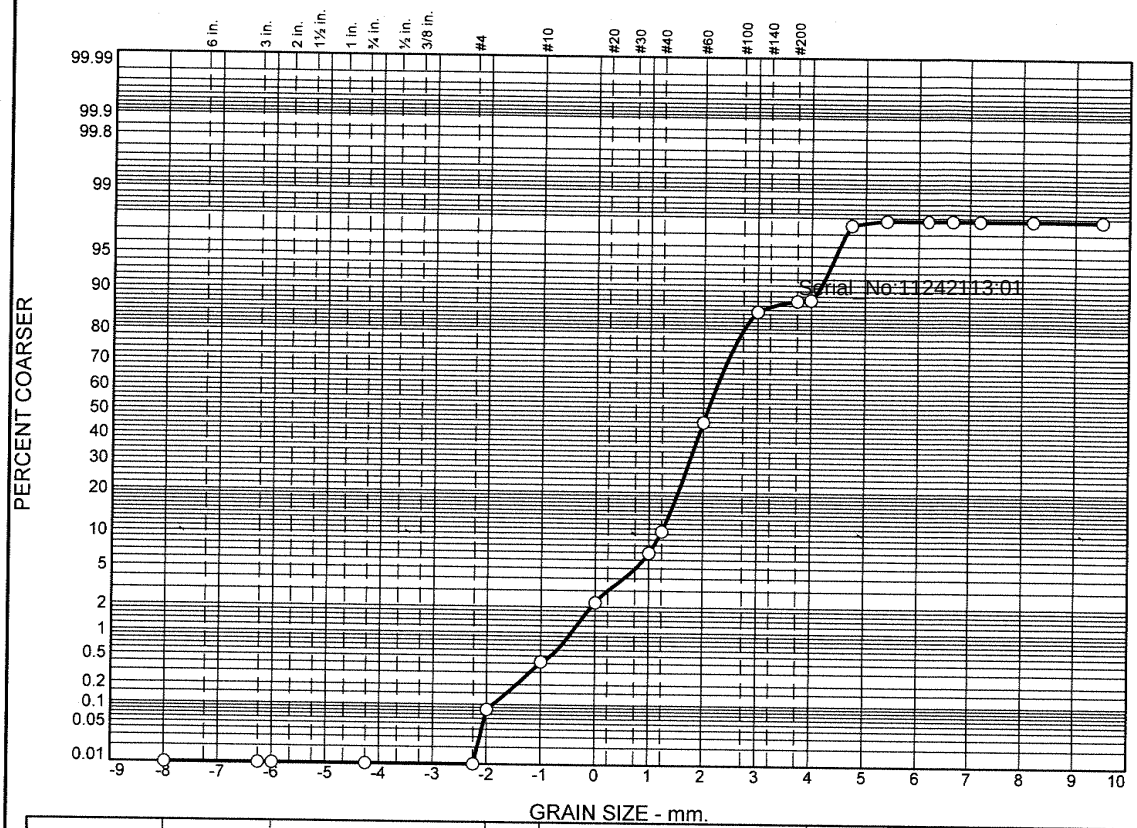
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.5	2.9	9.8	7.2	15.1	51.5	3.7	87.3	5.9	0.0	0.0	0.0	5.9	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0532	0.1143	0.1391	0.1520	0.1728	0.1921	0.2131	0.2406	0.6426	1.0153	1.3640	2.1383

Fineness Modulus	C_u	C_c
1.50	2.10	1.08

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.3	1.8	4.7	38.9	39.8	2.7	9.4	0.1	0.0		2.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3771	0.2664	0.2385	0.1849	0.1289	0.0569	2.25	4.68

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|434|SED|01 **Sample No.:** L2151381-08

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|434|SED|01

Sample Number: L2151381-08

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 95.59
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
95.59	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.08	0.00	99.9
		#10	0.32	0.00	99.6
		#18	1.74	0.00	97.8
		#35	4.47	0.00	93.1
		#40	3.39	0.00	89.5
		#60	33.75	0.00	54.2
		#120	38.09	0.00	14.4
		#200	2.30	0.00	12.0
		#230	0.17	0.00	11.8

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.8
Weight of hydrometer sample =35.45
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0045	1.0045	0.0136	4.5	15.1	0.0373	2.4
5.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0237	2.2
15.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0137	2.2
30.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0097	2.2
60.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0068	2.2
240.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0034	2.2
1440.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0014	2.2

Fractional Components

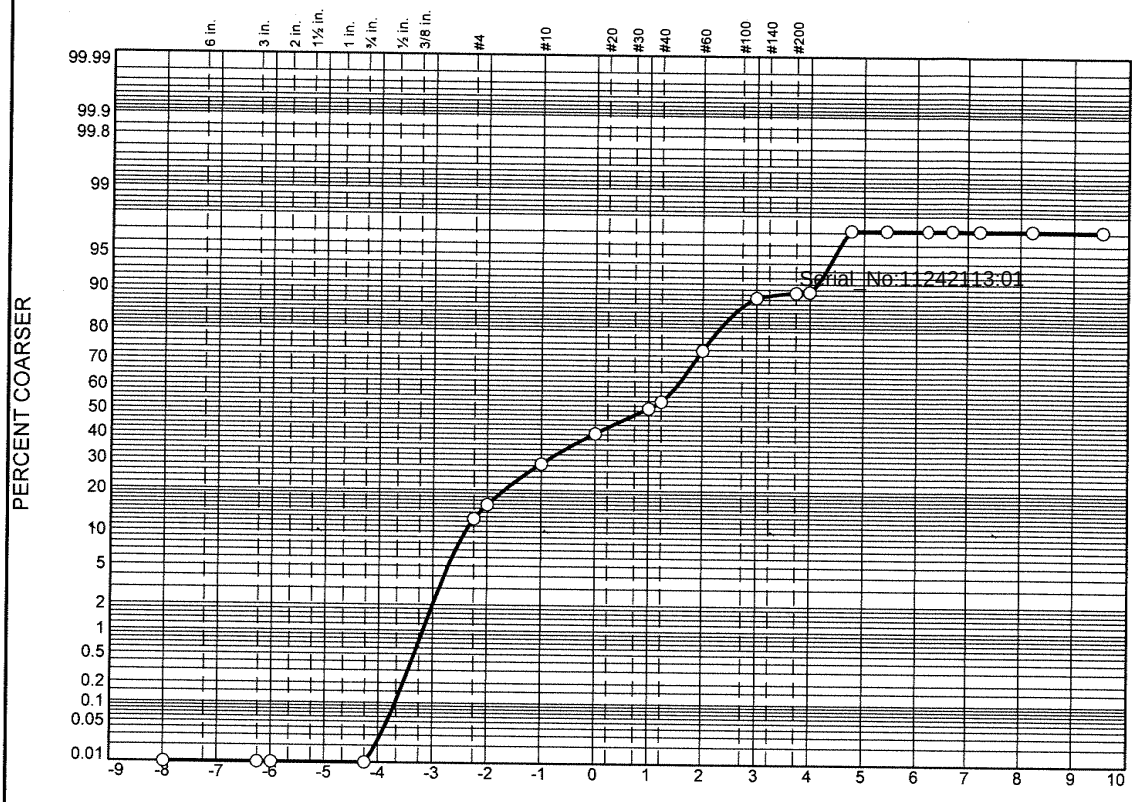
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.3	1.8	4.7	38.9	39.8	2.7	87.9	9.4	0.1	0.0		9.5	2.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0460	0.0569	0.1289	0.1522	0.1849	0.2122	0.2385	0.2664	0.3437	0.3771	0.4318	0.5924

Fineness Modulus	C_u	C_c
1.17	4.68	2.25

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			15.9	12.6	11.9	10.5	22.9	14.6	1.2	7.6	0.0	0.0	0.0	2.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.1970	1.0239	0.5309	0.2754	0.1642	0.0603	1.23	16.97

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|436|SED|01 **Sample No.:** L2151381-09

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|436|SED|01

Sample Number: L2151381-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 110.83
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
110.83	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	13.89	0.00	87.5
		#5	3.70	0.00	84.1
		#10	14.04	0.00	71.5
		#18	13.12	0.00	59.6
		#35	11.66	0.00	49.1
		#40	3.24	0.00	46.2
		#60	22.11	0.00	26.2
		#120	16.19	0.00	11.6
		#200	1.15	0.00	10.6
		#230	0.14	0.00	10.5

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.5
Weight of hydrometer sample =35.52
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0368	2.8
5.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0233	2.8
15.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0134	2.8
30.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0095	2.8
60.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0067	2.8
240.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0034	2.8
1440.00	20.4	1.0060	1.0060	0.0136	6.0	14.7	0.0014	2.8

Alpha Analytical

Fractional Components

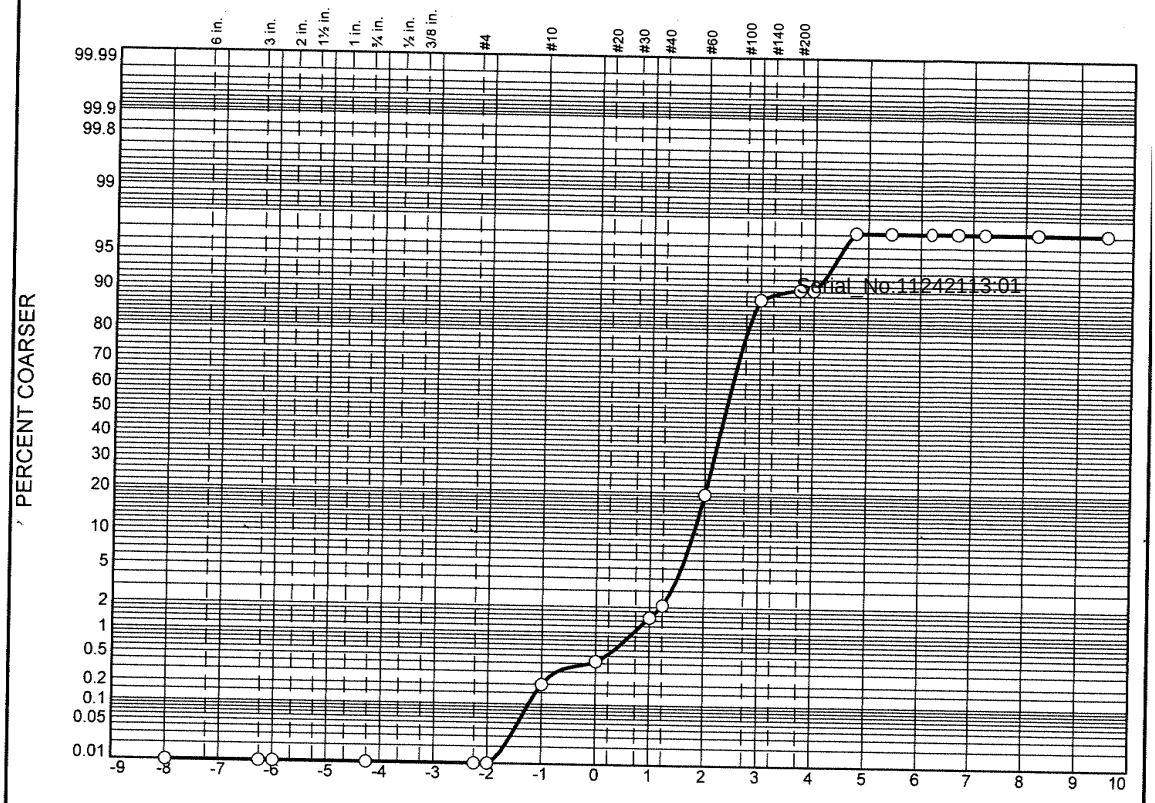
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		15.9	12.6	11.9	10.5	22.9	14.6	1.2	61.1	7.6	0.0	0.0	0.0	7.6	2.8

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0454	0.0603	0.1642	0.2058	0.2754	0.3509	0.5309	1.0239	3.1919	4.1970	5.2854	6.5644

Fineness Modulus	C_u	C_c
2.78	16.97	1.23

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.2	0.2	1.1	17.8	69.0	2.0	6.8	0.0	0.0		2.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.2642	0.2085	0.1938	0.1653	0.1361	0.0853	1.54	2.44

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|438|SED|01 **Sample No.:** L2151381-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|438|SED|01

Sample Number: L2151381-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 101.46
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
101.46	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.20	0.00	99.8
		#18	0.23	0.00	99.6
		#35	1.11	0.00	98.5
		#40	0.59	0.00	97.9
		#60	17.50	0.00	80.7
		#120	69.93	0.00	11.7
		#200	1.97	0.00	9.8
		#230	0.02	0.00	9.8

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.8
Weight of hydrometer sample =35.83
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0367	2.9
5.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0232	2.9
15.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0134	2.9
30.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0095	2.9
60.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0067	2.9
240.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0033	2.9
1440.00	20.4	1.0065	1.0065	0.0136	6.5	14.6	0.0014	2.9

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.2	0.2	1.1	17.8	69.0	2.0	90.1	6.8	0.0	0.0		6.8	2.9

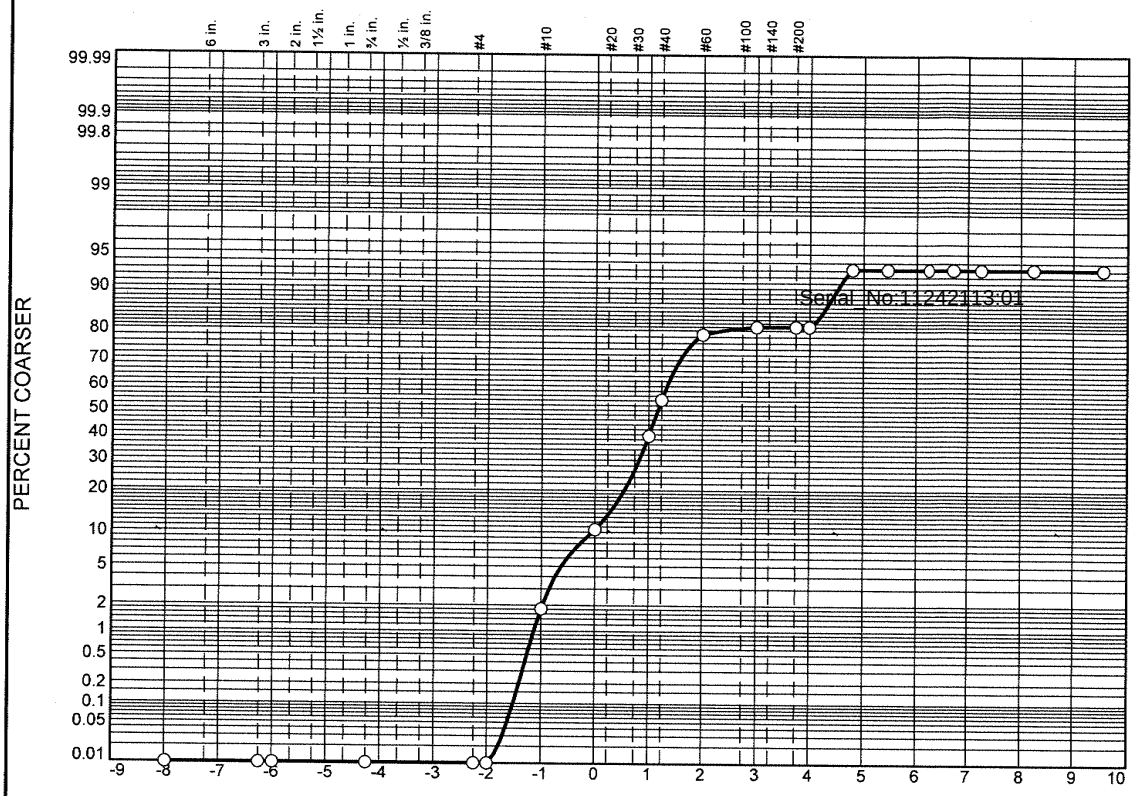
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0458	0.0853	0.1361	0.1479	0.1653	0.1799	0.1938	0.2085	0.2482	0.2642	0.2879	0.3342

Fineness Modulus	C_u	C_c
0.89	2.44	1.54

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.8	8.7	28.9	39.3	2.4	0.1	11.9	0.0	0.0	0.0	6.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7969	0.4965	0.4459	0.3357	0.0524	0.0436	5.20	11.38

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|440|SED|01 **Sample No.:** L2151381-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|440|SED|01

Sample Number: L2151381-11

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 41.11
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
41.11	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.75	0.00	98.2
		#18	3.55	0.00	89.5
		#35	11.89	0.00	60.6
		#40	6.16	0.00	45.6
		#60	10.02	0.00	21.3
		#120	0.95	0.00	18.9
		#200	0.02	0.00	18.9
		#230	0.00	0.00	18.9

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 18.9
Weight of hydrometer sample =35.50
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0362	6.9
5.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0229	6.9
15.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0132	6.9
30.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0093	6.9
60.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0066	6.9
240.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0033	6.9
1440.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0013	6.9

Alpha Analytical

Fractional Components

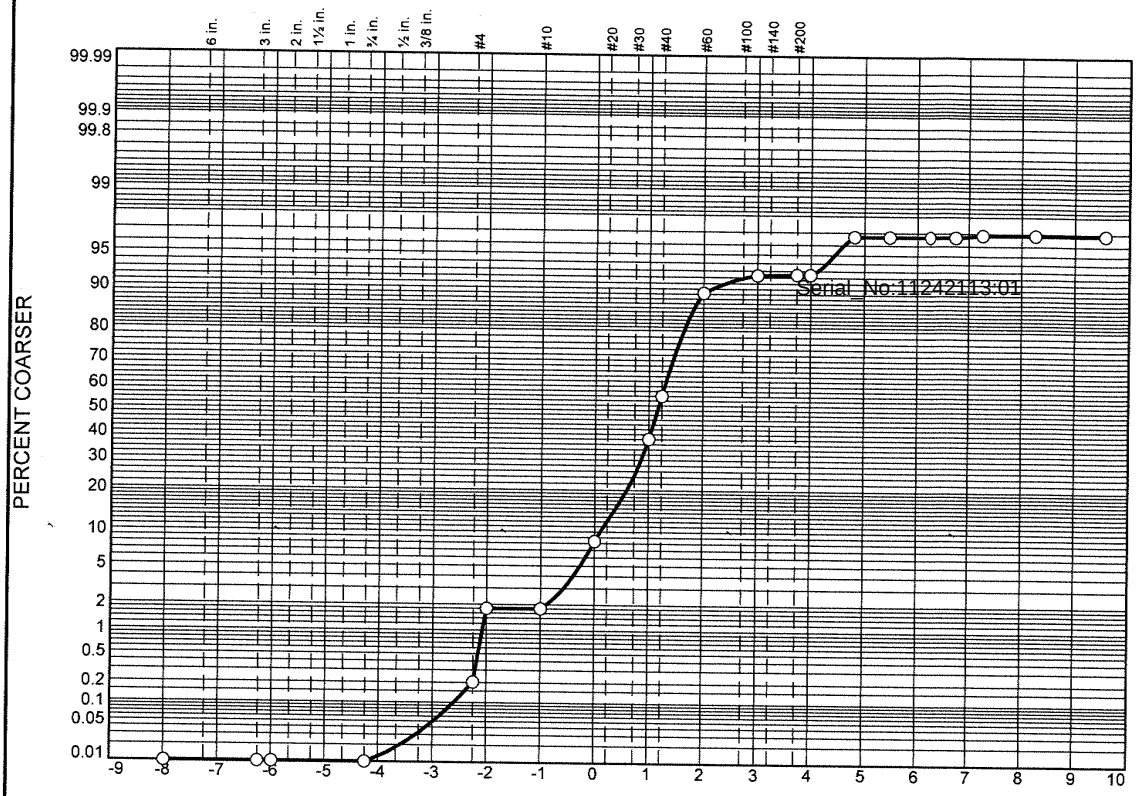
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.8	8.7	28.9	39.3	2.4	0.1	79.4	11.9	0.0	0.0	0.0	11.9	6.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0436	0.0524	0.1892	0.3357	0.3964	0.4459	0.4965	0.6841	0.7969	1.0323	1.5455

Fineness Modulus	C_u	C_c
1.90	11.38	5.20

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.8	0.0	6.6	29.7	51.1	3.1	0.1	4.3	0.0	0.1	0.1	3.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7628	0.4907	0.4480	0.3687	0.2883	0.2235	1.24	2.20

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|440|SED|02 **Sample No.:** L2151381-12

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|440|SED|02

Sample Number: L2151381-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 118.18
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
118.18	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.24	0.00	99.8
		#5	1.88	0.00	98.2
		#10	0.00	0.00	98.2
		#18	7.76	0.00	91.6
		#35	35.19	0.00	61.9
		#40	21.06	0.00	44.0
		#60	39.29	0.00	10.8
		#120	3.66	0.00	7.7
		#200	0.14	0.00	7.6
		#230	0.00	0.00	7.6

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.6
Weight of hydrometer sample =35.24
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0095	1.0095	0.0136	9.5	13.8	0.0356	3.3
5.00	20.4	1.0095	1.0095	0.0136	9.5	13.8	0.0225	3.3
15.00	20.4	1.0095	1.0095	0.0136	9.5	13.8	0.0130	3.3
30.00	20.4	1.0095	1.0095	0.0136	9.5	13.8	0.0092	3.3
60.00	20.4	1.0090	1.0090	0.0136	9.0	13.9	0.0065	3.1
240.00	20.4	1.0090	1.0090	0.0136	9.0	13.9	0.0033	3.1
1440.00	20.4	1.0090	1.0090	0.0136	9.0	13.9	0.0013	3.1

Alpha Analytical

Fractional Components

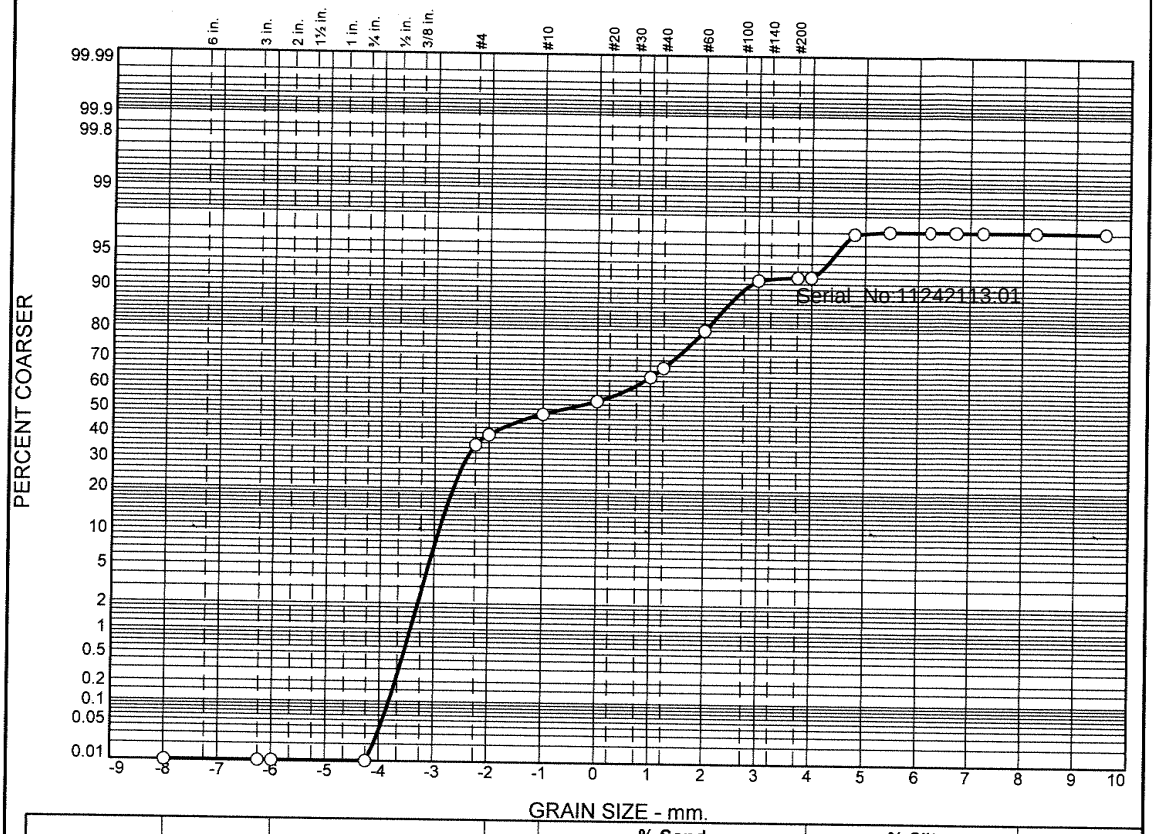
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.8	0.0	6.6	29.7	51.1	3.1	0.1	90.6	4.3	0.0	0.1	0.1	4.5	3.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0461	0.2235	0.2883	0.3202	0.3687	0.4094	0.4480	0.4907	0.6600	0.7628	0.9294	1.2052

Fineness Modulus	C_u	C_c
2.07	2.20	1.24

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			39.1	8.8	5.6	10.1	16.3	11.6	0.6	4.9	0.1	0.0	0.0	2.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			6.8362	3.7988	1.5318	0.3766	0.2007	0.1484	0.25	25.59

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source:** 3664|2021|ECR-B|444|SED|01 **Sample No.:** L2151381-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|444|SED|01

Sample Number: L2151381-13

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 114.35
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
114.35	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	40.08	0.00	64.9
		#5	4.67	0.00	60.9
		#10	9.97	0.00	52.1
		#18	6.45	0.00	46.5
		#35	11.57	0.00	36.4
		#40	4.09	0.00	32.8
		#60	14.58	0.00	20.1
		#120	13.27	0.00	8.5
		#200	0.58	0.00	7.9
		#230	0.01	0.00	7.9

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.9
Weight of hydrometer sample =35.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0085	1.0085	0.0136	8.5	14.0	0.0360	3.1
5.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0229	2.9
15.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0132	2.9
30.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0093	2.9
60.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0066	2.9
240.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0033	2.9
1440.00	20.4	1.0080	1.0080	0.0136	8.0	14.2	0.0013	2.9

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		39.1	8.8	5.6	10.1	16.3	11.6	0.6	44.2	4.9	0.1	0.0	0.0	5.0	2.9

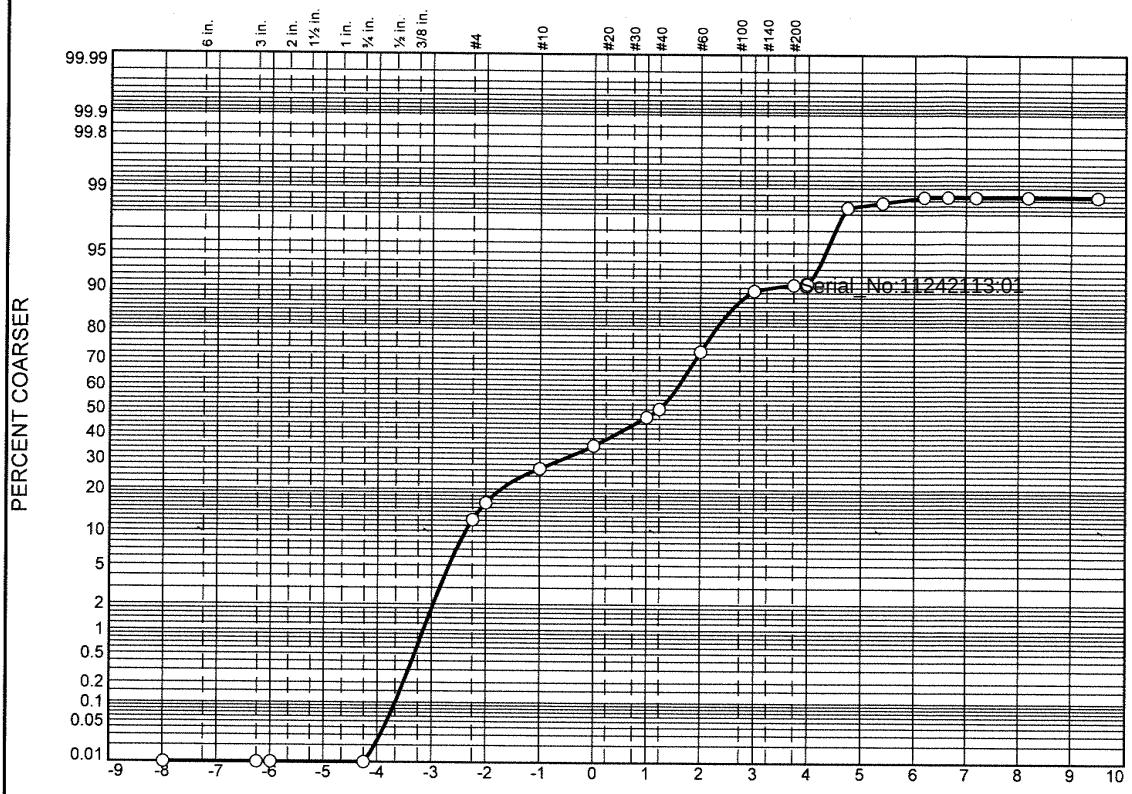
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0464	0.1484	0.2007	0.2494	0.3766	0.6054	1.5318	3.7988	6.2902	6.8362	7.5155	8.5510

Fineness Modulus	C_u	C_c
3.61	25.59	0.25

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			16.1	10.5	8.4	11.7	26.2	16.5	1.3	7.7	0.3	0.0		1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.2160	0.7311	0.4273	0.2669	0.1694	0.0997	0.98	7.33

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|460|SED|01 **Sample No.:** L2151381-14

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|460|SED|01

Sample Number: L2151381-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 115.36
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.36	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	14.05	0.00	87.8
		#5	4.57	0.00	83.9
		#10	12.02	0.00	73.4
		#18	9.74	0.00	65.0
		#35	13.54	0.00	53.3
		#40	3.93	0.00	49.9
		#60	26.21	0.00	27.1
		#120	19.05	0.00	10.6
		#200	1.29	0.00	9.5
		#230	0.19	0.00	9.3

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 9.3
Weight of hydrometer sample =35.65
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0040	1.0040	0.0136	4.0	15.2	0.0375	1.7
5.00	20.4	1.0035	1.0035	0.0136	3.5	15.4	0.0238	1.5
15.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0138	1.3
30.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0098	1.3
60.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0069	1.3
240.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0035	1.3
1440.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0014	1.3

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		16.1	10.5	8.4	11.7	26.2	16.5	1.3	64.1	7.7	0.3	0.0		8.0	1.3

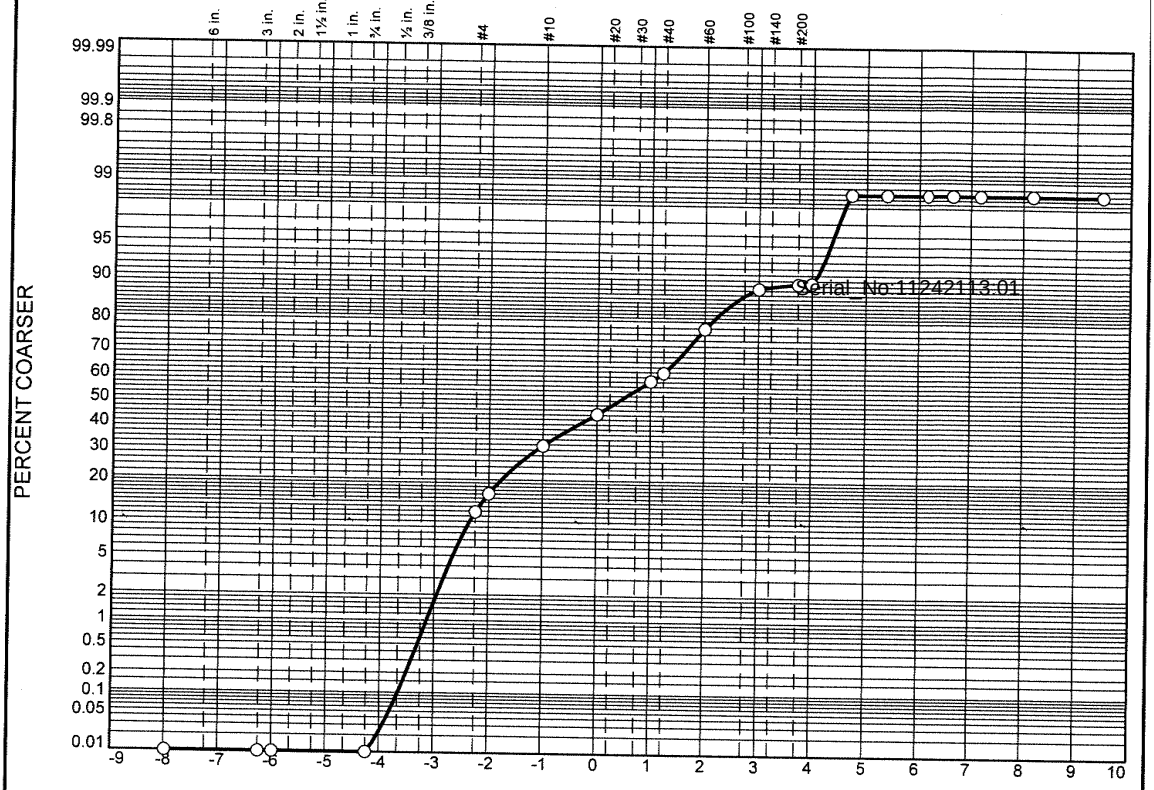
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0497	0.0997	0.1694	0.2057	0.2669	0.3297	0.4273	0.7311	3.2741	4.2160	5.1714	6.3977

Fineness Modulus	C_u	C_c
2.65	7.33	0.98

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			16.1	15.5	12.6	14.1	19.5	10.5	1.2	9.1	0.0	0.0		1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.1806	1.2601	0.7501	0.3223	0.1734	0.0608	1.36	20.74

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|460|SED|02 **Sample No.:** L2151381-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|460|SED|02

Sample Number: L2151381-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 109.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
109.56	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	12.96	0.00	88.2
		#5	4.64	0.00	83.9
		#10	16.97	0.00	68.4
		#18	13.90	0.00	55.8
		#35	15.39	0.00	41.7
		#40	3.73	0.00	38.3
		#60	17.60	0.00	22.2
		#120	11.59	0.00	11.7
		#200	1.07	0.00	10.7
		#230	0.14	0.00	10.6

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 10.6
Weight of hydrometer sample =35.93
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0378	1.4
5.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0239	1.4
15.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0138	1.4
30.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0098	1.4
60.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0069	1.4
240.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0035	1.4
1440.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0014	1.4

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		16.1	15.5	12.6	14.1	19.5	10.5	1.2	57.9	9.1	0.0	0.0		9.1	1.4

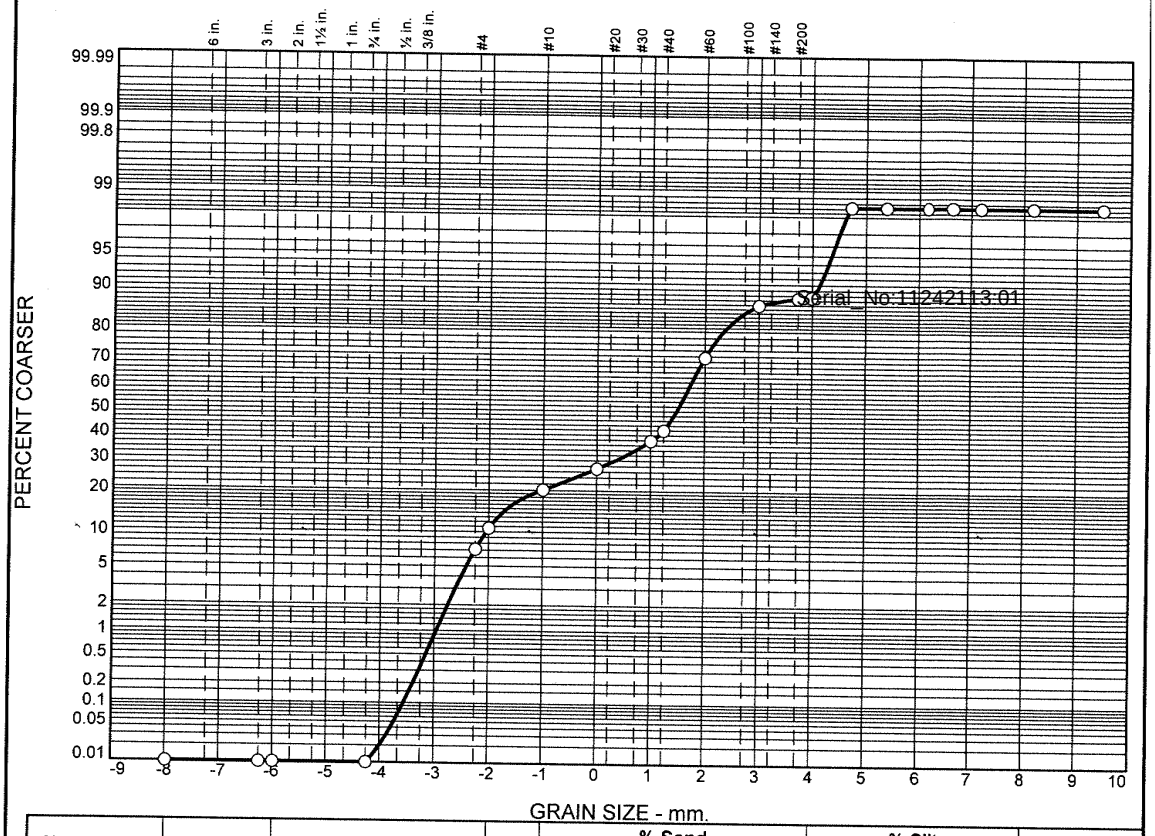
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0496	0.0608	0.1734	0.2283	0.3223	0.4586	0.7501	1.2601	3.3959	4.1806	5.0970	6.3077

Fineness Modulus	C_u	C_c
2.96	20.74	1.36

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			10.7	9.4	7.0	10.6	33.8	15.3	1.9	9.7	0.0	0.0	0.0	1.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.1545	0.4526	0.3595	0.2575	0.1499	0.0587	2.50	7.72

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|462|SED|01 **Sample No.:** L2151381-16

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|462|SED|01

Sample Number: L2151381-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 107.01
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
107.01	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	7.61	0.00	92.9
		#5	3.80	0.00	89.3
		#10	10.10	0.00	79.9
		#18	7.45	0.00	72.9
		#35	11.37	0.00	62.3
		#40	4.58	0.00	58.0
		#60	31.56	0.00	28.5
		#120	16.46	0.00	13.2
		#200	1.64	0.00	11.6
		#230	0.24	0.00	11.4

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.4
Weight of hydrometer sample =35.53
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0378	1.6
5.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0239	1.6
15.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0138	1.6
30.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0098	1.6
60.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0069	1.6
240.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0035	1.6
1440.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0014	1.6

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		10.7	9.4	7.0	10.6	33.8	15.3	1.9	68.6	9.7	0.0	0.0	0.0	9.7	1.6

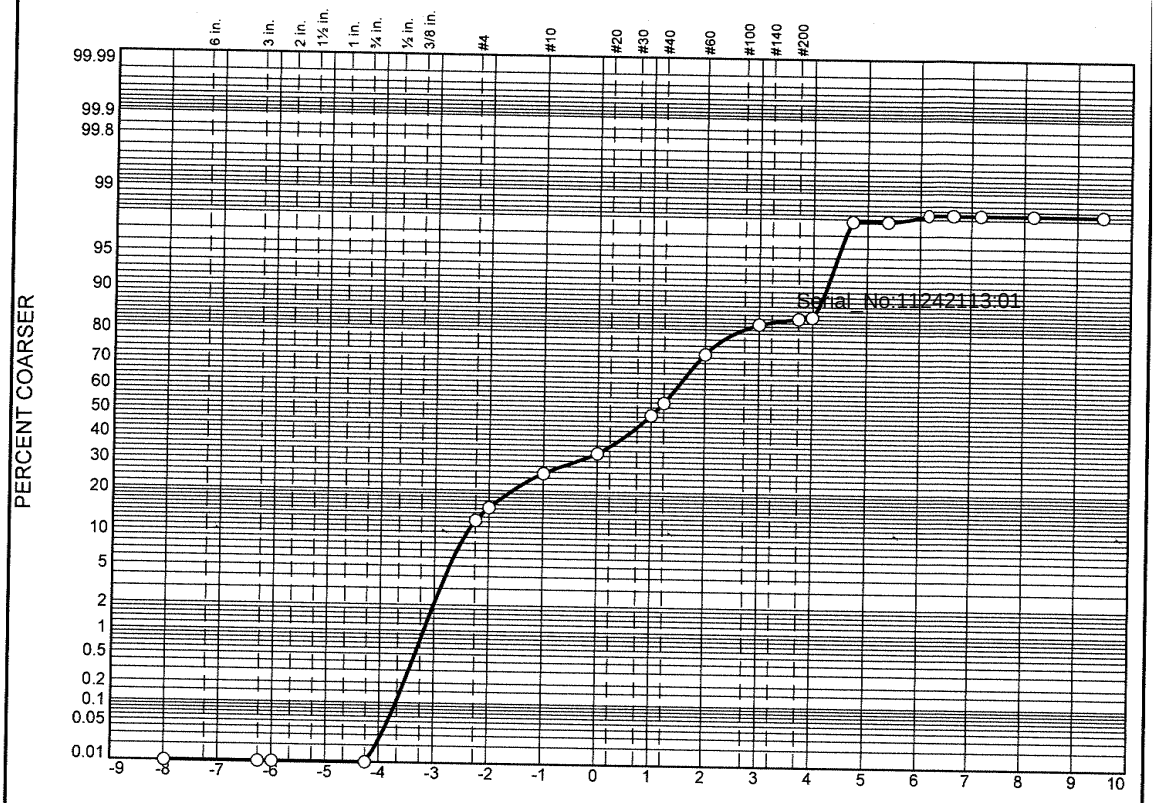
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0488	0.0587	0.1499	0.1969	0.2575	0.3057	0.3595	0.4526	2.0227	3.1545	4.1298	5.3279

Fineness Modulus	C_u	C_c
2.32	7.72	2.50

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			15.2	10.3	7.5	15.7	24.4	9.5	2.1	13.2	0.2	0.1	0.0	1.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.0589	0.6904	0.4784	0.2774	0.0616	0.0532	2.09	12.97

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|464|SED|01 **Sample No.:** L2151381-17

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|464|SED|01

Sample Number: L2151381-17

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 103.56
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
103.56	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	12.72	0.00	87.7
		#5	3.05	0.00	84.8
		#10	10.63	0.00	74.5
		#18	7.78	0.00	67.0
		#35	16.21	0.00	51.3
		#40	5.43	0.00	46.1
		#60	19.92	0.00	26.9
		#120	9.76	0.00	17.4
		#200	1.65	0.00	15.8
		#230	0.39	0.00	15.5

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 15.5
Weight of hydrometer sample =35.21
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0378	2.1
5.00	20.4	1.0030	1.0030	0.0136	3.0	15.5	0.0239	2.1
15.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0139	1.8
30.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0098	1.8
60.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0069	1.8
240.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0035	1.8
1440.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0014	1.8

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		15.2	10.3	7.5	15.7	24.4	9.5	2.1	59.2	13.2	0.2	0.1	0.0	13.5	1.8

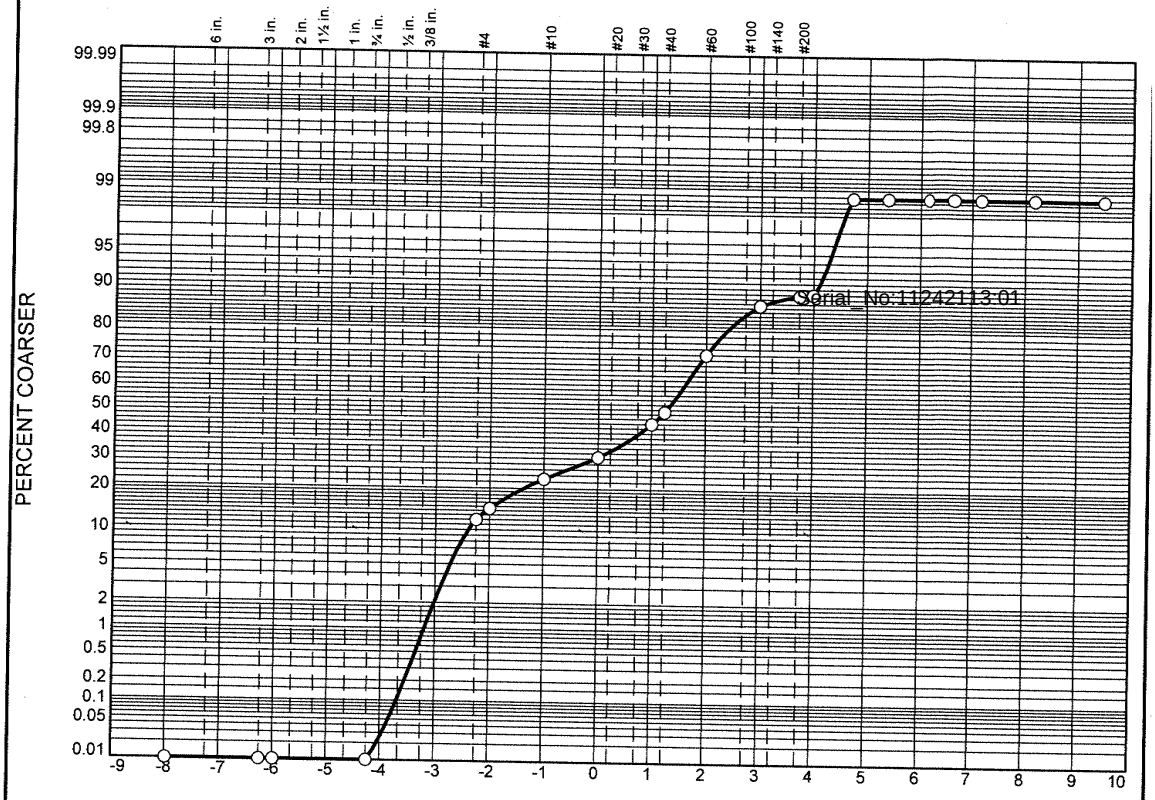
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0458	0.0532	0.0616	0.1692	0.2774	0.3620	0.4784	0.6904	2.9556	4.0589	5.2669	6.5830

Fineness Modulus	C_u	C_c
2.59	12.97	2.09

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			14.5	8.4	7.7	13.4	27.9	14.6	2.6	9.6	0.0	0.0	0.0	1.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.8547	0.5865	0.4133	0.2624	0.1427	0.0597	1.97	9.83

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|466|SED|01 **Sample No.:** L2151381-18

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|466|SED|01

Sample Number: L2151381-18

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 131.87
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
131.87	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	15.78	0.00	88.0
		#5	3.37	0.00	85.5
		#10	11.00	0.00	77.1
		#18	10.16	0.00	69.4
		#35	17.70	0.00	56.0
		#40	6.57	0.00	51.0
		#60	30.21	0.00	28.1
		#120	19.34	0.00	13.5
		#200	2.83	0.00	11.3
		#230	0.34	0.00	11.0

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 11.0
Weight of hydrometer sample =35.73
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0380	1.3
5.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0240	1.3
15.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0139	1.3
30.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0098	1.3
60.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0069	1.3
240.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0035	1.3
1440.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0014	1.3

Alpha Analytical

Fractional Components

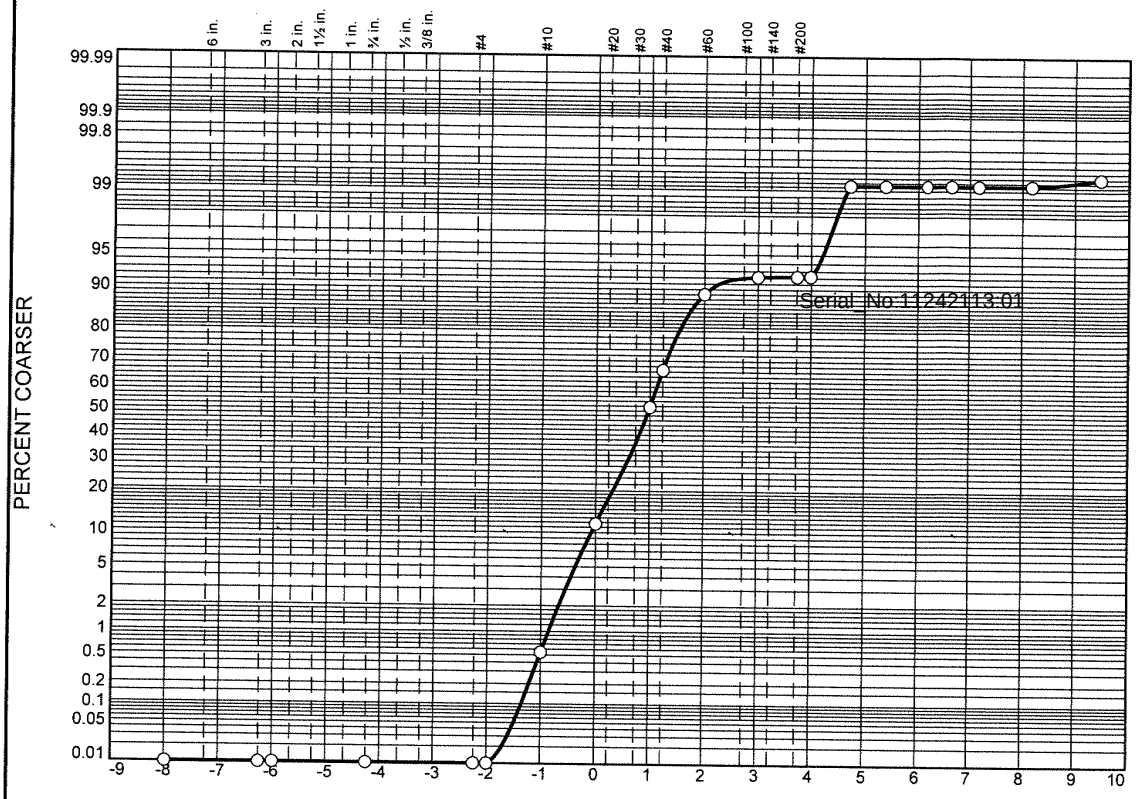
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		14.5	8.4	7.7	13.4	27.9	14.6	2.6	66.2	9.6	0.0	0.0	0.0	9.6	1.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0499	0.0597	0.1427	0.1898	0.2624	0.3285	0.4133	0.5865	2.5769	3.8547	5.2304	6.5877

Fineness Modulus	C_u	C_c
2.50	9.83	1.97

Serial_No:11242113:01

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.5	11.2	39.9	37.5	3.0	0.2	6.8	0.0	0.0		0.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9098	0.5729	0.5086	0.4072	0.3019	0.2322	1.25	2.47

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|442|SED|01 **Sample No.:** L2151381-19

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|442|SED|01
Sample Number: L2151381-19

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 116.78
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
116.78	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.64	0.00	99.5
		#18	13.04	0.00	88.3
		#35	46.54	0.00	48.4
		#40	17.56	0.00	33.4
		#60	26.23	0.00	10.9
		#120	3.56	0.00	7.9
		#200	0.11	0.00	7.8
		#230	0.01	0.00	7.8

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.8
Weight of hydrometer sample =35.98
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0380	0.9
5.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0240	0.9
15.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0139	0.9
30.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0098	0.9
60.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0069	0.9
240.00	20.4	1.0025	1.0025	0.0136	2.5	15.6	0.0035	0.9
1440.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0014	0.7

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.5	11.2	39.9	37.5	3.0	0.2	91.8	6.8	0.0	0.0		6.8	0.9

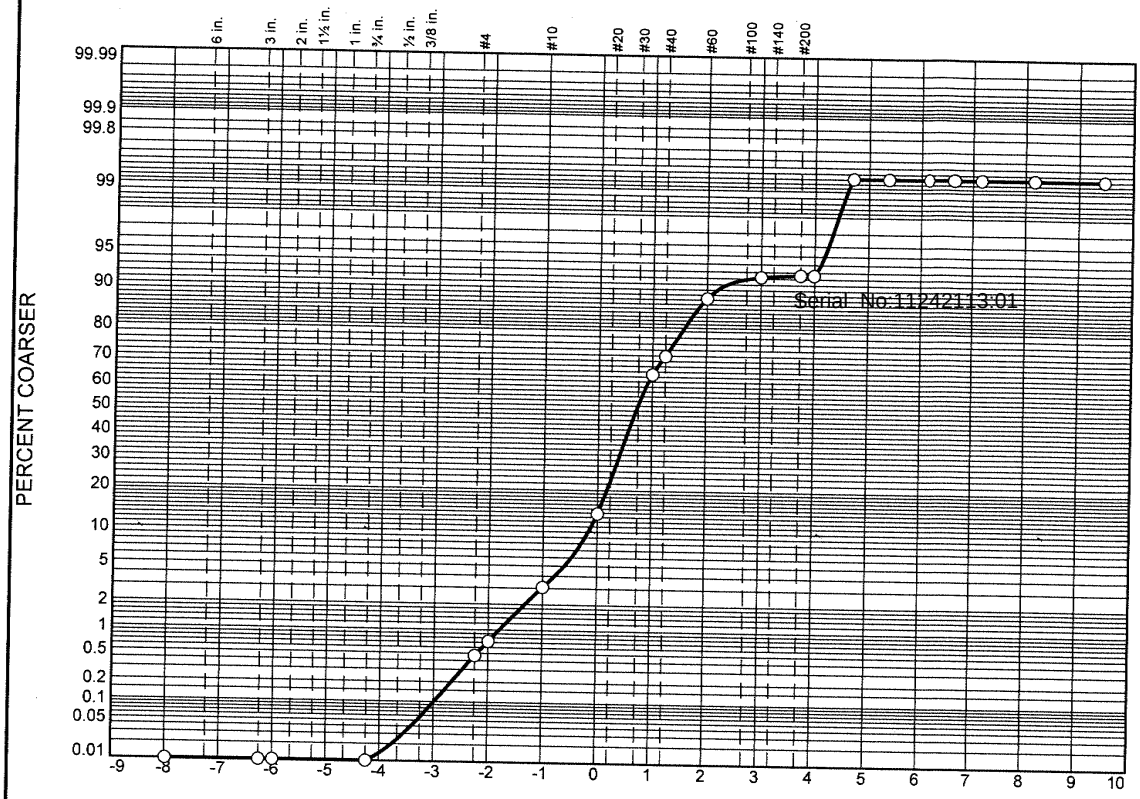
D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0538	0.2322	0.3019	0.3448	0.4072	0.4575	0.5086	0.5729	0.8043	0.9098	1.0564	1.2936

Fineness Modulus	C_u	C_c
2.21	2.47	1.25

Serial_No:11242113:01

Alpha Analytical

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.7	2.4	10.7	51.1	23.4	3.9	0.4	6.7	0.0	0.0	0.0	0.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9740	0.6898	0.6165	0.4455	0.2913	0.2191	1.31	3.15

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source:** 3664|2021|ECR-B|468|SED|01 **Sample No.:** L2151381-20

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

11/24/2021

Location: 3664|2021|ECR-B|468|SED|01

Sample Number: L2151381-20

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 122.09
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
122.09	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.57	0.00	99.5
		#5	0.31	0.00	99.3
		#10	2.86	0.00	96.9
		#18	13.16	0.00	86.2
		#35	62.34	0.00	35.1
		#40	8.43	0.00	28.2
		#60	20.12	0.00	11.7
		#120	4.82	0.00	7.8
		#200	0.35	0.00	7.5
		#230	0.00	0.00	7.5

Serial_No:11242113:01

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 7.5
Weight of hydrometer sample =35.36
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0381	0.7
5.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0241	0.7
15.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0139	0.7
30.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0098	0.7
60.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0070	0.7
240.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0035	0.7
1440.00	20.4	1.0020	1.0020	0.0136	2.0	15.8	0.0014	0.7

Alpha Analytical

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.7	2.4	10.7	51.1	23.4	3.9	0.4	89.5	6.7	0.0	0.0	0.0	6.7	0.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0548	0.2191	0.2913	0.3424	0.4455	0.5422	0.6165	0.6898	0.8876	0.9740	1.1202	1.5180

Fineness Modulus	C_u	C_c
2.40	3.15	1.31

Serial_No:11242113:01

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

TOC

CHAIN OF CUSTODY

PAGE OF

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151381

Westborough, MA
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: 3664

Project Location: Offshore MA

Project #: 3664

Project Manager: Jason Clermont

ALPHA Quote #: ref: 11026

Client Information

Client: CSA Ocean Sciences

Address: 8502 SW Kansas Avenue

Stuart, FL 34997

Phone: cell: (252) 258-1626

Fax:

Email: jclermont@conshelf.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information

☐ FAX ☐ ADEx

Data Deliverables

☒ EMAIL ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #

Regulatory Requirements/Report Limits

State/Fed Program Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51381-01	3664|2021 ECR-B-410	09-05-21	2011	SE	JAM	☒	
-02	3664|2021 ECR-B-422	09-06-21	0915	SE	JAM	☒	
-03	3664|2021 ECR-B-424	09-06-21	1582	SE	JAM	☒	
-04	3664|2021 ECR-B-426	09-06-21	1715	SE	JAM	☒	
-05	3664|2021 ECR-B-428	09-06-21	2010	SE	JAM	☒	
-06	3664|2021 ECR-B-430	09-06-21	2238	SE	JAM	☒	
-07	3664|2021 ECR-B-432	09-07-21	0155	SE	JAM	☒	
-08	3664|2021 ECR-B-434	09-07-21	0630	SE	JAM	☒	
-09	3664|2021 ECR-B-436	09-07-21	0935	SE	JAM	☒	
-10	3664|2021 ECR-B-438	09-07-21	1313	SE	JAM	☒	

Container Type G

Preservative A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	09-09-21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1720	[signature]	9/22/21 1720

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

Meghan Murphy 9/22/21 2000 [signature] 9/22/21 2000

[signature] 9/22/21 2119 Kim L Bailey 9/22/21 21:19

CS

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: CSA Ocean Sciences
Address: 8502 SW Kansas Avenue
Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)
Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151381

Report Information ☐ FAX ☐ ADEx
Data Deliverables ☒ EMAIL ☐ Add'l Deliverables
Billing Information ☒ Same as Client info PO #:

Regulatory Requirements/Report Limits
State/Fed Program | Criteria

ANALYSIS

Grain Size

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size	Sample Specific Comments
51381 -01	3664|2021 ECR-B-416	09-05-21	2011	SE	ZMH	☒	
-02	3664|2021 ECR-B-422	09-06-21	0915	SE	ZMH	☒	
-03	3664|2021 ECR-B-424	09-06-21	1502	SE	ZMH	☒	
-04	3664|2021 ECR-B-426	09-06-21	1715	SE	ZMH	☒	
-05	3664|2021 ECR-B-428	09-06-21	2010	SE	ZMH	☒	
-06	3664|2021 ECR-B-430	09-06-21	2238	SE	ZMH	☒	
-07	3664|2021 ECR-B-432	09-07-21	0155	SE	ZMH	☒	
-08	3664|2021 ECR-B-434	09-07-21	0630	SE	ZMH	☒	
-09	3664|2021 ECR-B-436	09-07-21	0835	SE	ZMH	☒	
-10	3664|2021 ECR-B-438	09-07-21	1313	SE	ZMH	☒	

Container Type: PO
Preservative: A

Relinquished By:	Date/Time:	Received By:	Date/Time:
	9/9/21		9/9/21
AK	9/22/21	AK	9/22/21
	9/22/21 1720		9/22/21
Meghan Murphy	9/22/21 2000	Joseph C. Burgio	9/22/21 2000
Joseph C. Burgio	9/22/21 2119	Kin L. Bailey	9/22/21 21:19

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

TOC

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

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Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151381

Report Information
☐ FAX
☐ ADEx

Data Deliverables
☒ EMAIL
☐ Add'l Deliverables

Billing Information
☒ Same as Client Info
PO #:

Regulatory Requirements/Report Limits
State/Fed Program
Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOC	Sample Specific Comments
51381-11	3664|2021 ECR-B-440-1	09-07-21	2307	SE	~~2307~~ JAM	☒	
-12	3664|2021 ECR-B-440-2	09-07-21	2307	SE	~~2307~~ JAM	☒	
-13	3664|2021 ECR-B-444	09-08-21	0236	SE	JAM	☒	
-14	3664|2021 ECR-B-460-1	09-08-21	2055	SE	JAM	☒	
-15	3664|2021 ECR-B-460-2	09-08-21	2055	SE	JAM	☒	
-16	3664|2021 ECR-B-462	09-08-21	1600	SE	JAM	☒	
-17	3664|2021 ECR-B-464	09-05-21	0659	SE	JAM	☒	
-18	3664|2021 ECR-B-466	09-05-21	0943	SE	JAM	☒	
-19	3664|2021 ECR-B-442	09-02-21	1840	SE	~~1840~~ JAM	☒	
-20	3664|2021 ECR-B-468	09-05-21	1555	SE	JAM	☒	

Container Type: G
Preservative: A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	09-09-21	[signature]	9/9/21
[signature] AAL	9-22-21	[signature] AAL	9/22/21
	9/22/21 1720	[signature]	9/22/21 1720
Meghan Murphy	9/22/21 2000	[signature]	9/22/21 2000
Joseph C. Bezzigh	9/22/21 21:19	Kim L. Bailey	9/22/21 21:19

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GS

CHAIN OF CUSTODY

PAGE OF

ALPHA ANALYTICAL

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Stuart, FL 34997
Phone: cell: (252) 258-1626
Fax:
Email: jclermont@conshelf.com

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Project Information

Project Name: 3664
Project Location: Offshore MA
Project #: 3664
Project Manager: Jason Clermont
ALPHA Quote #: ref: 11026

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: TBD Time:

Other Project Specific Requirements/Comments/Detection Limits:
Grain size reported using Wentworth classification scheme

Date Rec'd in Lab: 9/22/21

ALPHA Job #: L2151381

Report Information
☐ FAX
☐ ADEx

Data Deliverables
☒ EMAIL
☐ Add'l Deliverables

Billing Information
☒ Same as Client info
PO #:

Regulatory Requirements/Report Limits
State/Fed Program
Criteria

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Grain Size												Sample Specific Comments
51381 - 11	3664|2021 ECR-B-440-1	09-07-21	2307	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-12	3664|2021 ECR-B-440-2	09-07-21	2307	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-13	3664|2021 ECR-B-444	09-08-21	0236	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-14	3664|2021 ECR-B-460-1	09-08-21	2055	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-15	3664|2021 ECR-B-460-2	09-08-21	2055	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-16	3664|2021 ECR-B-462	09-08-21	1600	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-17	3664|2021 ECR-B-464	09-05-21	0659	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-18	3664|2021 ECR-B-466	09-05-21	0943	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-19	3664|2021 ECR-B-442	09-07-21	1840	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
-20	3664|2021 ECR-B-468	09-05-21	1555	SE	JAM	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

Container Type: EP
Preservative: A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/9/21	[signature]	9/9/21
[signature]	9/22/21	[signature]	9/22/21
[signature]	9/22/21 1700	[signature]	9/22/21
Meghan Chumpey	9/22/21 2000	Joseph C. Bezzi Jr.	9/22/21 2000
Joseph C. Bezzi Jr.	9/22/21 2119	Kim L. Bailey	9/22/21 21:19

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Serial_No:01132214:15

ANALYTICAL REPORT

Lab Number:	L2161415
Client:	CSA Ocean Sciences Inc. 3 Division Street East Greenwich, RI 02818
ATTN:	Jason Clermont
Phone:	(772) 219-3000
Project Name:	BEACON WIND EXPORT CABLE ROUTE
Project Number:	3664
Report Date:	01/13/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
Report Date: 01/13/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2161415-01	ECR-B-101-A	SEDIMENT	Not Specified	11/04/21 10:30	11/08/21
L2161415-02	ECR-B-106	SEDIMENT	Not Specified	11/04/21 08:54	11/08/21
L2161415-03	ECR-B-108	SEDIMENT	Not Specified	11/03/21 09:03	11/08/21
L2161415-04	ECR-B-1150	SEDIMENT	Not Specified	11/04/21 13:52	11/08/21
L2161415-05	ECR-B-1151-01	SEDIMENT	Not Specified	11/04/21 14:56	11/08/21
L2161415-06	ECR-B-1151-02	SEDIMENT	Not Specified	11/04/21 14:56	11/08/21
L2161415-07	ECR-B-1152	SEDIMENT	Not Specified	11/05/21 09:33	11/08/21
L2161415-08	ECR-B-1154	SEDIMENT	Not Specified	11/05/21 11:23	11/08/21
L2161415-09	ECR-B-1155	SEDIMENT	Not Specified	11/03/21 15:57	11/08/21
L2161415-10	ECR-B-1156	SEDIMENT	Not Specified	11/03/21 15:01	11/08/21
L2161415-11	ECR-B-1157	SEDIMENT	Not Specified	11/05/21 13:19	11/08/21
L2161415-12	ECR-B-1158	SEDIMENT	Not Specified	11/04/21 11:58	11/08/21
L2161415-13	ECR-B-1131	SEDIMENT	Not Specified	11/06/21 12:47	11/08/21
L2161415-14	ECR-B-1133	SEDIMENT	Not Specified	11/06/21 12:01	11/08/21
L2161415-15	ECR-B-1135	SEDIMENT	Not Specified	11/06/21 11:19	11/08/21
L2161415-16	ECR-B-1137	SEDIMENT	Not Specified	11/06/21 10:31	11/08/21

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
Project Number:	3664	**Report Date:**	01/13/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
Project Number:	3664	**Report Date:**	01/13/22

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Grain Size

The WG1584758-1 Laboratory Duplicate RPDs for granule (160%), % very coarse sand (33%) and % very fine sand (67%), performed on L2161415-02, are above the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

Total Organic Carbon

L2161415: The samples were frozen upon receipt in order to arrest the holding time.

L2161415-02, -04, -06, and -07: The Sample Replicate RPD is outside the acceptance criteria of 30%. A double-burn re-analysis was performed with a confirming result. The results of the original analysis are reported. The elevated RPD has been attributed to the non-homogeneous nature of the sample.

The WG1591021-4 MS recoveries (Rep1 - 141%) performed on L2161415-08, are outside the 75-125% acceptance criteria, possibly due to sample matrix. The associated SRM recoveries are within criteria, indicating the sample batch was in control, and all sample results were accepted.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Elizabeth Porta

Title: Technical Director/Representative Date: 01/13/22

INORGANICS
&
MISCELLANEOUS

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-01
Client ID: ECR-B-101-A
Sample Location: Not Specified
Date Collected: 11/04/21 10:30
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.806		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	0.750		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	0.778		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	9.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	4.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	35.1		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	25.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	16.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-02
Client ID: ECR-B-106
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/04/21 08:54
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.106		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	0.860		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	0.483		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.900		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	17.1		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	34.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	10.2		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.200		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	29.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	5.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-03
Client ID: ECR-B-108
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/03/21 09:03
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.14		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	2.70		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	2.92		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	2.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	6.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	3.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	6.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	7.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	50.0		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	13.0		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-04
Client ID: ECR-B-1150
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/04/21 13:52
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.57		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	2.13		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	1.85		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	31.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	12.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	13.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	13.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	12.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	1.80		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.500		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	11.1		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-05
Client ID: ECR-B-1151-01
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/04/21 14:56
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.50		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	1.39		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	1.45		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	4.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	12.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	26.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	24.2		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	4.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.700		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	17.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-06
Client ID: ECR-B-1151-02
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/04/21 14:56
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.98		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	0.957		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	1.47		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	9.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	6.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	12.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	25.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	23.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	5.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.900		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	13.3		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	3.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-07
Client ID: ECR-B-1152
Sample Location: Not Specified
Date Collected: 11/05/21 09:33
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.592		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	1.55		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	1.07		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	13.7		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.0		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	13.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	17.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	24.1		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	5.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.900		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	12.7		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-08
Client ID: ECR-B-1154
Sample Location: Not Specified
Date Collected: 11/05/21 11:23
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.691		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	0.705		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	0.698		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.400		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.500		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	2.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	13.2		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	40.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	19.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	18.3		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	2.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-09
Client ID: ECR-B-1155
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/03/21 15:57
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.05		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	3.53		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	3.29		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.200		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	2.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	5.80		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	6.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	8.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	11.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	9.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	47.1		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-10
Client ID: ECR-B-1156
Sample Location: Not Specified
Date Collected: 11/03/21 15:01
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	3.92		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	3.90		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	3.91		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	5.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	10.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	6.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	3.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	1.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	58.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	12.7		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-11
Client ID: ECR-B-1157
Sample Location: Not Specified
Date Collected: 11/05/21 13:19
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	0.879		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	0.745		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	0.812		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	13.7		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.70		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	4.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	9.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	27.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	20.6		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	2.50		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	16.0		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-12
Client ID: ECR-B-1158
Sample Location: Not Specified
Date Collected: 11/04/21 11:58
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	1.13		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	1.04		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	1.08		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.100		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	0.400		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	1.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	4.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	70.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	6.50		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	0.500		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	14.3		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	1.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-13
Client ID: ECR-B-1131
Sample Location: Not Specified
Sample Depth:
Matrix: Sediment

Date Collected: 11/06/21 12:47
Date Received: 11/08/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.94		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	3.01		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	2.98		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	0.300		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	9.50		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	10.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	5.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	2.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	1.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	58.3		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	10.2		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-14
Client ID: ECR-B-1133
Sample Location: Not Specified
Date Collected: 11/06/21 12:01
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.06		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	2.22		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	2.14		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	3.40		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	3.00		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	8.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	7.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	6.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	6.80		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	51.4		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	11.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-15
Client ID: ECR-B-1135
Sample Location: Not Specified
Date Collected: 11/06/21 11:19
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.16		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	2.40		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	2.28		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	1.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	5.80		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	2.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	1.50		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.20		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	62.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	16.7		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664
Lab Number: L2161415
Report Date: 01/13/22

SAMPLE RESULTS

Lab ID: L2161415-16
Client ID: ECR-B-1137
Sample Location: Not Specified
Date Collected: 11/06/21 10:31
Date Received: 11/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Sediment

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab										
Total Organic Carbon (Rep1)	2.98		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	3.50		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	3.24		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Grain Size (Wentworth Method) - Mansfield Lab										
Boulder (>256 mm)	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Cobbles	ND		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Pebble (4.0-64 mm)	16.8		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Granule (2.0-4.0 mm)	10.9		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Coarse Sand	7.90		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Coarse Sand	4.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Medium Sand	2.10		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Fine Sand	1.30		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
% Very Fine Sand	1.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Silt - (3.9-62.5 um)	46.5		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ
Clay - (<3.9 um)	8.60		%	0.100	NA	1	-	12/17/21 14:45	12,D6913/D7928(M)	SJ

Project Name: BEACON WIND EXPORT CABLE ROU **Lab Number:** L2161415

Project Number: 3664 **Report Date:** 01/13/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Organic Carbon - Mansfield Lab for sample(s): 01-16 Batch: WG1591021-1										
Total Organic Carbon (Rep1)	ND		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Rep2)	ND		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP
Total Organic Carbon (Average)	ND		%	0.050	0.050	1	-	01/04/22 20:12	13,-	SP

Lab Control Sample Analysis
Batch Quality Control

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
Report Date: 01/13/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-16 Batch: WG1591021-2								
Total Organic Carbon (Rep1)	100		-		75-125	-		25
Total Organic Carbon (Rep2)	107		-		75-125	-		25
Total Organic Carbon (Average)	103		-		75-125	-		25

Matrix Spike Analysis
Batch Quality Control

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
Report Date: 01/13/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1591021-4 QC Sample: L2161415-08 Client ID: ECR-B-1154												
Total Organic Carbon (Rep1)	0.691	0.666	1.63	**141**	Q	-	-		75-125	-		25
Total Organic Carbon (Rep2)	0.705	0.638	1.41	110		-	-		75-125	-		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
Report Date: 01/13/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Grain Size (Wentworth Method) - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1584758-1 QC Sample: L2161415-02 Client ID: ECR-B-106						
Boulder (>256 mm)	ND	ND	%	NC		20
Cobbles	ND	ND	%	NC		20
Pebble (4.0-64 mm)	ND	1.00	%	NC		20
Granule (2.0-4.0 mm)	0.900	0.100	%	**160**	Q	20
% Very Coarse Sand	2.10	1.50	%	**33**	Q	20
% Coarse Sand	17.1	14.5	%	16		20
% Medium Sand	34.4	36.3	%	5		20
% Fine Sand	10.2	11.5	%	12		20
% Very Fine Sand	0.200	0.400	%	**67**	Q	20
Silt - (3.9-62.5 um)	29.8	29.6	%	1		20
Clay - (<3.9 um)	5.30	5.10	%	4		20
Total Organic Carbon - Mansfield Lab Associated sample(s): 01-16 QC Batch ID: WG1591021-3 QC Sample: L2161415-08 Client ID: ECR-B-1154						
Total Organic Carbon (Rep1)	0.691	0.731	%	6		25
Total Organic Carbon (Rep2)	0.705	0.829	%	16		25
Total Organic Carbon (Average)	0.698	0.780	%	11		25

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
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Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	***Custody Seal***
B	Absent

Container Information

Container ID	***Container Type***	***Cooler***	***Initial pH***	***Final pH***	***Temp deg C***	***Pres***	***Seal***	***Frozen Date/Time***	***Analysis(*)***
L2161415-01A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-01B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2161415-02A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-02B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2161415-03A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-03B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2161415-04A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-04B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)()
L2161415-05A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)

*Values in parentheses indicate holding time in days

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2161415-05B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)()
L2161415-06A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-06B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-VCSAND(W)()
L2161415-07A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-07B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2161415-08A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-08B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2161415-09A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-09B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)()
L2161415-10A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)

*Values in parentheses indicate holding time in days

Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
Report Date: 01/13/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2161415-10B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-CSAND(W)()
L2161415-11A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-11B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()
L2161415-12A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-12B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)()
L2161415-13A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-13B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)()
L2161415-14A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-14B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-GRANULE(W)(),A2-HYDRO-COBBLES(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-BOULDER(W)()
L2161415-15A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)

*Values in parentheses indicate holding time in days

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Project Name: BEACON WIND EXPORT CABLE ROUTE
Project Number: 3664

Lab Number: L2161415
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2161415-15B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-MSAND(W)(),A2-HYDRO-VCSAND(W)()
L2161415-16A	Glass 120ml/4oz unpreserved	B	NA		3.1	Y	Absent		A2-TOC-LK-2REPS(14)
L2161415-16B	Plastic 8oz unpreserved for Grain Size	B	NA		3.1	Y	Absent		A2-HYDRO-COBBLES(W)(),A2-HYDRO-GRANULE(W)(),A2-HYDRO-CLAY(W)(),A2-HYDRO-VFSAND(W)(),A2-HYDRO-SILT(W)(),A2-HYDRO-PEBBLE(W)(),A2-HYDRO-FSAND(W)(),A2-HYDRO-VCSAND(W)(),A2-HYDRO-BOULDER(W)(),A2-HYDRO-CSAND(W)(),A2-HYDRO-MSAND(W)()

*Values in parentheses indicate holding time in days

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
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Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
Project Number:	3664	**Report Date:**	01/13/22

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	BEACON WIND EXPORT CABLE ROUTE	**Lab Number:**	L2161415
Project Number:	3664	**Report Date:**	01/13/22

REFERENCES

12 Annual Book of ASTM Standards. (American Society for Testing and Materials) ASTM International.

13 Determination of Total Organic Carbon in Sediment. U.S. EPA, Region II. July 27, 1988.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

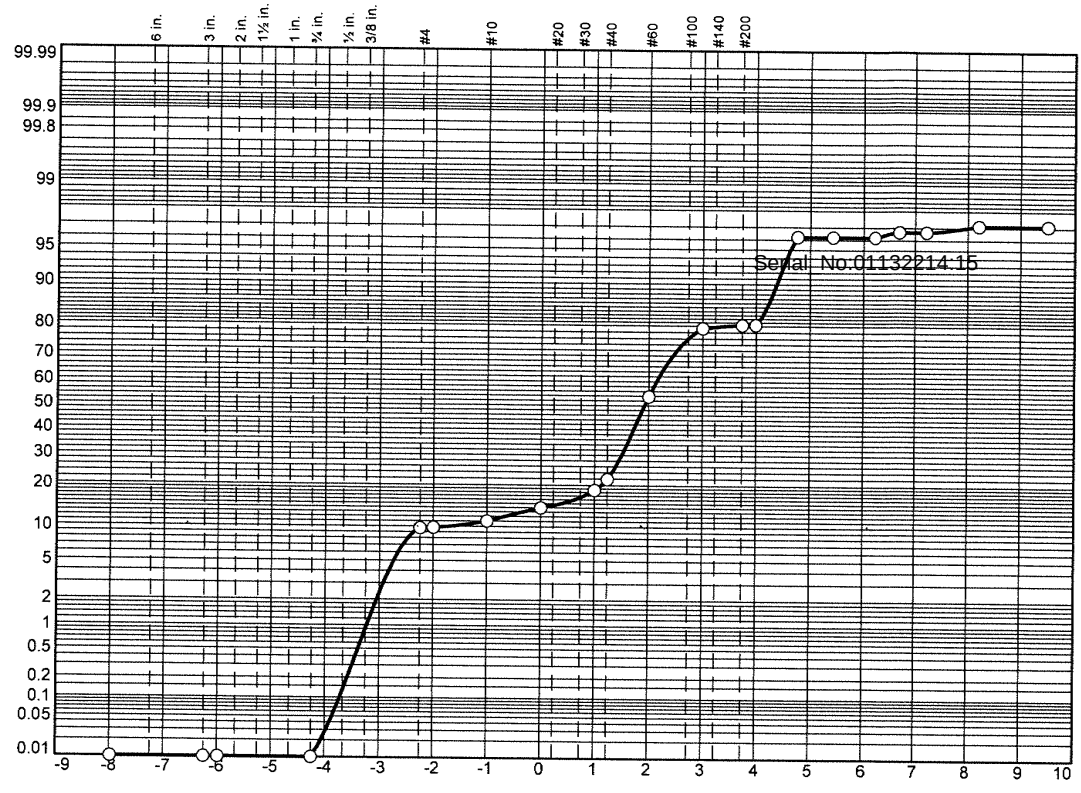
We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Serial_No:01132214:15

ASTM D6913/D7928

GRAIN SIZE ANALYSIS

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			9.7	1.3	2.9	4.7	35.1	25.5	1.2	15.8	0.0	0.5	0.3	3.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.7708	0.3027	0.2636	0.1832	0.0543	0.0481	2.31	6.30

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** ECR-B-101-A **Sample Number:** L2161415-01

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-101-A

Sample Number: L2161415-01

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 53.98
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
53.98	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	5.21	0.00	90.3
		#5	0.05	0.00	90.3
		#10	0.70	0.00	89.0
		#18	1.57	0.00	86.1
		#35	2.51	0.00	81.4
		#40	1.76	0.00	78.1
		#60	17.18	0.00	46.3
		#120	13.78	0.00	20.8
		#200	0.54	0.00	19.8
		#230	0.03	0.00	19.7

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 19.7
Weight of hydrometer sample =35.69
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	3.8
5.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0233	3.8
15.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0134	3.8
30.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0095	3.3
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	3.3
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	2.9
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	2.9

Fractional Components

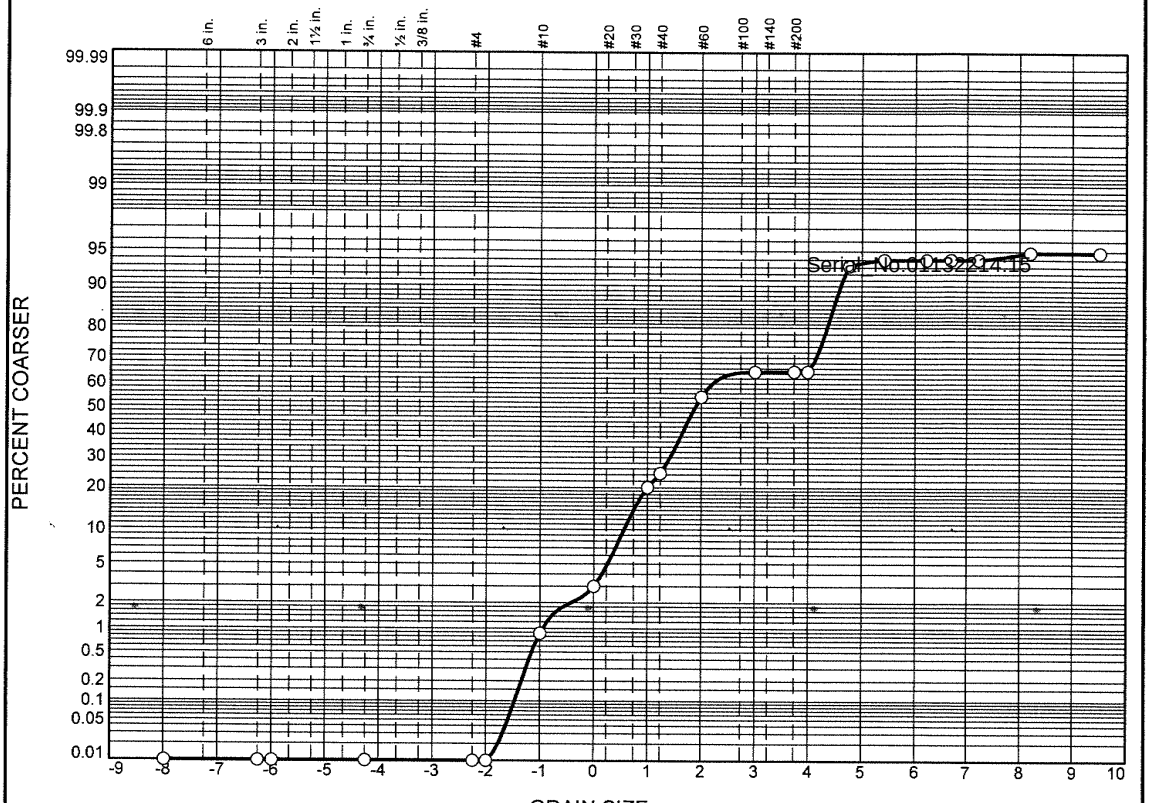
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		9.7	1.3	2.9	4.7	35.1	25.5	1.2	69.4	15.8	0.0	0.5	0.3	16.6	3.0

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0403	0.0481	0.0543	0.0902	0.1832	0.2260	0.2636	0.3027	0.4591	0.7708	3.1875	6.6553

Fineness Modulus	C_u	C_c
1.68	6.30	2.31

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	0.9	2.1	17.1	34.4	10.2	0.3	28.6	0.4	0.0	0.7	5.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5826	0.3168	0.2714	0.0563	0.0454	0.0411	0.24	7.71

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-106 **Sample Number:** L2161415-02

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-106

Sample Number: L2161415-02

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 21.73
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
21.73	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.19	0.00	99.1
		#18	0.46	0.00	97.0
		#35	3.71	0.00	79.9
		#40	0.95	0.00	75.6
		#60	6.53	0.00	45.5
		#120	2.22	0.00	35.3
		#200	0.02	0.00	35.2
		#230	0.00	0.00	35.2

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 35.2
Weight of hydrometer sample =35.30
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	6.8
5.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0234	6.0
15.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0135	6.0
30.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0095	6.0
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	6.0
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	5.2
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	5.2

Alpha Analytical

Fractional Components

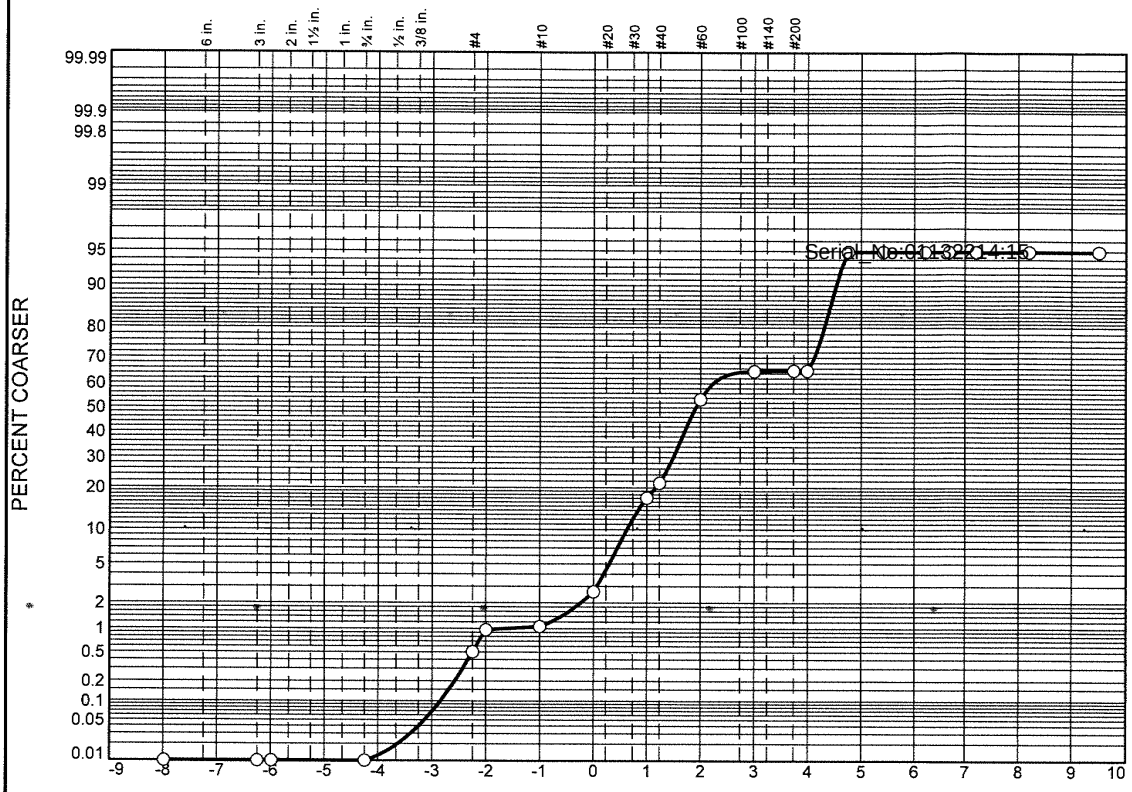
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	0.9	2.1	17.1	34.4	10.2	0.3	64.1	28.6	0.4	0.0	0.7	29.7	5.3

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0411	0.0454	0.0489	0.0563	0.2160	0.2714	0.3168	0.5011	0.5826	0.6758	0.8362

Fineness Modulus	C_u	C_c
1.25	7.71	0.24

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			1.0	0.1	1.5	14.5	36.3	11.5	0.5	29.5	0.0	0.0		5.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_U
○			0.5408	0.3066	0.2651	0.0573	0.0471	0.0433	0.25	7.08

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-106 **Sample Number:** WG1584758-1

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-106

Sample Number: WG1584758-1

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 21.70
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
21.70	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.11	0.00	99.5
		#5	0.10	0.00	99.0
		#10	0.02	0.00	98.9
		#18	0.34	0.00	97.4
		#35	3.14	0.00	82.9
		#40	0.92	0.00	78.7
		#60	6.96	0.00	46.6
		#120	2.50	0.00	35.1
		#200	0.04	0.00	34.9
		#230	0.00	0.00	34.9

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 34.9
Weight of hydrometer sample =35.59
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0371	5.1
5.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0235	5.1
15.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0136	5.1
30.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0096	5.1
60.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0068	5.1
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	5.1
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	5.1

Fractional Components

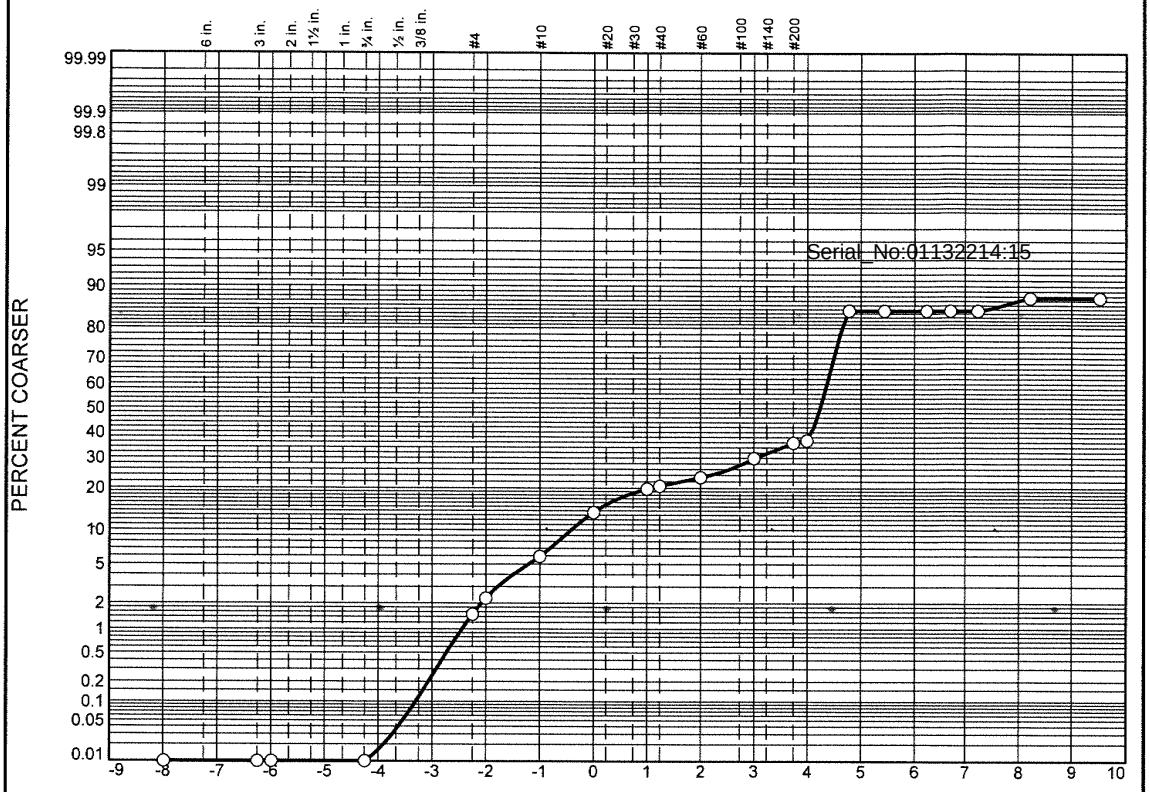
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		1.0	0.1	1.5	14.5	36.3	11.5	0.5	64.3	29.5	0.0	0.0		29.5	5.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0433	0.0471	0.0504	0.0573	0.2123	0.2651	0.3066	0.4443	0.5408	0.6463	0.8147

Fineness Modulus	C_u	C_c
1.22	7.08	0.25

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			2.3	3.6	7.7	6.1	3.6	6.6	7.1	47.7	0.0	0.0	2.4	12.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.8849	0.0591	0.0529	0.0445	0.0060			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-108 **Sample Number:** L2161415-03

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-108

Sample Number: L2161415-03

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 34.85
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
34.85	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.52	0.00	98.5
		#5	0.27	0.00	97.7
		#10	1.27	0.00	94.1
		#18	2.67	0.00	86.4
		#35	2.14	0.00	80.3
		#40	0.31	0.00	79.4
		#60	0.93	0.00	76.7
		#120	2.30	0.00	70.1
		#200	2.04	0.00	64.3
		#230	0.34	0.00	63.3

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 63.3
Weight of hydrometer sample =34.85
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0050	1.0052	0.0133	5.0	15.0	0.0365	15.3
5.00	21.9	1.0050	1.0052	0.0133	5.0	15.0	0.0231	15.3
15.00	21.9	1.0050	1.0052	0.0133	5.0	15.0	0.0133	15.3
30.00	21.9	1.0050	1.0052	0.0133	5.0	15.0	0.0094	15.3
60.00	21.9	1.0050	1.0052	0.0133	5.0	15.0	0.0067	15.3
240.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0034	12.4
1440.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0014	12.4

Fractional Components

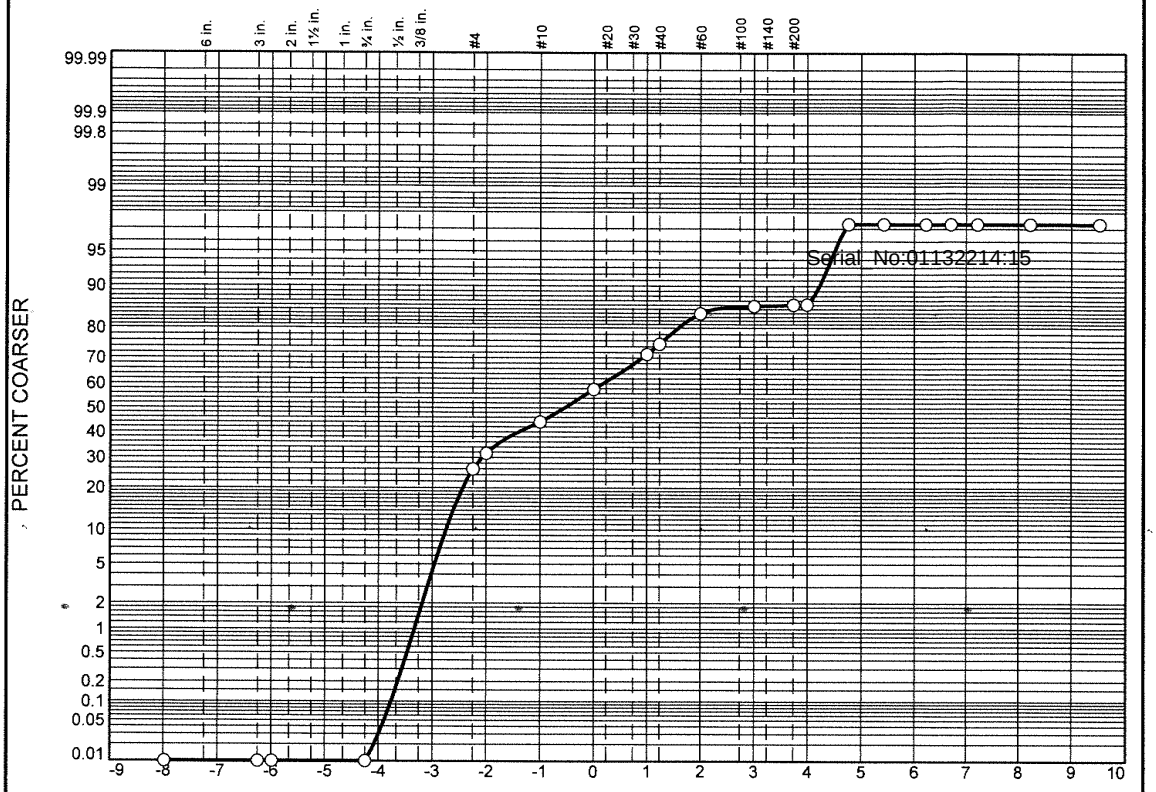
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		2.3	3.6	7.7	6.1	3.6	6.6	7.1	31.1	47.7	0.0	0.0	2.4	50.1	12.9

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0060	0.0398	0.0445	0.0486	0.0529	0.0591	0.4756	0.8849	1.3265	2.3062

Fineness Modulus
0.86

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			31.6	12.5	13.6	13.6	12.6	1.8	0.5	11.1	0.0	0.0		2.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			5.9966	2.6237	1.4529	0.5318	0.2113	0.0534	2.02	49.11

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** ECR-B-1150 **Sample Number:** L2161415-04

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1150

Sample Number: L2161415-04

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 69.31
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
69.31	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	17.95	0.00	74.1
		#5	3.92	0.00	68.4
		#10	8.68	0.00	55.9
		#18	9.42	0.00	42.3
		#35	9.46	0.00	28.7
		#40	2.49	0.00	25.1
		#60	6.24	0.00	16.1
		#120	1.27	0.00	14.3
		#200	0.21	0.00	14.0
		#230	0.05	0.00	13.9

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 13.9
Weight of hydrometer sample =35.39
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	2.7
5.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0233	2.7
15.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0134	2.7
30.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0095	2.7
60.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0067	2.7
240.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0034	2.7
1440.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0014	2.7

Alpha Analytical

Fractional Components

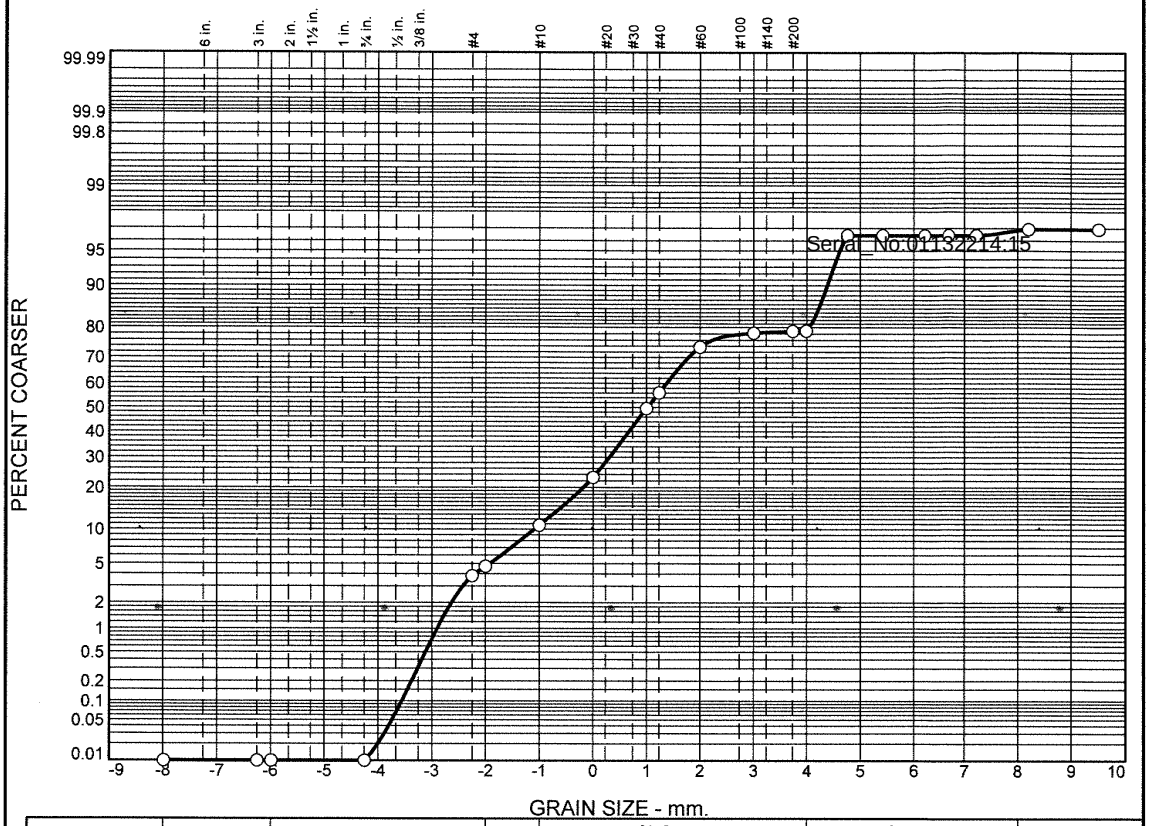
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		31.6	12.5	13.6	13.6	12.6	1.8	0.5	42.1	11.1	0.0	0.0		11.1	2.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0442	0.0534	0.2113	0.3316	0.5318	0.8873	1.4529	2.6237	5.4109	5.9966	6.7073	7.7790

Fineness Modulus	C_u	C_c
3.58	49.11	2.02

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			4.7	6.0	12.4	26.4	24.2	4.6	0.8	17.4	0.0	0.0	0.3	3.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.4661	0.6270	0.4944	0.2903	0.0535	0.0479	2.81	13.09

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1151-01 **Sample Number:** L2161415-05

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1151-01

Sample Number: L2161415-05

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 51.05
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
51.05	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	1.94	0.00	96.2
		#5	0.47	0.00	95.3
		#10	3.07	0.00	89.3
		#18	6.29	0.00	76.9
		#35	13.52	0.00	50.5
		#40	3.33	0.00	43.9
		#60	8.98	0.00	26.3
		#120	2.36	0.00	21.7
		#200	0.27	0.00	21.2
		#230	0.06	0.00	21.1

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 21.1
Weight of hydrometer sample =35.64
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0370	3.5
5.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0234	3.5
15.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0135	3.5
30.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0095	3.5
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	3.5
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	3.1
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	3.1

Fractional Components

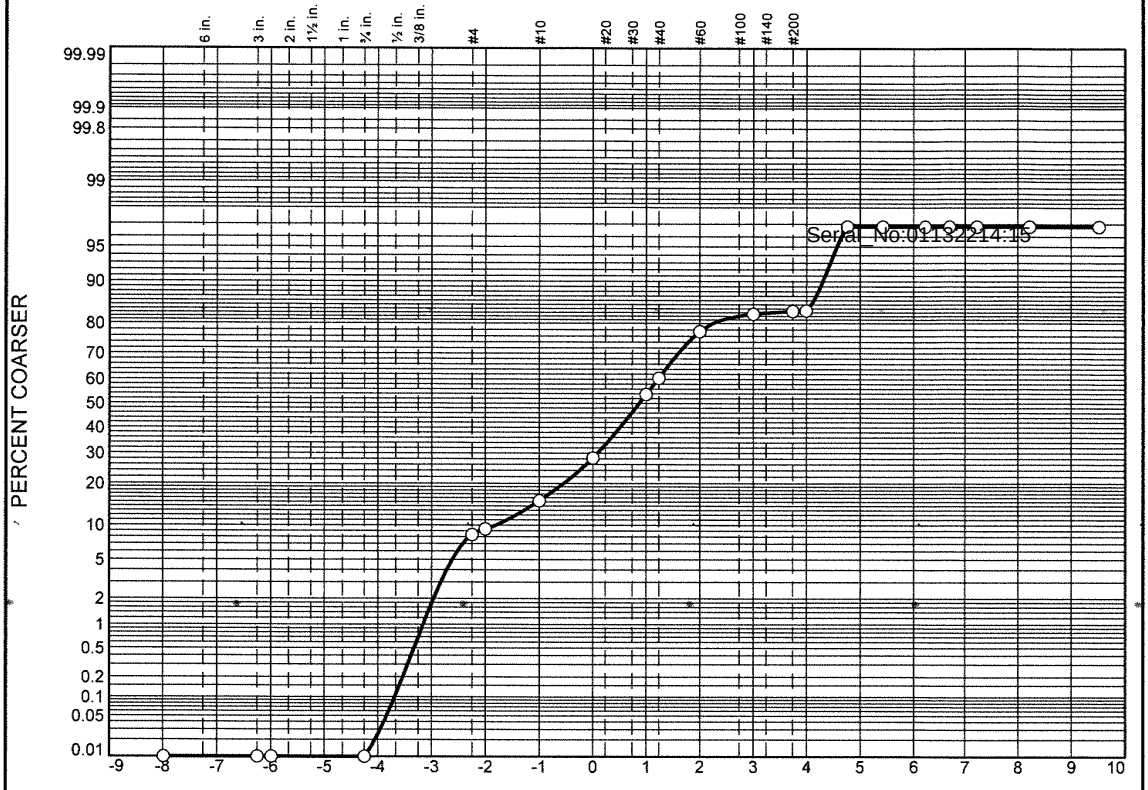
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		4.7	6.0	12.4	26.4	24.2	4.6	0.8	68.4	17.4	0.0	0.0	0.3	17.7	3.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0408	0.0479	0.0535	0.0604	0.2903	0.3851	0.4944	0.6270	1.1289	1.4661	2.1290	3.8028

Fineness Modulus	C_u	C_c
2.21	13.09	2.81

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			9.3	6.0	12.9	25.5	23.8	5.1	1.0	13.2	0.0	0.0		3.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			2.0426	0.7011	0.5465	0.3304	0.0586	0.0505	3.08	13.87

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1151-02 **Sample Number:** L2161415-06

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1151-02

Sample Number: L2161415-06

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 68.25
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
68.25	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	5.70	0.00	91.6
		#5	0.63	0.00	90.7
		#10	4.09	0.00	84.7
		#18	8.86	0.00	71.8
		#35	17.37	0.00	46.3
		#40	4.58	0.00	39.6
		#60	11.64	0.00	22.5
		#120	3.51	0.00	17.4
		#200	0.48	0.00	16.7
		#230	0.09	0.00	16.6

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 16.6
Weight of hydrometer sample =35.51
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	3.2
5.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0233	3.2
15.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0134	3.2
30.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0095	3.2
60.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0067	3.2
240.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0034	3.2
1440.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0014	3.2

Alpha Analytical

Fractional Components

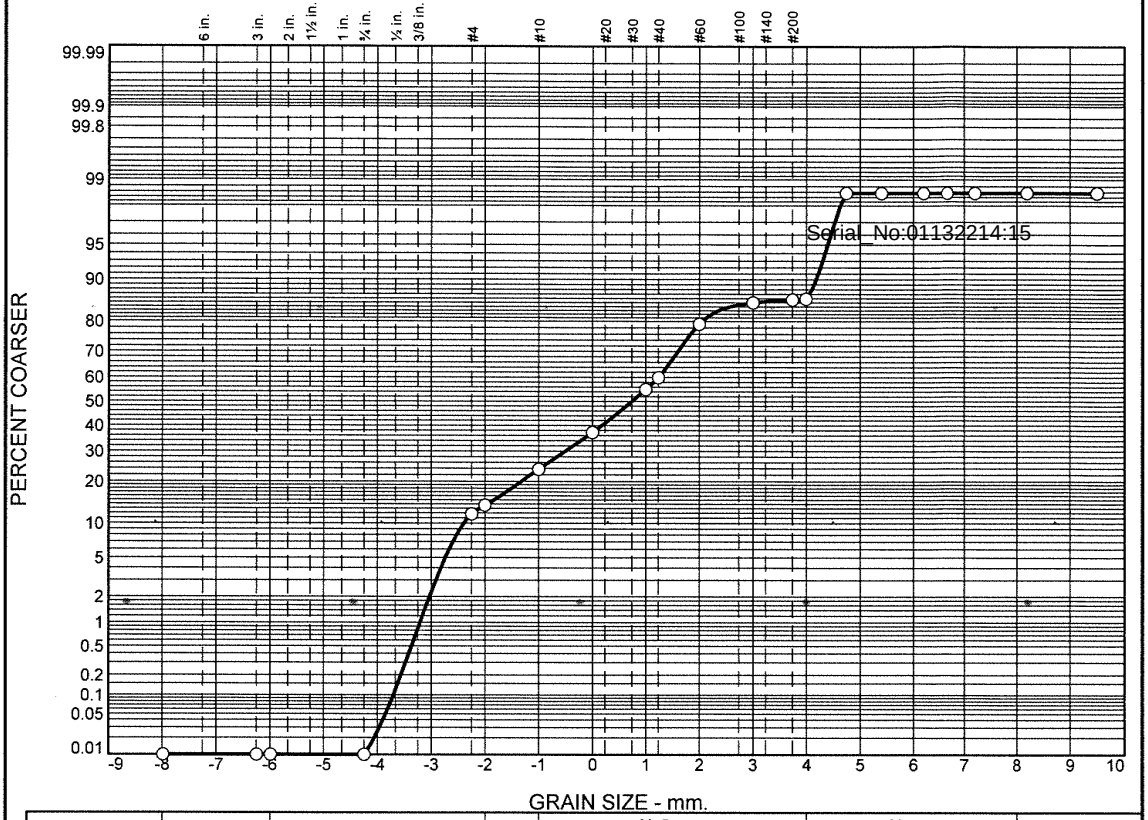
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		9.3	6.0	12.9	25.5	23.8	5.1	1.0	68.3	13.2	0.0	0.0		13.2	3.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0422	0.0505	0.0586	0.2094	0.3304	0.4293	0.5465	0.7011	1.4554	2.0426	3.4759	6.1396

Fineness Modulus	C_u	C_c
2.48	13.87	3.08

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			13.7	10.0	13.4	17.9	24.1	5.9	1.0	12.6	0.0	0.0	1.4	

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.5463	0.8834	0.5996	0.3290	0.1264	0.0550	2.23	16.07

Material Description	USCS	AASHTO
○		

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1152 **Sample Number:** L2161415-07

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1152

Sample Number: L2161415-07

Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 88.69
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
88.69	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	10.44	0.00	88.2
		#5	1.71	0.00	86.3
		#10	8.89	0.00	76.3
		#18	11.89	0.00	62.9
		#35	15.87	0.00	45.0
		#40	4.34	0.00	40.1
		#60	17.04	0.00	20.9
		#120	5.24	0.00	15.0
		#200	0.61	0.00	14.3
		#230	0.13	0.00	14.1

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 14.1
Weight of hydrometer sample =35.25
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0374	1.4
5.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0237	1.4
15.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0137	1.4
30.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0097	1.4
60.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0068	1.4
240.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0034	1.4
1440.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0014	1.4

Fractional Components

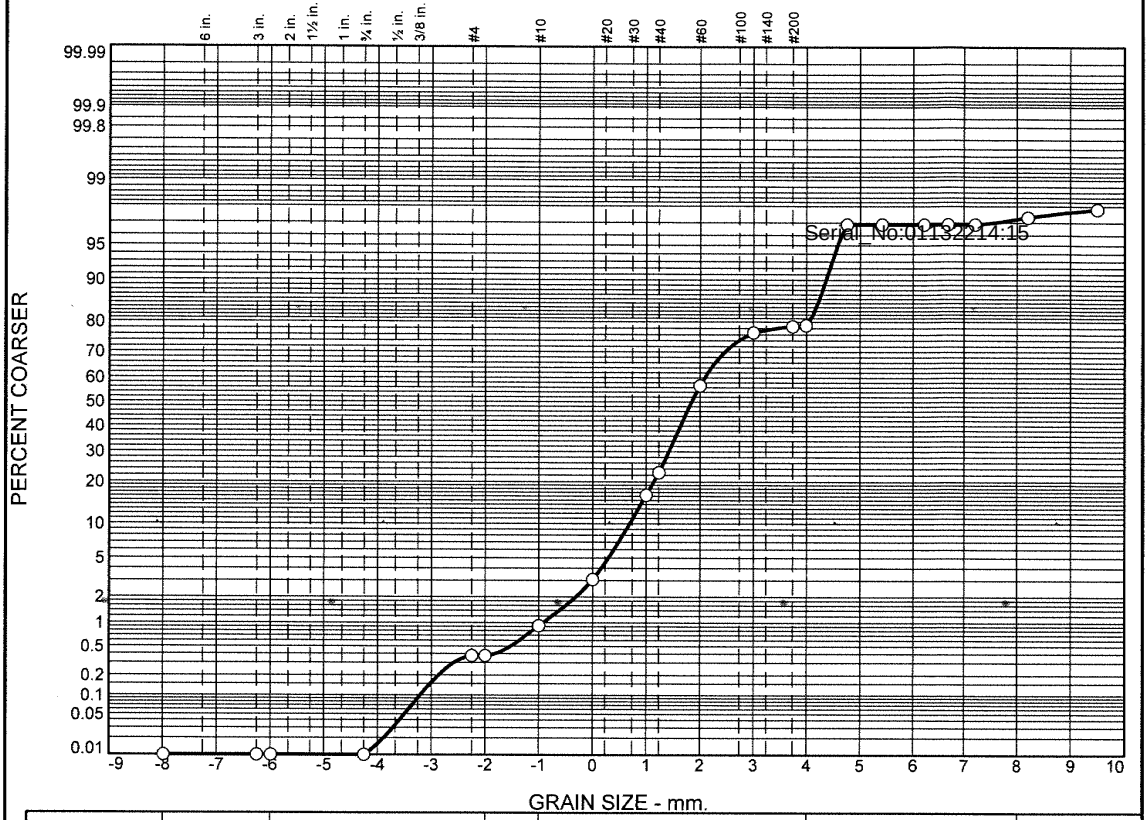
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		13.7	10.0	13.4	17.9	24.1	5.9	1.0	62.3	12.6	0.0	0.0		12.6	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0475	0.0550	0.1264	0.2403	0.3290	0.4240	0.5996	0.8834	2.4896	3.5463	5.2483	6.6758

Fineness Modulus	C_u	C_c
2.75	16.07	2.23

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.4	0.5	2.2	13.2	40.4	19.9	2.5	17.8	0.0	0.0	0.4	2.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5192	0.3213	0.2784	0.1810	0.0539	0.0486	2.10	6.61

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1154 **Sample Number:** L2161415-08

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1154

Sample Number: L2161415-08

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 53.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
53.51	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.20	0.00	99.6
		#5	0.00	0.00	99.6
		#10	0.29	0.00	99.1
		#18	1.15	0.00	96.9
		#35	7.07	0.00	83.7
		#40	3.50	0.00	77.2
		#60	18.15	0.00	43.3
		#120	10.64	0.00	23.4
		#200	1.06	0.00	21.4
		#230	0.16	0.00	21.1

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 21.1
Weight of hydrometer sample =35.16
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0371	3.1
5.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0235	3.1
15.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0136	3.1
30.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0096	3.1
60.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0068	3.1
240.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0034	2.6
1440.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0014	2.2

Fractional Components

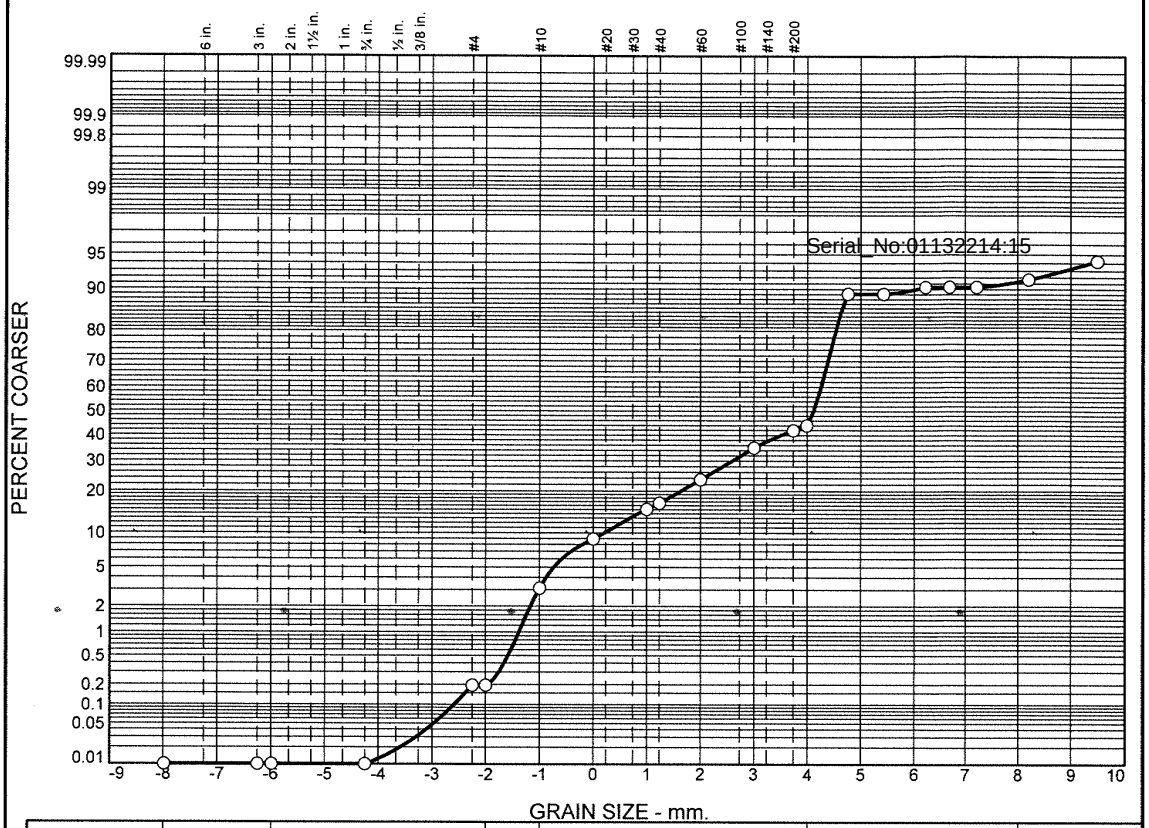
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.4	0.5	2.2	13.2	40.4	19.9	2.5	78.2	17.8	0.0	0.0	0.4	18.2	2.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0418	0.0486	0.0539	0.0605	0.1810	0.2353	0.2784	0.3213	0.4529	0.5192	0.6179	0.8147

Fineness Modulus	C_u	C_c
1.33	6.61	2.10

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.2	2.9	5.8	6.2	8.4	11.5	9.3	44.8	0.8	0.5	0.9	8.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.5033	0.0877	0.0575	0.0478	0.0403	0.0152	1.71	5.77

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1155 **Sample Number:** L2161415-09

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1155

Sample Number: L2161415-09

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 36.05
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
36.05	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.07	0.00	99.8
		#5	0.00	0.00	99.8
		#10	1.05	0.00	96.9
		#18	2.09	0.00	91.1
		#35	2.22	0.00	84.9
		#40	0.57	0.00	83.4
		#60	2.48	0.00	76.5
		#120	4.13	0.00	65.0
		#200	2.51	0.00	58.1
		#230	0.72	0.00	56.1

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 56.1
Weight of hydrometer sample =35.01
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	10.9
5.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0233	10.9
15.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0135	9.6
30.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0095	9.6
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	9.6
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	8.3
1440.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0014	5.8

Fractional Components

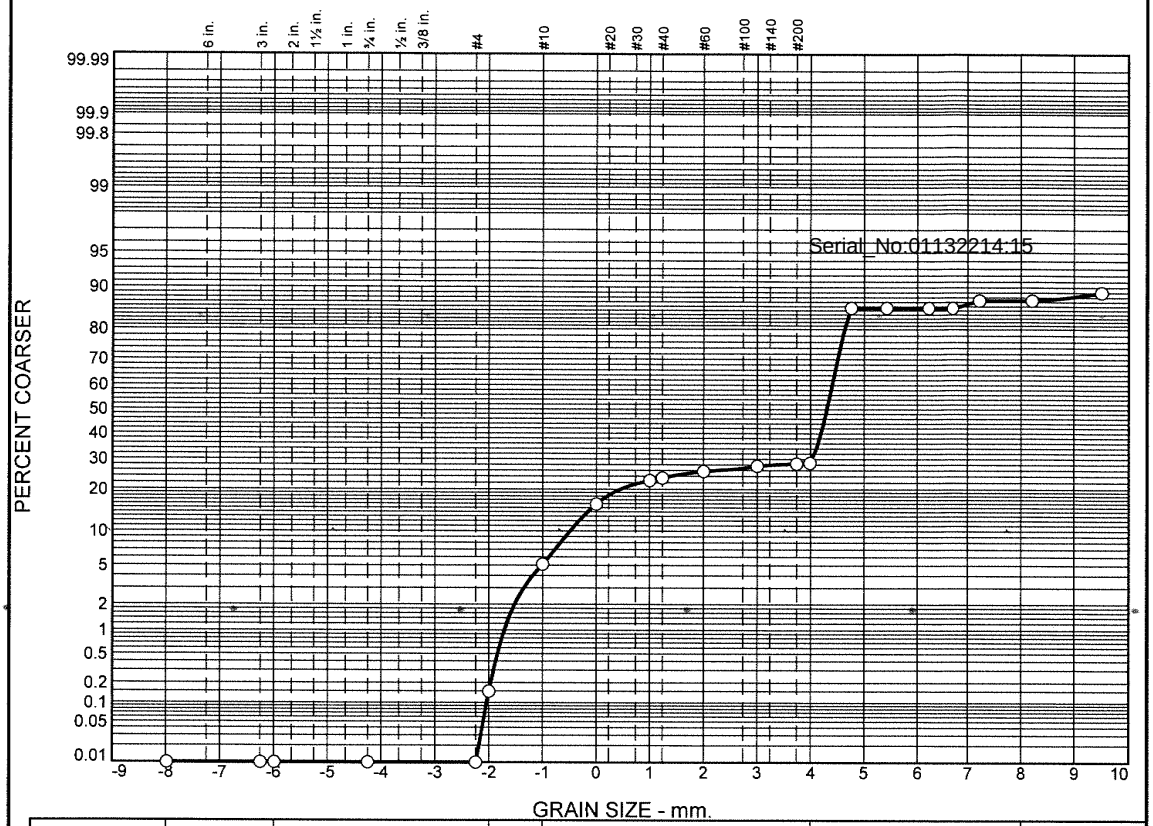
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.2	2.9	5.8	6.2	8.4	11.5	9.3	41.2	44.8	0.8	0.5	0.9	47.0	8.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0152	0.0403	0.0432	0.0478	0.0522	0.0575	0.0877	0.3205	0.5033	0.8634	1.6663

Fineness Modulus	C_u	C_c
0.76	5.77	1.71

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	5.0	10.8	6.7	3.0	1.9	1.4	56.7	0.0	1.0	0.7	12.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.0540	0.0546	0.0506	0.0440	0.0373			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1156 **Sample Number:** L2161415-10

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1156

Sample Number: L2161415-10

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.81
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.81	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.05	0.00	99.9
		#10	1.68	0.00	94.9
		#18	3.64	0.00	84.1
		#35	2.28	0.00	77.4
		#40	0.29	0.00	76.5
		#60	0.73	0.00	74.4
		#120	0.64	0.00	72.5
		#200	0.28	0.00	71.6
		#230	0.08	0.00	71.4

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 71.4
Weight of hydrometer sample =33.81
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	14.4
5.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0233	14.4
15.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0134	14.4
30.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0095	14.4
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	12.7
240.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0034	12.7
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	11.0

Alpha Analytical

Fractional Components

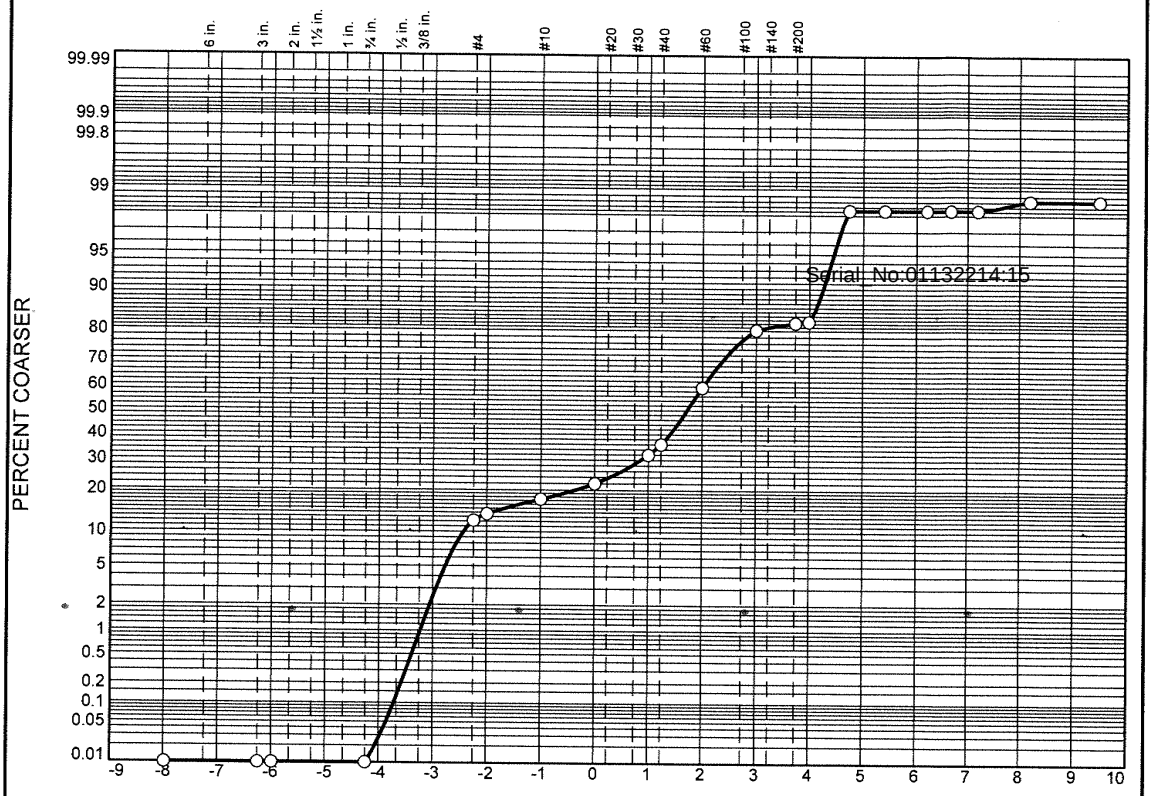
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	5.0	10.8	6.7	3.0	1.9	1.4	23.8	56.7	0.0	1.0	0.7	58.4	12.7

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0373	0.0401	0.0440	0.0473	0.0506	0.0546	0.7264	1.0540	1.3975	2.0240

Fineness Modulus
0.90

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			13.7	3.7	4.6	9.9	27.6	20.6	2.6	15.5	0.0	0.0	0.4	1.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			3.1601	0.3786	0.3038	0.1924	0.0583	0.0522	1.87	7.25

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** ECR-B-1157 **Sample Number:** L2161415-11

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1157

Sample Number: L2161415-11

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 63.40
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
63.40	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	7.73	0.00	87.8
		#5	0.94	0.00	86.3
		#10	2.33	0.00	82.6
		#18	2.95	0.00	78.0
		#35	6.30	0.00	68.1
		#40	2.54	0.00	64.1
		#60	14.92	0.00	40.5
		#120	13.09	0.00	19.9
		#200	1.29	0.00	17.8
		#230	0.22	0.00	17.5

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 17.5
Weight of hydrometer sample =35.71
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0374	1.8
5.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0237	1.8
15.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0137	1.8
30.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0097	1.8
60.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0068	1.8
240.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0034	1.4
1440.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0014	1.4

Fractional Components

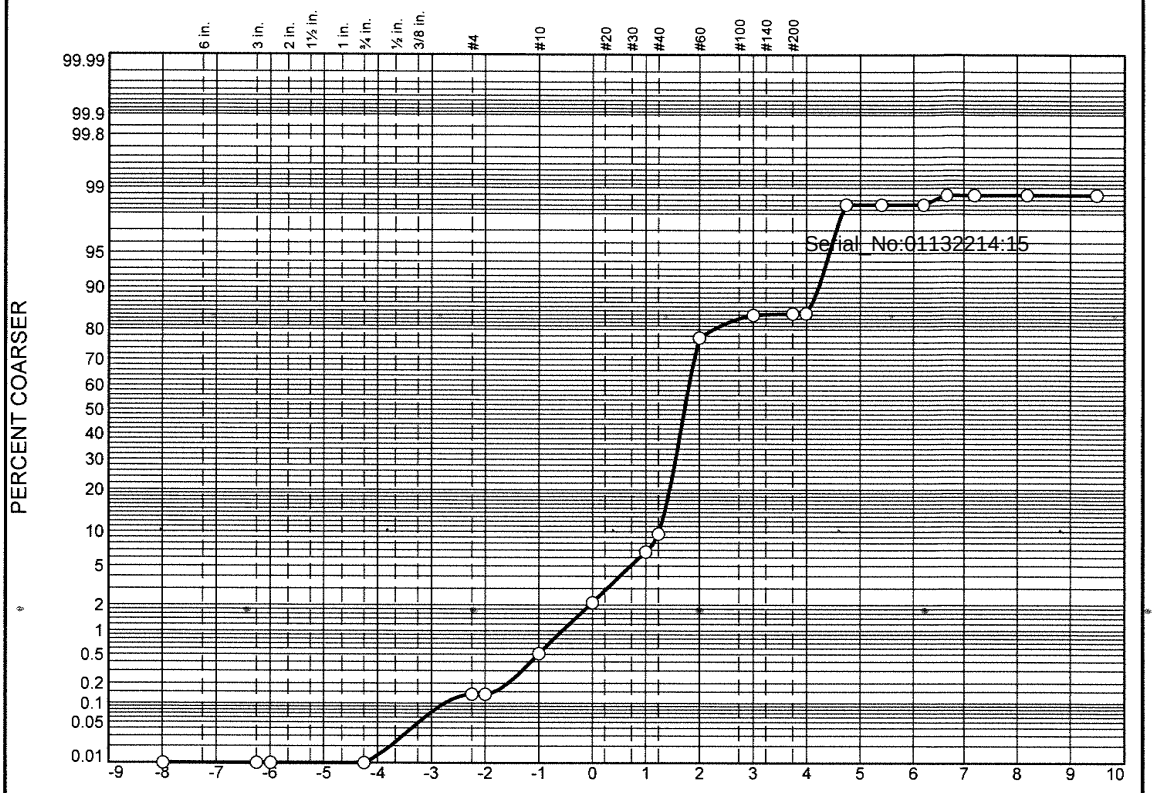
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		13.7	3.7	4.6	9.9	27.6	20.6	2.6	65.3	15.5	0.0	0.0	0.4	15.9	1.4

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0457	0.0522	0.0583	0.1261	0.1924	0.2472	0.3038	0.3786	1.2813	3.1601	5.3854	6.8144

Fineness Modulus	C_u	C_c
2.06	7.25	1.87

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.1	0.4	1.6	4.6	70.8	6.5	0.6	13.8	0.0	0.4		1.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.3861	0.3201	0.3028	0.2674	0.0613	0.0535	4.18	5.98

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1158 **Sample Number:** L2161415-12

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1158

Sample Number: L2161415-12

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 58.51
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
58.51	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.08	0.00	99.9
		#5	0.00	0.00	99.9
		#10	0.22	0.00	99.5
		#18	0.94	0.00	97.9
		#35	2.70	0.00	93.3
		#40	1.67	0.00	90.4
		#60	39.72	0.00	22.5
		#120	3.80	0.00	16.0
		#200	0.21	0.00	15.7
		#230	0.05	0.00	15.6

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 15.6
Weight of hydrometer sample =35.64
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0374	1.6
5.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0237	1.6
15.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0137	1.6
30.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0097	1.2
60.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0069	1.2
240.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0034	1.2
1440.00	21.9	1.0015	1.0017	0.0133	1.5	15.9	0.0014	1.2

Alpha Analytical

Fractional Components

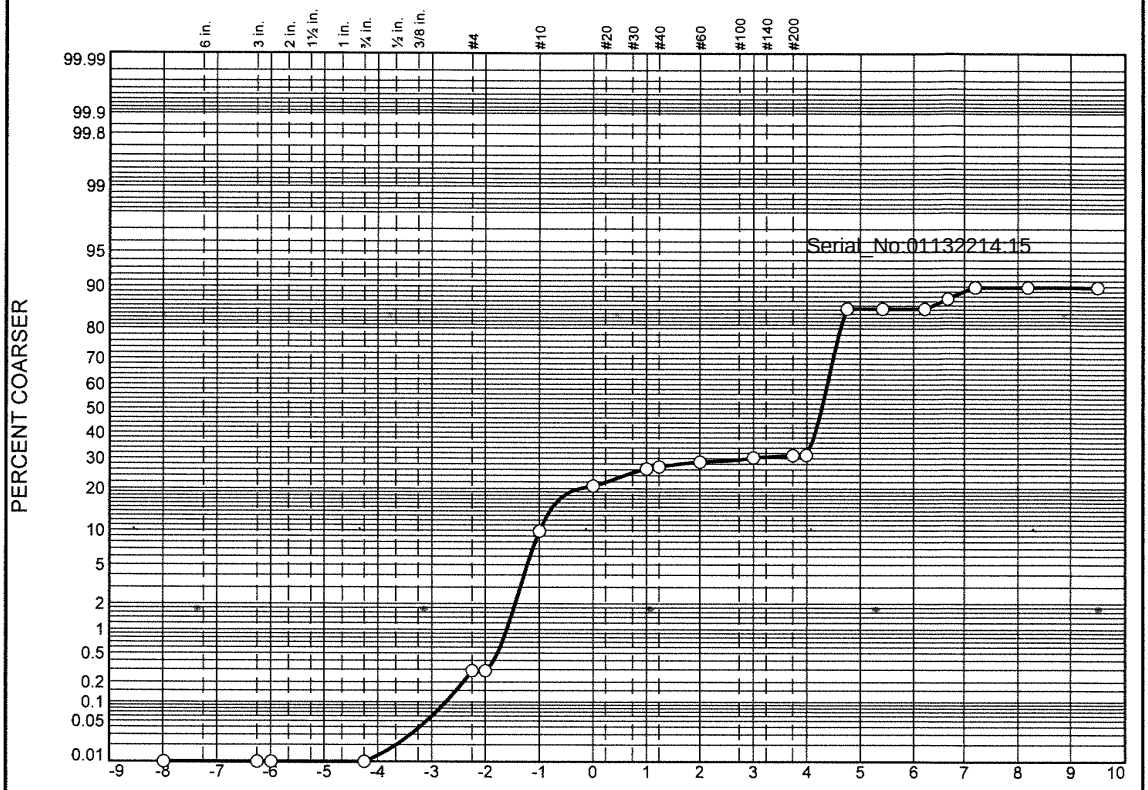
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.1	0.4	1.6	4.6	70.8	6.5	0.6	84.1	13.8	0.0	0.4		14.2	1.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0466	0.0535	0.0613	0.2084	0.2674	0.2859	0.3028	0.3201	0.3664	0.3861	0.4204	0.6100

Fineness Modulus	C_u	C_c
1.42	5.98	4.18

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.3	9.5	10.9	5.6	2.4	1.6	1.2	53.8	0.0	3.8	0.7	10.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			1.6861	0.0558	0.0514	0.0444	0.0373			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1131 **Sample Number:** L2161415-13

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1131

Sample Number: L2161415-13

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare** = 24.29
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
24.29	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.07	0.00	99.7
		#5	0.00	0.00	99.7
		#10	2.32	0.00	90.2
		#18	2.65	0.00	79.3
		#35	1.34	0.00	73.7
		#40	0.17	0.00	73.0
		#60	0.43	0.00	71.3
		#120	0.38	0.00	69.7
		#200	0.20	0.00	68.9
		#230	0.03	0.00	68.8

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 68.8
Weight of hydrometer sample =24.29
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 x Rm

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0371	14.7
5.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0235	14.7
15.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0136	14.7
30.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0096	12.4
60.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0068	10.2
240.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0034	10.2
1440.00	21.9	1.0020	1.0022	0.0133	2.0	15.8	0.0014	10.2

Fractional Components

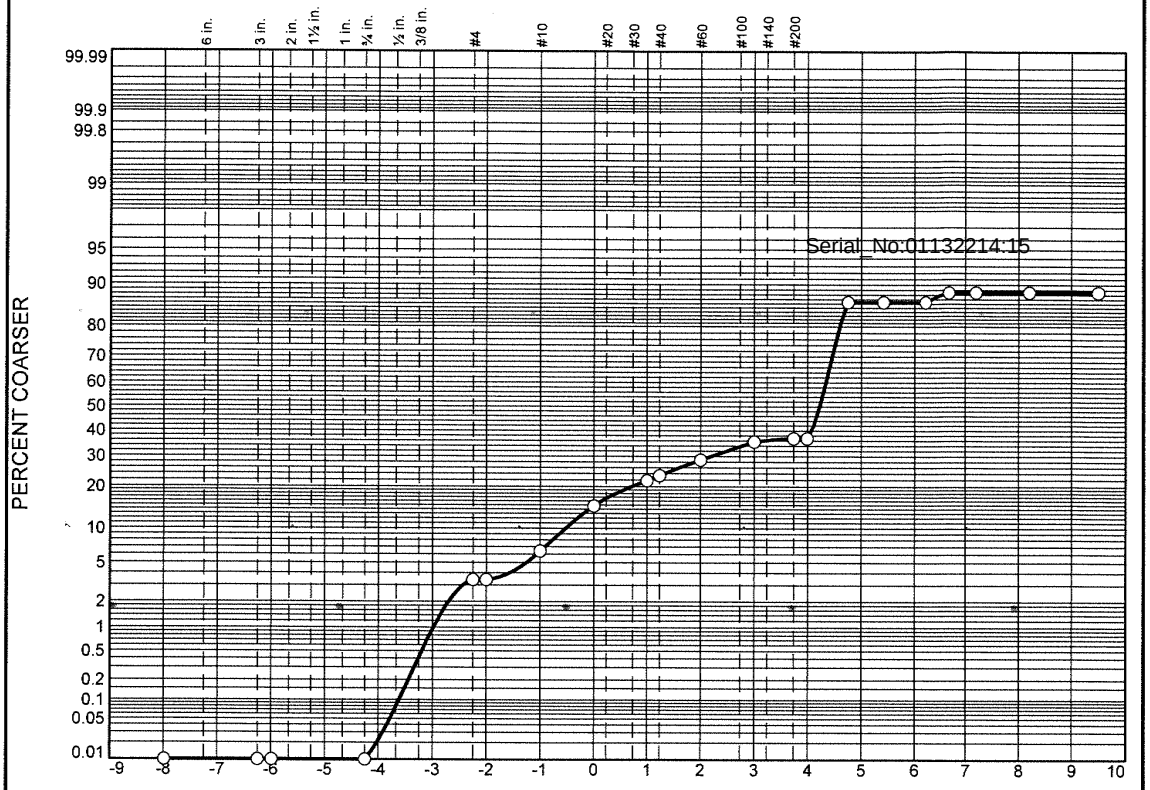
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.3	9.5	10.9	5.6	2.4	1.6	1.2	21.7	53.8	0.0	3.8	0.7	58.3	10.2

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0373	0.0403	0.0444	0.0479	0.0514	0.0558	1.1725	1.6861	1.9904	2.3342

Fineness Modulus
1.08

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			3.4	3.0	8.3	7.1	6.9	6.8	1.6	49.3	0.0	2.1	0.0	11.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.9800	0.0593	0.0534	0.0455	0.0383			

	Material Description	USCS	AASHTO
○			

Project No. **Client:**
Project:

○ **Source of Sample:** ECR-B-1133 **Sample Number:** L2161415-14

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1133

Sample Number: L2161415-14

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 24.14
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
24.14	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.82	0.00	96.6
		#5	0.00	0.00	96.6
		#10	0.72	0.00	93.6
		#18	2.02	0.00	85.3
		#35	1.70	0.00	78.2
		#40	0.39	0.00	76.6
		#60	1.28	0.00	71.3
		#120	1.64	0.00	64.5
		#200	0.32	0.00	63.2
		#230	0.00	0.00	63.2

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 63.2
Weight of hydrometer sample =24.14
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0371	13.6
5.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0235	13.6
15.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0136	13.6
30.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0096	11.5
60.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0068	11.5
240.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0034	11.5
1440.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0014	11.5

Alpha Analytical

Fractional Components

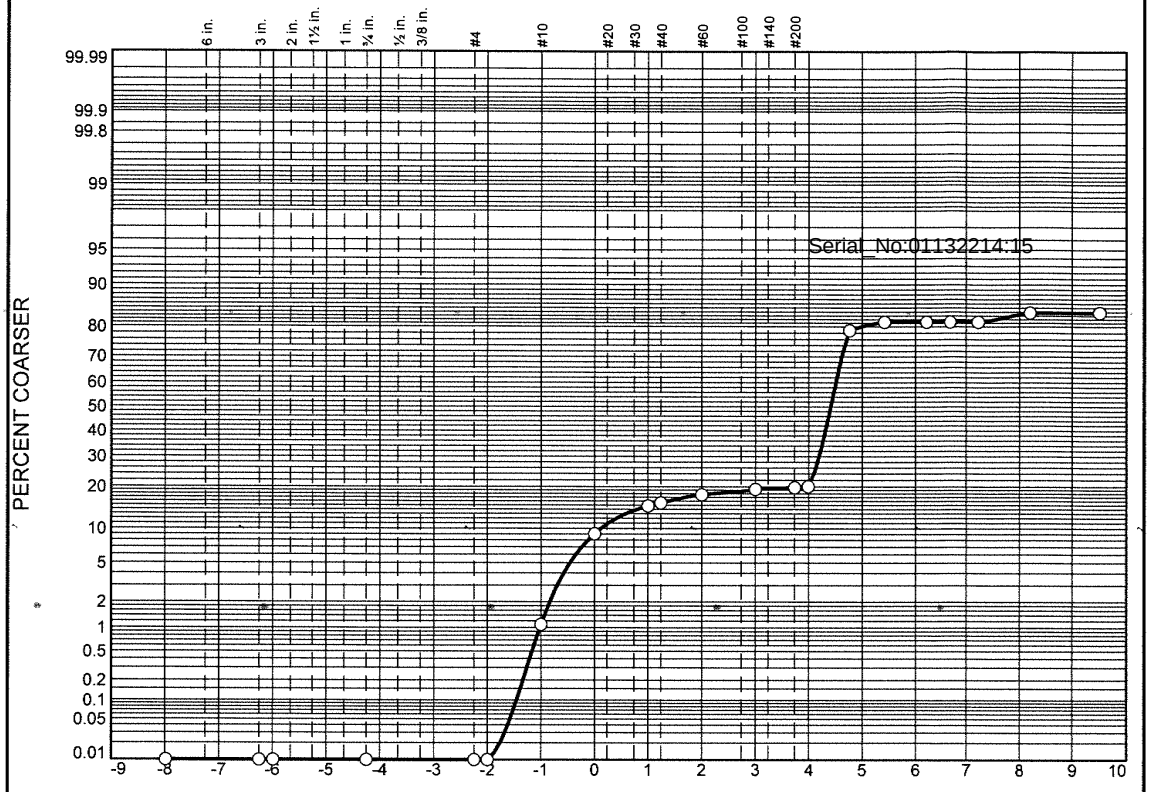
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		3.4	3.0	8.3	7.1	6.9	6.8	1.6	30.7	49.3	0.0	2.1	0.0	51.4	11.5

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0383	0.0412	0.0455	0.0493	0.0534	0.0593	0.6063	0.9800	1.4342	2.3800

Fineness Modulus
1.02

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			0.0	1.1	7.9	5.8	2.9	1.5	1.1	59.8	1.2	0.0	2.1	16.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			0.4783	0.0503	0.0470	0.0407				

	Material Description	USCS	AASHTO
○			

Project No. **Client:**

Project:

○ **Source of Sample:** ECR-B-1135 **Sample Number:** L2161415-15

Alpha Analytical

Mansfield, MA

Remarks:

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1135

Sample Number: L2161415-15

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 25.71
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
25.71	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	0.00	0.00	100.0
		#5	0.00	0.00	100.0
		#10	0.28	0.00	98.9
		#18	2.04	0.00	91.0
		#35	1.48	0.00	85.2
		#40	0.20	0.00	84.4
		#60	0.56	0.00	82.3
		#120	0.38	0.00	80.8
		#200	0.13	0.00	80.3
		#230	0.08	0.00	80.0

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 80.0
Weight of hydrometer sample =25.71
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0040	1.0042	0.0133	4.0	15.2	0.0368	21.2
5.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0234	18.7
15.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0135	18.7
30.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0095	18.7
60.00	21.9	1.0035	1.0037	0.0133	3.5	15.4	0.0067	18.7
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	16.2
1440.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0014	16.2

Fractional Components

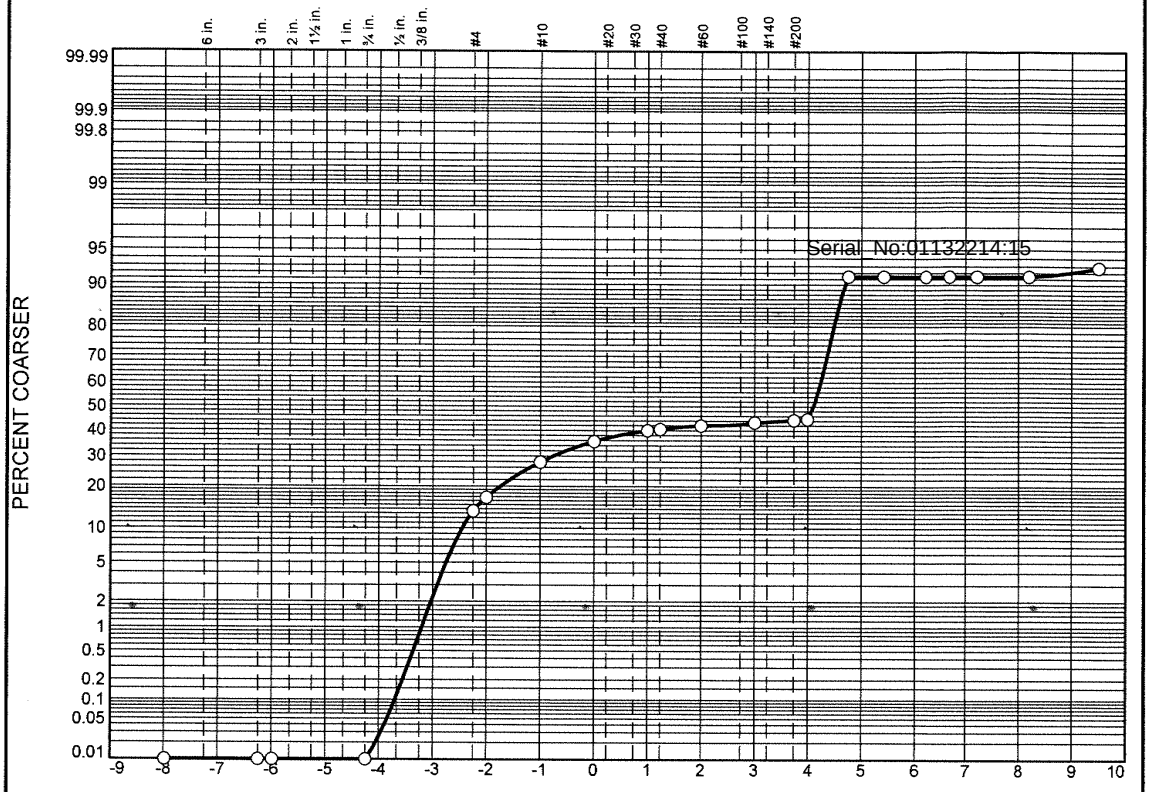
Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		0.0	1.1	7.9	5.8	2.9	1.5	1.1	19.2	59.8	1.2	0.0	2.1	63.1	16.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0313	0.0407	0.0439	0.0470	0.0503	0.0640	0.4783	0.9184	1.3733

Fineness Modulus
0.57

Serial_No:01132214:15

Particle Size Distribution Report



	% Boulders	% +3"	% Pebbles	% Granules	% Sand					% Silt				% Clay
					V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Med.	Fine	V. Fine	
○			16.8	10.9	7.9	4.3	2.1	1.3	1.7	46.4	0.0	0.0		8.6

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○			4.4244	0.4887	0.0581	0.0488	0.0421	0.0386	0.13	12.65

Material Description	USCS	AASHTO
○		

Project No. **Client:**
Project:

○ **Source of Sample:** ECR-B-1137 **Sample Number:** L2161415-16

Remarks:

Alpha Analytical

Mansfield, MA

Figure

GRAIN SIZE DISTRIBUTION TEST DATA

1/13/2022

Location: ECR-B-1137

Sample Number: L2161415-16

Sieve Test Data

Post #200 Wash Test Weights (grams): **Dry Sample and Tare =** 33.55
Tare Wt. = 0.00
Minus #200 from wash = 0.0%

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
33.55	0.00	10"	0.00	0.00	100.0
		3"	0.00	0.00	100.0
		2.5"	0.00	0.00	100.0
		3/4"	0.00	0.00	100.0
		#4	4.53	0.00	86.5
		#5	1.12	0.00	83.2
		#10	3.66	0.00	72.3
		#18	2.63	0.00	64.4
		#35	1.45	0.00	60.1
		#40	0.20	0.00	59.5
		#60	0.50	0.00	58.0
		#120	0.44	0.00	56.7
		#200	0.34	0.00	55.7
		#230	0.12	0.00	55.3

Serial_No:01132214:15

Hydrometer Test Data

Hydrometer test uses material passing #230
Percent passing #230 based upon complete sample = 55.3
Weight of hydrometer sample =33.55
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = 0
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 151H
Hydrometer effective depth equation: L = 16.294964 - 0.2645 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
2.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0371	8.6
5.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0235	8.6
15.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0136	8.6
30.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0096	8.6
60.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0068	8.6
240.00	21.9	1.0030	1.0032	0.0133	3.0	15.5	0.0034	8.6
1440.00	21.9	1.0025	1.0027	0.0133	2.5	15.6	0.0014	7.2

Fractional Components

Boulders	Cobbles	Pebbles	Granules	Sand						Silt					Clay
				V. Crs.	Crs.	Med.	Fine	V. Fine	Total	Crs.	Med.	Fine	V. Fine	Total	
		16.8	10.9	7.9	4.3	2.1	1.3	1.7	17.3	46.4	0.0	0.0		46.4	8.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0386	0.0421	0.0446	0.0488	0.0529	0.0581	0.4887	3.3275	4.4244	5.4617	6.7203

Fineness Modulus	C_u	C_c
1.97	12.65	0.13

Serial_No:01132214:15

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430
Albany, NY 12205
Tonawanda, NY 14150 Holmes, PA 19043

Page 1 of 1

Date Rec'd in Lab: 11/9/21

ALPHA Job #: L2116 1415

Project Information

Project Name: Beacon Wind Export Cable Route Survey
Project Location:
Project #: 0201361-000/02/03
(Use Project name as Project #) ☐
Project Manager: Lee Vanzler
ALPHAQuote #: 15633

Turn-Around Time

Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

H&A Information

H&A Client: MMT US Inc.
H&A Address: 465 Medford Street
Boston, MA 02129
H&A Phone: (561)676-7294
H&A Fax:
H&A Email: tmartin@conshelf.com

Deliverables

☐ Email ☐ Fax
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other:

Regulatory Requirements (Program/Criteria)

USEPA New Eglan
NY ESEPA Region 2
NY NYSDEC TOGS

Note: Select State from menu & identify criteria.

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility
☐ NJ ☐ NY
☐ Other

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Depth	3. Grain Size	2. TOC							Sample Specific Comments	Total Bottles
61415 -01	ECR-B-101-A	4-Nov-21	1030	sed			1	1								2
-02	ECR-B-106	4-Nov-21	854	sed			1	1								2
-03	ECR-B-108	3-Nov-21	903	sed			1	1								2
-04	ECR-B-1150	4-Nov-21	1352	sed			1	1								2
-05	ECR-B-1151-01	4-Nov-21	1456	sed			1	1								2
-06	ECR-B-1151-02	4-Nov-21	1456	sed			1	1								2
-07	ECR-B-1152	5-Nov-21	933	sed			1	1								2
-08	ECR-B-1154	5-Nov-21	1123	sed			1	1								2
-09	ECR-B-1155	3-Nov-21	1557	sed			1	1								2
-10	ECR-B-1156	3-Nov-21	1501	sed			1	1								2
						Container Type	G	G	P	P						
						Preservative	A	A	A	A						

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
KE = Zn Ac/NaOH

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	Nov 8, 2021	[signature] AAC	11/8/21 1502
[signature]	11/8/21 1711	Rob Maerto	11/8/21
Rob Maerto	11/8/21 1820	[signature]	11/8/21 1820
[signature]	11-9 9:16	[signature] AAC	11/9/21 916
[signature] AAC	11/9/21 1034	[signature]	11/9/21 10:34

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 2 (8/9/2016)

CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193

Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430
Albany, NY 12205
Tonawanda, NY 14150 Holmes, PA 19043

Page 2 of 2

Date Rec'd in Lab: 11/9/21

ALPHA Job #: L2161415

H&A Information
H&A Client: CSA Ocean Sciences Inc.
H&A Address: 8502 SW Kansas Ave
Sturat, FL
H&A Phone: (252) 258-1626
H&A Fax:
H&A Email: jclermont@conshelf.com

Project Information
Project Name: Beacon Wind Export Cable Route Survey
Project Location:
Project #: 3664
(Use Project name as Project #) ☐
Project Manager: Jason Clermont
ALPHAQuote #: 11026

Turn-Around Time
Standard ☑ Due Date:
Rush (only if pre approved) ☐ # of Days:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables
☐ Email ☐ Fax
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other:

Regulatory Requirements (Program/Criteria)
USEPA New Eglan
NY ESEPA Region 2
NY NYSDEC TOGS
Note: Select State from menu & identify criteria

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

ANALYSIS
1. Grain Size
2. TOC

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Depth	1. Grain Size	2. TOC	Total Bottles	Sample Specific Comments
L2161415 - 11	ECR-B-1157	5-Nov-21	1319	sed			1	1	2	
-12	ECR-B-1158	4-Nov-21	1158	sed			1	1	2	
-13	ECR-B-1131	6-Nov-21	1247	sed			1	1	2	
-14	ECR-B-1133	6-Nov-21	1201	sed			1	1	2	
-15	ECR-B-1135	6-Nov-21	1119	sed			1	1	2	
-16	ECR-B-1137	6-Nov-21	1031	sed			1	1	2	

Container Type: G G P P
Preservative: A A A A

Preservative Code
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

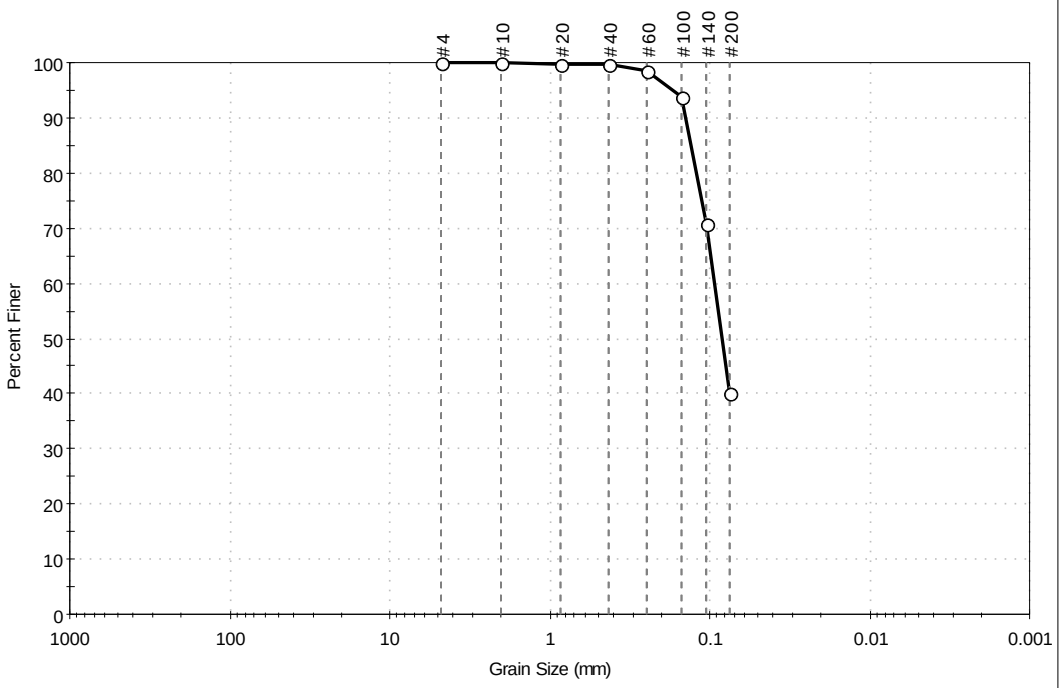
Relinquished By:	Date/Time	Received By:	Date/Time
	Nov 8, 2021	MACM	11/8/21 1320
	11/8/21 1715		11/8/21
	11/8/21 1820		11/9/21 916
	11-9 9:16		
AM	11/9/21 1034		11/9/21 10:34

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 2 (8/9/2016)

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-476	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639473		
Test Comment:	---				
Visual Description:	Moist, very dark gray silty sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	60.0	40.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	99		
#100	0.15	94		
#140	0.11	71		
#200	0.075	40		

Coefficients

D_{85} = 0.1314 mm	D_{30} = N/A
D_{60} = 0.0938 mm	D_{15} = N/A
D_{50} = 0.0839 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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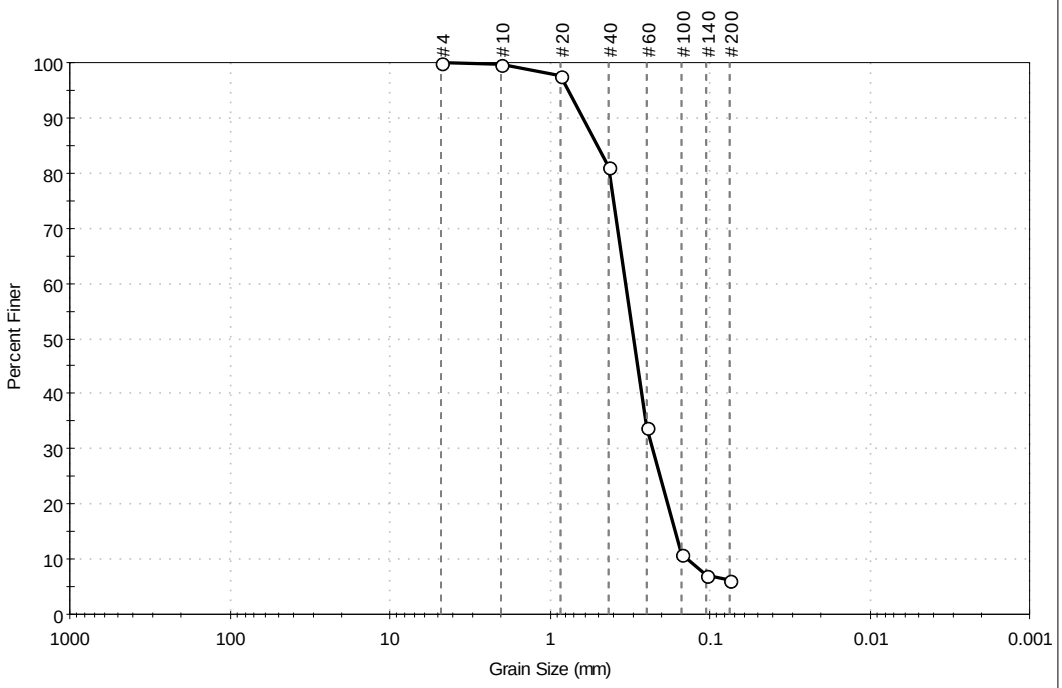
Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-480-A	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639474		
Test Comment:	---				
Visual Description:	Moist, very dark gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	0.0	93.7	6.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	98		
#40	0.42	81		
#60	0.25	34		
#100	0.15	11		
#140	0.11	7		
#200	0.075	6.3		

Coefficients

D_{85} = 0.5007 mm	D_{30} = 0.2286 mm
D_{60} = 0.3351 mm	D_{15} = 0.1639 mm
D_{50} = 0.2993 mm	D_{10} = 0.1372 mm
C_u = 2.442	C_c = 1.137

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (1))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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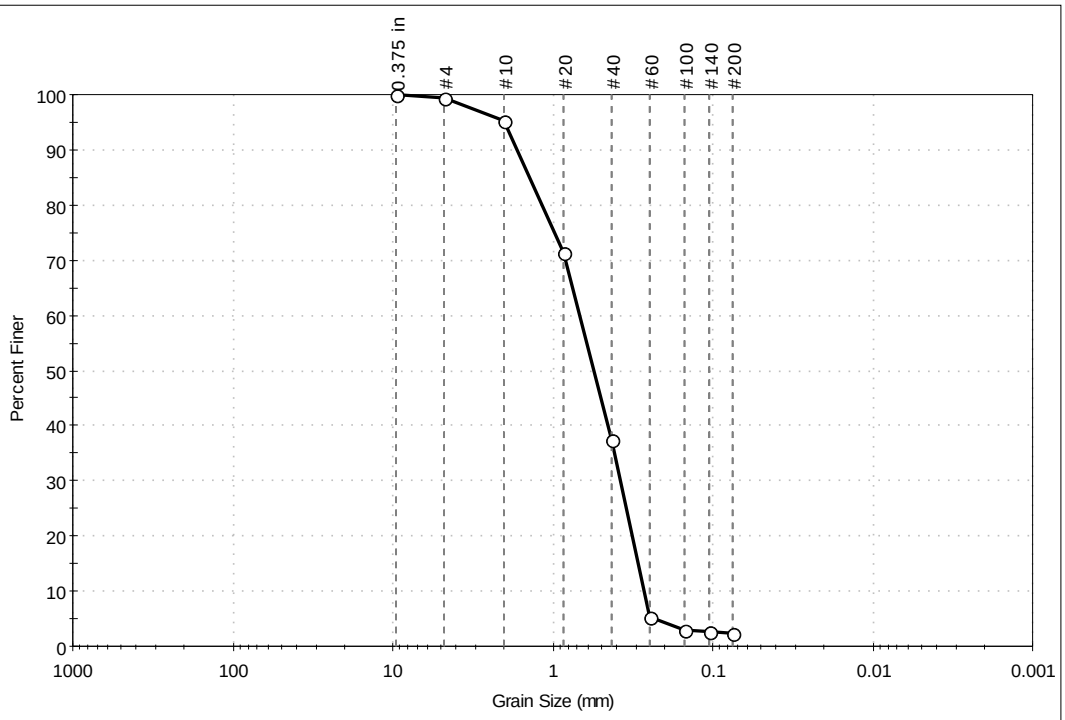
Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-486	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639475		
Test Comment:	---				
Visual Description:	Moist, dark olive brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
---	0.6	97.2	2.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	95		
#20	0.85	71		
#40	0.42	37		
#60	0.25	5		
#100	0.15	3		
#140	0.11	3		
#200	0.075	2.2		

Coefficients

D_{85} = 1.3865 mm	D_{30} = 0.3762 mm
D_{60} = 0.6752 mm	D_{15} = 0.2939 mm
D_{50} = 0.5501 mm	D_{10} = 0.2707 mm
C_u = 2.494	C_c = 0.774

Classification

ASTM Poorly graded SAND (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

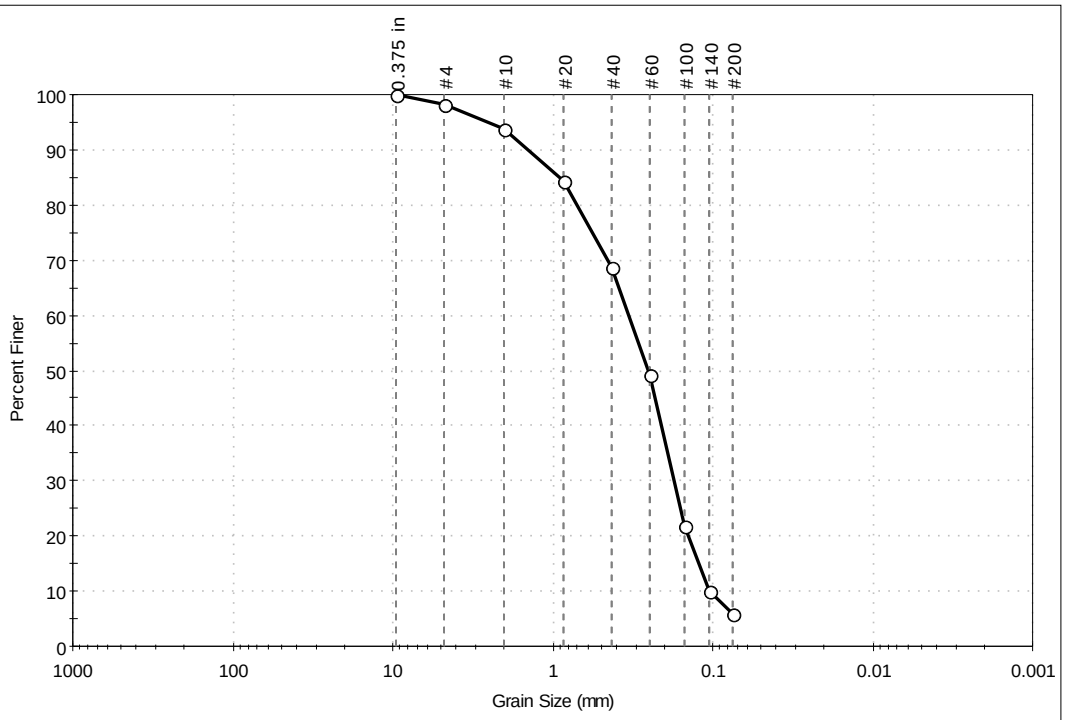
Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-B-488	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639477		
Test Comment:	---				
Visual Description:	Moist, very dark gray sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	1.8	92.3	5.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	94		
#20	0.85	84		
#40	0.42	69		
#60	0.25	49		
#100	0.15	22		
#140	0.11	10		
#200	0.075	5.9		

Coefficients

D_{85} = 0.8907 mm	D_{30} = 0.1745 mm
D_{60} = 0.3353 mm	D_{15} = 0.1224 mm
D_{50} = 0.2548 mm	D_{10} = 0.1051 mm
C_u = 3.190	C_c = 0.864

Classification

ASTM N/A

AASHTO Fine Sand (A-3 (1))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

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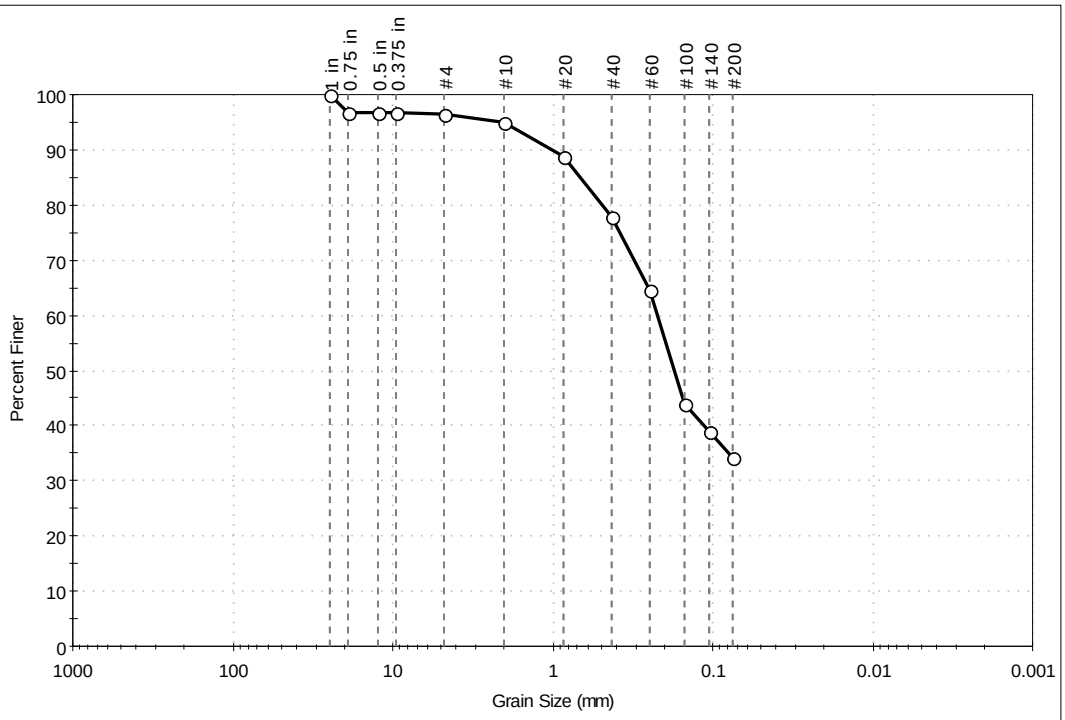
GeoTesting EXPRESS

Client:	Alpha Analytical				
Project:	L2159908 (H&A)				
Location:	New York			Project No:	GTX-314573
Boring ID:	L2159908	Sample Type:	jar	Tested By:	ckg
Sample ID:	ECR-C-1437	Test Date:	11/06/21	Checked By:	bfs
Depth :	---	Test Id:	639476		

Test Comment: ---
Visual Description: Moist, very dark gray silty sand
Sample Comment: ---

Particle Size Analysis - ASTM D6913



%Cobble	%Gravel	%Sand	%Silt & Clay Size
---	3.6	62.1	34.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	97		
0.5 in	12.50	97		
0.375 in	9.50	97		
#4	4.75	96		
#10	2.00	95		
#20	0.85	89		
#40	0.42	78		
#60	0.25	64		
#100	0.15	44		
#140	0.11	39		
#200	0.075	34		

Coefficients

D_{85} = 0.6730 mm D_{30} = N/A
D_{60} = 0.2235 mm D_{15} = N/A
D_{50} = 0.1741 mm D_{10} = N/A
C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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ATTACHMENT D BENTHIC INFAUNA ANALYSIS RESULTS – LABORATORY REPORTS

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment D - Benthic Infauna Results - Taxonomy

Segment	Station	Phylum	Class	Order	Family	Taxa	Number
1	ECR-B-101	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	100
1	ECR-B-101	Annelida	Polychaeta	Eunicida	Eunicidae	Eunicidae (LPIL)	2
1	ECR-B-101	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
1	ECR-B-101	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	10
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	7
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
1	ECR-B-101	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	2
1	ECR-B-101	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	35
1	ECR-B-101	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	3
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	3
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	235
1	ECR-B-101	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	13
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	1
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Isaeidae (LPIL)	2
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Lysianassidae	Lysianopsis alba	2
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Melitidae	Elasmopus levis	4
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	1
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
1	ECR-B-101	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Metopella angusta	1
1	ECR-B-101	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis (LPIL)	1
1	ECR-B-101	Chordata	Ascidiacea			Ascidiacea (LPIL)	7
1	ECR-B-101	Mollusca	Bivalvia	Veneroida	Solenidae	Ensis directus	2
1	ECR-B-101	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	1
1	ECR-B-106	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	3
1	ECR-B-106	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
1	ECR-B-106	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	2
1	ECR-B-106	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	3
1	ECR-B-106	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
1	ECR-B-106	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	2
1	ECR-B-106	Annelida	Polychaeta	Spionida	Spionidae	Marenzelleria viridis	38
1	ECR-B-106	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	10
1	ECR-B-106	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	2
1	ECR-B-106	Nemertea				Nemertea (LPIL)	1
1	ECR-B-110	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	5
1	ECR-B-110	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	7
1	ECR-B-110	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	10
1	ECR-B-110	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
1	ECR-B-110	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
1	ECR-B-110	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	1
1	ECR-B-110	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	8

1	ECR-B-110	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	10
1	ECR-B-110	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
1	ECR-B-110	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	1
1	ECR-B-110	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	2
1	ECR-B-110	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	20
1	ECR-B-110	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	10
1	ECR-B-110	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
1	ECR-B-110	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Paracaprella tenuis	2
1	ECR-B-110	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	13
1	ECR-B-110	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	4
1	ECR-B-110	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
1	ECR-B-110	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Cerapus (LPIL)	2
1	ECR-B-110	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	3
1	ECR-B-110	Arthropoda	Malacostraca	Cumacea	Leuconidae	Leucon (Leucon) americanus	1
1	ECR-B-110	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	4
1	ECR-B-110	Arthropoda	Pycnogonida			Pycnogonida (LPIL)	2
1	ECR-B-110	Chordata	Ascidiacea			Ascidiacea (LPIL)	4
1	ECR-B-110	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
1	ECR-B-110	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	30
1	ECR-B-110	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
1	ECR-B-110	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	2
1	ECR-B-110	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	4
1	ECR-B-110	Mollusca	Bivalvia			Bivalvia (LPIL)	2
1	ECR-B-110	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	1
1	ECR-B-110	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	1
1	ECR-B-110	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
1	ECR-B-110	Nemertea				Nemertea (LPIL)	1
1	ECR-B-1150	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	15
1	ECR-B-1150	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	2
1	ECR-B-1150	Annelida	Polychaeta	Eunicida	Eunicidae	Marphysa sanguinea	3
1	ECR-B-1150	Annelida	Polychaeta	Eunicida	Eunicidae	Lysidice hebes	3
1	ECR-B-1150	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	2
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis splendida	43
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	66
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	4
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	2
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Odontosyllis enopla	7
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	3
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	12
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	10
1	ECR-B-1150	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis anops	2
1	ECR-B-1150	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	15
1	ECR-B-1150	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	67
1	ECR-B-1150	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
1	ECR-B-1150	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1

1	ECR-B-1150	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
1	ECR-B-1150	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	18
1	ECR-B-1150	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
1	ECR-B-1150	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	10
1	ECR-B-1150	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	67
1	ECR-B-1150	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	99
1	ECR-B-1150	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	62
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola serrata	60
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	1
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	1
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	2
1	ECR-B-1150	Arthropoda	Malacostraca	Amphipoda	Melitidae	Elasmopus levis	2
1	ECR-B-1150	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
1	ECR-B-1150	Arthropoda	Pycnogonida			Pycnogonida (LPIL)	1
1	ECR-B-1150	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	24
1	ECR-B-1150	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
1	ECR-B-1150	Mollusca	Bivalvia	Veneroida	Solenidae	Ensis directus	2
1	ECR-B-1150	Mollusca	Bivalvia			Bivalvia (LPIL)	8
1	ECR-B-1150	Nemertea				Nemertea (LPIL)	5
1	ECR-B-1151	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	23
1	ECR-B-1151	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
1	ECR-B-1151	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
1	ECR-B-1151	Annelida	Polychaeta	Eunicida	Eunicidae	Eunicidae (LPIL)	3
1	ECR-B-1151	Annelida	Polychaeta	Eunicida	Eunicidae	Marphysa sanguinea	3
1	ECR-B-1151	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis splendida	6
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	19
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	1
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	2
1	ECR-B-1151	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	2
1	ECR-B-1151	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	2
1	ECR-B-1151	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	27
1	ECR-B-1151	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	7
1	ECR-B-1151	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
1	ECR-B-1151	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
1	ECR-B-1151	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	12
1	ECR-B-1151	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	11
1	ECR-B-1151	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	6
1	ECR-B-1151	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	57
1	ECR-B-1151	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	40
1	ECR-B-1151	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	2
1	ECR-B-1151	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola serrata	8
1	ECR-B-1151	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Apocorophium (LPIL)	1
1	ECR-B-1151	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Eobrolgus spinosus	4
1	ECR-B-1151	Arthropoda	Malacostraca	Isopoda	Anthuridae	Cyathura (LPIL)	2
1	ECR-B-1151	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	10
1	ECR-B-1151	Mollusca	Bivalvia	Myoida	Corbulidae	Corbulidae (LPIL)	3
1	ECR-B-1151	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1

1	ECR-B-1151	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	1
1	ECR-B-1151	Nemertea				Nemertea (LPIL)	4
1	ECR-B-1152	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	20
1	ECR-B-1152	Annelida	Polychaeta	Eunicida	Dorvilleidae	Schistomeringos rudolphi	3
1	ECR-B-1152	Annelida	Polychaeta	Eunicida	Eunicidae	Marphysa sanguinea	5
1	ECR-B-1152	Annelida	Polychaeta	Eunicida	Eunicidae	Lysidice hebes	2
1	ECR-B-1152	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	3
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	2
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	2
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis splendida	15
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	27
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	7
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Odontosyllis enopla	11
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
1	ECR-B-1152	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis anops	3
1	ECR-B-1152	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	30
1	ECR-B-1152	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	75
1	ECR-B-1152	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
1	ECR-B-1152	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	15
1	ECR-B-1152	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	20
1	ECR-B-1152	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	3
1	ECR-B-1152	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	50
1	ECR-B-1152	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	45
1	ECR-B-1152	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	65
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	2
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Ampithoidae	Cymadusa compta	4
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola serrata	74
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	5
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Apocorophium (LPIL)	1
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	20
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Lysianassidae	Lysianopsis alba	7
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Melitidae	Elasmopus levis	31
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Eobrolgus spinosus	13
1	ECR-B-1152	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Stenothoe minuta	2
1	ECR-B-1152	Arthropoda	Pycnogonida			Pycnogonida (LPIL)	2
1	ECR-B-1152	Chordata	Ascidiacea			Ascidiacea (LPIL)	28
1	ECR-B-1152	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	3
1	ECR-B-1152	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
1	ECR-B-1152	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
1	ECR-B-1152	Mollusca	Bivalvia			Bivalvia (LPIL)	4
1	ECR-B-1152	Nemertea				Nemertea (LPIL)	3
1	ECR-B-1152	Platyhelminthes				Platyhelminthes (LPIL)	1
1	ECR-B-1154	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	270
1	ECR-B-1154	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	5
1	ECR-B-1154	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	2

1	ECR-B-1154	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	2
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	8
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	15
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	2
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	2
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	15
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Fimbriosthenelais minor	1
1	ECR-B-1154	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	1
1	ECR-B-1154	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	44
1	ECR-B-1154	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	80
1	ECR-B-1154	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	1
1	ECR-B-1154	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
1	ECR-B-1154	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	90
1	ECR-B-1154	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	50
1	ECR-B-1154	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	4
1	ECR-B-1154	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	75
1	ECR-B-1154	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	1
1	ECR-B-1154	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
1	ECR-B-1154	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	5
1	ECR-B-1154	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
1	ECR-B-1154	Mollusca	Bivalvia	Veneroida	Mactridae	Mulinia lateralis	1
1	ECR-B-1154	Mollusca	Bivalvia	Veneroida	Solenidae	Ensis directus	2
1	ECR-B-1154	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	6
1	ECR-B-1154	Mollusca	Bivalvia			Bivalvia (LPIL)	1
1	ECR-B-1154	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	3
1	ECR-B-1154	Nemertea				Nemertea (LPIL)	1
1	ECR-B-1154	Platyhelminthes				Platyhelminthes (LPIL)	1
1	ECR-B-1155	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
1	ECR-B-1155	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	5
1	ECR-B-1155	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	32
1	ECR-B-1155	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	1
1	ECR-B-1155	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	1
1	ECR-B-1155	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	1
1	ECR-B-1155	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	27
1	ECR-B-1155	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	6
1	ECR-B-1155	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	2
1	ECR-B-1155	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
1	ECR-B-1155	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
1	ECR-B-1155	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	10
1	ECR-B-1155	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
1	ECR-B-1155	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	3
1	ECR-B-1155	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
1	ECR-B-1155	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	10
1	ECR-B-1155	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
1	ECR-B-1155	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	6
1	ECR-B-1155	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	2
1	ECR-B-1155	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Cerapus (LPIL)	1
1	ECR-B-1155	Arthropoda	Malacostraca	Cumacea	Leuconidae	Leucon (Leucon) americanus	3
1	ECR-B-1155	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	2
1	ECR-B-1155	Mollusca	Bivalvia	Myoida	Corbulidae	Corbulidae (LPIL)	1
1	ECR-B-1155	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	31

1	ECR-B-1155	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	4
1	ECR-B-1155	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
1	ECR-B-1155	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	4
1	ECR-B-1155	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	1
1	ECR-B-1155	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
1	ECR-B-1155	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
1	ECR-B-1156	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	187
1	ECR-B-1156	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	4
1	ECR-B-1156	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	313
1	ECR-B-1156	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos foliosus	1
1	ECR-B-1156	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	13
1	ECR-B-1156	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	11
1	ECR-B-1156	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
1	ECR-B-1156	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	4
1	ECR-B-1156	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	1
1	ECR-B-1156	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	1
1	ECR-B-1156	Arthropoda	Malacostraca	Cumacea	Leuconidae	Leucon (Leucon) americanus	2
1	ECR-B-1156	Mollusca	Bivalvia	Veneroida	Mactridae	Mulinia lateralis	4
1	ECR-B-1156	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
1	ECR-B-1156	Mollusca	Bivalvia			Bivalvia (LPIL)	5
1	ECR-B-1156	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	8
1	ECR-B-1156	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	1
1	ECR-B-1156	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	3
1	ECR-B-1156	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa obsoleta	1
1	ECR-B-1157	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	5
1	ECR-B-1157	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	10
1	ECR-B-1157	Annelida	Polychaeta	Eunicida	Eunicidae	Marphysa sanguinea	1
1	ECR-B-1157	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
1	ECR-B-1157	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	5
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	5
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	10
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	1
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
1	ECR-B-1157	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	1
1	ECR-B-1157	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	1
1	ECR-B-1157	Annelida	Polychaeta	Scolecida	Capitellidae	Heteromastus filiformis	15
1	ECR-B-1157	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	25
1	ECR-B-1157	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	6
1	ECR-B-1157	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	1
1	ECR-B-1157	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	20
1	ECR-B-1157	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	15
1	ECR-B-1157	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	5
1	ECR-B-1157	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	67
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola serrata	4
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	2
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	2
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	3
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Eobrolgus spinosus	2
1	ECR-B-1157	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1

1	ECR-B-1157	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylidae (LPIL)	1
1	ECR-B-1157	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
1	ECR-B-1157	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
1	ECR-B-1157	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
1	ECR-B-1157	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	2
1	ECR-B-1157	Mollusca	Gastropoda			Gastropoda (LPIL)	2
1	ECR-B-1157	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
1	ECR-B-1157	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
1	ECR-B-1157	Sipuncula				Sipuncula (LPIL)	1
1	ECR-B-1158	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
1	ECR-B-1158	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	8
2	ECR-B-112	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	28
2	ECR-B-112	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	6
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	13
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	1
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
2	ECR-B-112	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1
2	ECR-B-112	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	1
2	ECR-B-112	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	60
2	ECR-B-112	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
2	ECR-B-112	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	1
2	ECR-B-112	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	27
2	ECR-B-112	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	8
2	ECR-B-112	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
2	ECR-B-112	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	14
2	ECR-B-112	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	8
2	ECR-B-112	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	7
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	5
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	3
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	7
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	2
2	ECR-B-112	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
2	ECR-B-112	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	2
2	ECR-B-112	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
2	ECR-B-112	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	10
2	ECR-B-112	Arthropoda	Malacostraca	Isopoda	Idoteidae	Idoteidae (LPIL)	1
2	ECR-B-112	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	63
2	ECR-B-112	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
2	ECR-B-112	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	1
2	ECR-B-112	Mollusca	Bivalvia	Venerida	Veneridae	Chione (LPIL)	1
2	ECR-B-112	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-112	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
2	ECR-B-112	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	4
2	ECR-B-112	Mollusca	Bivalvia			Bivalvia (LPIL)	2
2	ECR-B-112	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	1
2	ECR-B-112	Nemertea				Nemertea (LPIL)	1
2	ECR-B-114	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	7
2	ECR-B-114	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	8
2	ECR-B-114	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	7

2	ECR-B-114	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	31
2	ECR-B-114	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	3
2	ECR-B-114	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	1
2	ECR-B-114	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	1
2	ECR-B-114	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
2	ECR-B-114	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	16
2	ECR-B-114	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
2	ECR-B-114	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
2	ECR-B-114	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	1
2	ECR-B-114	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	2
2	ECR-B-114	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	32
2	ECR-B-114	Mollusca	Bivalvia	Veneroida	Mactridae	Mulinia lateralis	1
2	ECR-B-114	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	1
2	ECR-B-114	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
2	ECR-B-114	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	3
2	ECR-B-116	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	11
2	ECR-B-116	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	10
2	ECR-B-116	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
2	ECR-B-116	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	82
2	ECR-B-116	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
2	ECR-B-116	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	7
2	ECR-B-116	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
2	ECR-B-116	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
2	ECR-B-116	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	22
2	ECR-B-116	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
2	ECR-B-116	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
2	ECR-B-116	Mollusca	Bivalvia			Bivalvia (LPIL)	1
2	ECR-B-116	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	2
2	ECR-B-116	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	1
2	ECR-B-116	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
2	ECR-B-122	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	14
2	ECR-B-122	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	16
2	ECR-B-122	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	1
2	ECR-B-122	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
2	ECR-B-122	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	24
2	ECR-B-122	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	1
2	ECR-B-122	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	1
2	ECR-B-122	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	10
2	ECR-B-122	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	12
2	ECR-B-122	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	1
2	ECR-B-122	Arthropoda	Malacostraca	Cumacea	Leuconidae	Leucon (Leucon) americanus	1
2	ECR-B-122	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
2	ECR-B-122	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	3
2	ECR-B-122	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	80
2	ECR-B-122	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	3
2	ECR-B-122	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	2
2	ECR-B-122	Platyhelminthes				Platyhelminthes (LPIL)	1
2	ECR-B-124	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
2	ECR-B-124	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	12
2	ECR-B-124	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
2	ECR-B-124	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	5
2	ECR-B-124	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	7

2	ECR-B-124	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
2	ECR-B-124	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
2	ECR-B-124	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	3
2	ECR-B-124	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
2	ECR-B-124	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
2	ECR-B-124	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	2
2	ECR-B-124	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
2	ECR-B-124	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	23
2	ECR-B-124	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
2	ECR-B-124	Mollusca	Bivalvia			Bivalvia (LPIL)	1
2	ECR-B-124	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	9
2	ECR-B-124	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	3
2	ECR-B-124	Platyhelminthes				Platyhelminthes (LPIL)	1
2	ECR-B-126	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	2
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	4
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	5
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
2	ECR-B-126	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	1
2	ECR-B-126	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
2	ECR-B-126	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
2	ECR-B-126	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	2
2	ECR-B-126	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	3
2	ECR-B-126	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	23
2	ECR-B-126	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	23
2	ECR-B-126	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
2	ECR-B-126	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
2	ECR-B-126	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
2	ECR-B-126	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	13
2	ECR-B-126	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	1
2	ECR-B-126	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	2
2	ECR-B-126	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	6
2	ECR-B-126	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	5
2	ECR-B-126	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	7
2	ECR-B-126	Platyhelminthes				Platyhelminthes (LPIL)	6
2	ECR-B-128	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
2	ECR-B-128	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	4
2	ECR-B-128	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	7
2	ECR-B-128	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
2	ECR-B-128	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
2	ECR-B-128	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	1
2	ECR-B-128	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
2	ECR-B-128	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	5
2	ECR-B-128	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	2
2	ECR-B-128	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
2	ECR-B-128	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	3
2	ECR-B-128	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
2	ECR-B-128	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	5
2	ECR-B-128	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	38
2	ECR-B-128	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	7
2	ECR-B-128	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	3

2	ECR-B-128	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
2	ECR-B-128	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	1
2	ECR-B-128	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	1
2	ECR-B-128	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
2	ECR-B-128	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	41
2	ECR-B-128	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-128	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	13
2	ECR-B-128	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	2
2	ECR-B-128	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	16
2	ECR-B-128	Platyhelminthes				Platyhelminthes (LPIL)	1
2	ECR-B-128	Sipuncula				Sipuncula (LPIL)	1
2	ECR-B-132	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	2
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	8
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	1
2	ECR-B-132	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Fimbriosthenelais minor	1
2	ECR-B-132	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	4
2	ECR-B-132	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
2	ECR-B-132	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	5
2	ECR-B-132	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
2	ECR-B-132	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	3
2	ECR-B-132	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	5
2	ECR-B-132	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	11
2	ECR-B-132	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	2
2	ECR-B-132	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	5
2	ECR-B-132	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
2	ECR-B-132	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
2	ECR-B-132	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
2	ECR-B-132	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
2	ECR-B-132	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	18
2	ECR-B-132	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-132	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	4
2	ECR-B-132	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	1
2	ECR-B-132	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	10
2	ECR-B-132	Platyhelminthes				Platyhelminthes (LPIL)	1
2	ECR-B-140	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
2	ECR-B-140	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	1
2	ECR-B-140	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
2	ECR-B-140	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
2	ECR-B-140	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	3
2	ECR-B-140	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	22
2	ECR-B-140	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
2	ECR-B-140	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	2
2	ECR-B-140	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
2	ECR-B-140	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	2
2	ECR-B-140	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
2	ECR-B-140	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	8
2	ECR-B-140	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	7
2	ECR-B-140	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	3
2	ECR-B-140	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1

2	ECR-B-140	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
2	ECR-B-140	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	5
2	ECR-B-140	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-140	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	8
2	ECR-B-140	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	3
2	ECR-B-140	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	11
2	ECR-B-140	Platyhelminthes				Platyhelminthes (LPIL)	2
2	ECR-B-140	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae	Phascolion (Phascolion) stror	1
2	ECR-B-142	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	185
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	6
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
2	ECR-B-142	Annelida	Polychaeta	Phyllodocida	Syllidae	Odontosyllis enopla	1
2	ECR-B-142	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
2	ECR-B-142	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	10
2	ECR-B-142	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	5
2	ECR-B-142	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
2	ECR-B-142	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	5
2	ECR-B-142	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	12
2	ECR-B-142	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	9
2	ECR-B-142	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	17
2	ECR-B-142	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	205
2	ECR-B-142	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
2	ECR-B-142	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	3
2	ECR-B-142	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	10
2	ECR-B-142	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	5
2	ECR-B-142	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	5
2	ECR-B-142	Arthropoda	Malacostraca	Amphipoda	Bateidae	Batea catharinensis	4
2	ECR-B-142	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	9
2	ECR-B-142	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
2	ECR-B-142	Arthropoda	Malacostraca	Decapoda	Pisidae	Libinia dubia	1
2	ECR-B-142	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	2
2	ECR-B-142	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (LPIL)	1
2	ECR-B-142	Chordata	Ascidiacea			Ascidiacea (LPIL)	1
2	ECR-B-142	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	3
2	ECR-B-142	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	6
2	ECR-B-142	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-142	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
2	ECR-B-142	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	15
2	ECR-B-142	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	9
2	ECR-B-142	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	7
2	ECR-B-142	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
2	ECR-B-142	Mollusca	Gastropoda			Gastropoda (LPIL)	2
2	ECR-B-142	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
2	ECR-B-142	Nemertea				Nemertea (LPIL)	1
2	ECR-B-142	Platyhelminthes				Platyhelminthes (LPIL)	2

2	ECR-B-148	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	3
2	ECR-B-148	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
2	ECR-B-148	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
2	ECR-B-148	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
2	ECR-B-148	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	32
2	ECR-B-148	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	4
2	ECR-B-148	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	15
2	ECR-B-148	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	1
2	ECR-B-148	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	2
2	ECR-B-148	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	2
2	ECR-B-148	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	11
2	ECR-B-148	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	6
2	ECR-B-148	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	18
2	ECR-B-148	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
2	ECR-B-148	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	1
2	ECR-B-148	Arthropoda	Malacostraca	Cumacea	Leuconidae	Leucon (Leucon) americanus	1
2	ECR-B-148	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
2	ECR-B-148	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	6
2	ECR-B-148	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	2
2	ECR-B-148	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	11
2	ECR-B-148	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	17
2	ECR-B-148	Platyhelminthes				Platyhelminthes (LPIL)	4
2	ECR-B-148	Sipuncula				Sipuncula (LPIL)	1
2	ECR-B-150	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
2	ECR-B-150	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
2	ECR-B-150	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	1
2	ECR-B-150	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
2	ECR-B-150	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	8
2	ECR-B-150	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	15
2	ECR-B-150	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	1
2	ECR-B-150	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	3
2	ECR-B-150	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	2
2	ECR-B-150	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
2	ECR-B-150	Arthropoda	Malacostraca	Decapoda	Paguridae	Paguridae (LPIL)	1
2	ECR-B-150	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	10
2	ECR-B-150	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
2	ECR-B-150	Mollusca	Gastropoda			Gastropoda (LPIL)	1
2	ECR-B-150	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
2	ECR-B-150	Platyhelminthes				Platyhelminthes (LPIL)	2
2	ECR-B-1131	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	5
2	ECR-B-1131	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
2	ECR-B-1131	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
2	ECR-B-1131	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
2	ECR-B-1131	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
2	ECR-B-1131	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	22
2	ECR-B-1131	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
2	ECR-B-1131	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	4
2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	10
2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	9
2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	4
2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys (LPIL)	1

2	ECR-B-1133	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	2
2	ECR-B-1133	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	2
2	ECR-B-1133	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	2
2	ECR-B-1133	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
2	ECR-B-1133	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
2	ECR-B-1133	Mollusca	Bivalvia	Veneroida	Mactridae	Mulinia lateralis	1
2	ECR-B-1133	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	7
2	ECR-B-1133	Mollusca	Bivalvia			Bivalvia (LPIL)	1
2	ECR-B-1133	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	4
2	ECR-B-1133	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
2	ECR-B-1135	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
2	ECR-B-1135	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	1
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	68
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	2
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	1
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	2
2	ECR-B-1135	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	2
2	ECR-B-1135	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
2	ECR-B-1135	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	1
2	ECR-B-1135	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
2	ECR-B-1135	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	9
2	ECR-B-1135	Annelida	Polychaeta	Spionida	Spionidae	Polydora cornuta	1
2	ECR-B-1135	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	3
2	ECR-B-1135	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
2	ECR-B-1135	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	1
2	ECR-B-1135	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
2	ECR-B-1135	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
2	ECR-B-1135	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
2	ECR-B-1135	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Parametopella cypris	10
2	ECR-B-1135	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	2
2	ECR-B-1135	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	2
2	ECR-B-1135	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
2	ECR-B-1135	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	1
2	ECR-B-1135	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	6
2	ECR-B-1135	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	3
2	ECR-B-1135	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	19
2	ECR-B-1135	Nemertea				Nemertea (LPIL)	5
2	ECR-B-1135	Platyhelminthes				Platyhelminthes (LPIL)	1
2	ECR-B-1137	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
2	ECR-B-1137	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	11
2	ECR-B-1137	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	1
2	ECR-B-1137	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
2	ECR-B-1137	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	1
2	ECR-B-1137	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	1
2	ECR-B-1137	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	3
2	ECR-B-1137	Annelida	Polychaeta	Spionida	Spionidae	Paraprionospio pinnata	2
2	ECR-B-1137	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
2	ECR-B-1137	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	3
2	ECR-B-1137	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
2	ECR-B-1137	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	17
2	ECR-B-1137	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	4

2	ECR-B-1137	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	6
2	ECR-B-1137	Mollusca	Gastropoda	Heterostropha	Pyramidellidae	Turbonilla (LPIL)	4
2	ECR-B-1137	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	10
2	ECR-B-1137	Platyhelminthes				Platyhelminthes (LPIL)	5
2	ECR-B-1137	Sipuncula				Sipuncula (LPIL)	1
3	ECR-B-201	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
3	ECR-B-201	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
3	ECR-B-201	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	12
3	ECR-B-201	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
3	ECR-B-201	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	28
3	ECR-B-201	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	5
3	ECR-B-201	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
3	ECR-B-201	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	2
3	ECR-B-201	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
3	ECR-B-201	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
3	ECR-B-201	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
3	ECR-B-201	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
3	ECR-B-201	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
3	ECR-B-201	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
3	ECR-B-201	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	10
3	ECR-B-205	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
3	ECR-B-205	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	2
3	ECR-B-205	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
3	ECR-B-205	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	51
3	ECR-B-205	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	4
3	ECR-B-205	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-B-205	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	1
3	ECR-B-205	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	1
3	ECR-B-205	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	3
3	ECR-B-209	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
3	ECR-B-209	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
3	ECR-B-209	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	11
3	ECR-B-209	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	15
3	ECR-B-209	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	89
3	ECR-B-209	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
3	ECR-B-209	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	5
3	ECR-B-209	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	8
3	ECR-B-209	Annelida	Polychaeta	Spionida	Spionidae	Streblospio benedicti	1
3	ECR-B-209	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	5
3	ECR-B-209	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
3	ECR-B-209	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	1
3	ECR-B-209	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	1
3	ECR-B-209	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	11
3	ECR-B-213	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
3	ECR-B-213	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-B-213	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
3	ECR-B-213	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	13
3	ECR-B-213	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	9
3	ECR-B-213	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	124
3	ECR-B-213	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	2
3	ECR-B-213	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
3	ECR-B-213	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	3

3	ECR-B-213	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
3	ECR-B-213	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	5
3	ECR-B-213	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	5
3	ECR-B-213	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	8
3	ECR-B-213	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	3
3	ECR-B-213	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
3	ECR-B-213	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	1
3	ECR-B-213	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	6
3	ECR-B-213	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
3	ECR-B-213	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	11
3	ECR-B-213	Sipuncula				Sipuncula (LPIL)	2
3	ECR-B-217	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
3	ECR-B-217	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	3
3	ECR-B-217	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	2
3	ECR-B-217	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	10
3	ECR-B-217	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	17
3	ECR-B-217	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	8
3	ECR-B-217	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	19
3	ECR-B-217	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	119
3	ECR-B-217	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	1
3	ECR-B-217	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	39
3	ECR-B-217	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	4
3	ECR-B-217	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-B-217	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	4
3	ECR-B-217	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
3	ECR-B-217	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
3	ECR-B-217	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
3	ECR-B-217	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
3	ECR-B-217	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Rathbunixa sayana	4
3	ECR-B-217	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
3	ECR-B-217	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	6
3	ECR-B-217	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	17
3	ECR-B-217	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	4
3	ECR-B-217	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-219	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
3	ECR-B-219	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	4
3	ECR-B-219	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	8
3	ECR-B-219	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
3	ECR-B-219	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	6
3	ECR-B-219	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	5
3	ECR-B-219	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	22
3	ECR-B-219	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	2
3	ECR-B-219	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	95
3	ECR-B-219	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	5
3	ECR-B-219	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	6
3	ECR-B-219	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
3	ECR-B-219	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
3	ECR-B-219	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
3	ECR-B-219	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	6
3	ECR-B-219	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Rathbunixa sayana	2
3	ECR-B-219	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
3	ECR-B-219	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2

3	ECR-B-219	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	12
3	ECR-B-219	Mollusca	Bivalvia			Bivalvia (LPIL)	1
3	ECR-B-219	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	27
3	ECR-B-219	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	4
3	ECR-B-219	Mollusca	Gastropoda			Gastropoda (LPIL)	2
3	ECR-B-219	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	9
3	ECR-B-219	Sipuncula				Sipuncula (LPIL)	1
3	ECR-B-221	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
3	ECR-B-221	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	15
3	ECR-B-221	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	19
3	ECR-B-221	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	18
3	ECR-B-221	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus ambiseta	2
3	ECR-B-221	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
3	ECR-B-221	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	152
3	ECR-B-221	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
3	ECR-B-221	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	2
3	ECR-B-221	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	4
3	ECR-B-221	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	3
3	ECR-B-221	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	4
3	ECR-B-221	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	22
3	ECR-B-221	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	2
3	ECR-B-221	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	2
3	ECR-B-221	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
3	ECR-B-221	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	1
3	ECR-B-221	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	3
3	ECR-B-221	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
3	ECR-B-221	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	1
3	ECR-B-221	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	6
3	ECR-B-221	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	6
3	ECR-B-221	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
3	ECR-B-221	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	3
3	ECR-B-221	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	16
3	ECR-B-221	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
3	ECR-B-221	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	1
3	ECR-B-221	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
3	ECR-B-221	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-221	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	38
3	ECR-B-223	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	2
3	ECR-B-223	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	7
3	ECR-B-223	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	52
3	ECR-B-223	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
3	ECR-B-223	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-B-223	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
3	ECR-B-223	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	8
3	ECR-B-223	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	5
3	ECR-B-223	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
3	ECR-B-223	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	2
3	ECR-B-223	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
3	ECR-B-223	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	19
3	ECR-B-223	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	10
3	ECR-B-223	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
3	ECR-B-223	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	1

3	ECR-B-223	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	2
3	ECR-B-223	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
3	ECR-B-223	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
3	ECR-B-223	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	30
3	ECR-B-223	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	3
3	ECR-B-223	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	3
3	ECR-B-223	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
3	ECR-B-223	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	44
3	ECR-B-223	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
3	ECR-B-223	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
3	ECR-B-223	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	13
3	ECR-B-223	Arthropoda	Malacostraca	Mysida	Mysidae	Neomysis americana	8
3	ECR-B-223	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	3
3	ECR-B-223	Mollusca	Bivalvia			Bivalvia (LPIL)	1
3	ECR-B-223	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
3	ECR-B-223	Nemertea				Nemertea (LPIL)	2
3	ECR-B-227	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
3	ECR-B-227	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
3	ECR-B-227	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	4
3	ECR-B-227	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	7
3	ECR-B-227	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	1
3	ECR-B-227	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	25
3	ECR-B-227	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
3	ECR-B-227	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	2
3	ECR-B-227	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
3	ECR-B-227	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	8
3	ECR-B-227	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	4
3	ECR-B-227	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	2
3	ECR-B-227	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
3	ECR-B-227	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	1
3	ECR-B-227	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
3	ECR-B-227	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	8
3	ECR-B-227	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
3	ECR-B-227	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	4
3	ECR-B-227	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-227	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-231	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	6
3	ECR-B-231	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	20
3	ECR-B-231	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	6
3	ECR-B-231	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
3	ECR-B-231	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	107
3	ECR-B-231	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
3	ECR-B-231	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	3
3	ECR-B-231	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	4
3	ECR-B-231	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	16
3	ECR-B-231	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-B-231	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	2
3	ECR-B-231	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	2
3	ECR-B-231	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	7
3	ECR-B-231	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
3	ECR-B-231	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	2
3	ECR-B-231	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1

3	ECR-B-231	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	6
3	ECR-B-231	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	1
3	ECR-B-231	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	8
3	ECR-B-231	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
3	ECR-B-231	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-231	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-235	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
3	ECR-B-235	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
3	ECR-B-235	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	3
3	ECR-B-235	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
3	ECR-B-235	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-B-235	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
3	ECR-B-235	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	4
3	ECR-B-235	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	2
3	ECR-B-235	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
3	ECR-B-235	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	5
3	ECR-B-235	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	3
3	ECR-B-235	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	9
3	ECR-B-235	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
3	ECR-B-235	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
3	ECR-B-235	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	5
3	ECR-B-235	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	2
3	ECR-B-235	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	4
3	ECR-B-235	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
3	ECR-B-235	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
3	ECR-B-235	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	4
3	ECR-B-235	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
3	ECR-B-235	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	8
3	ECR-B-235	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	8
3	ECR-B-235	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	4
3	ECR-B-235	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	3
3	ECR-B-235	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
3	ECR-B-235	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
3	ECR-B-235	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	1
3	ECR-B-235	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
3	ECR-B-235	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	1
3	ECR-B-235	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	4
3	ECR-B-235	Mollusca	Gastropoda			Gastropoda (LPIL)	4
3	ECR-B-235	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-241	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
3	ECR-B-241	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	4
3	ECR-B-241	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	9
3	ECR-B-241	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
3	ECR-B-241	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	25
3	ECR-B-241	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	9
3	ECR-B-241	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
3	ECR-B-241	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	70
3	ECR-B-241	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
3	ECR-B-241	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	1
3	ECR-B-241	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	25
3	ECR-B-241	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
3	ECR-B-241	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	4

3	ECR-B-241	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
3	ECR-B-241	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	3
3	ECR-B-241	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
3	ECR-B-241	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
3	ECR-B-241	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	4
3	ECR-B-241	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
3	ECR-B-241	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	5
3	ECR-B-241	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	9
3	ECR-B-241	Mollusca	Gastropoda	Heterostropha	Pyramidellidae	Turbonilla (LPIL)	2
3	ECR-B-241	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	6
3	ECR-B-241	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	1
3	ECR-B-241	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-241	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	7
3	ECR-B-247	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
3	ECR-B-247	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
3	ECR-B-247	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
3	ECR-B-247	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	21
3	ECR-B-247	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	9
3	ECR-B-247	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
3	ECR-B-247	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	40
3	ECR-B-247	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
3	ECR-B-247	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
3	ECR-B-247	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	9
3	ECR-B-247	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
3	ECR-B-247	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
3	ECR-B-247	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	14
3	ECR-B-247	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
3	ECR-B-247	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	3
3	ECR-B-247	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	4
3	ECR-B-247	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
3	ECR-B-247	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	3
3	ECR-B-247	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	5
3	ECR-B-247	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1
3	ECR-B-247	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	9
3	ECR-B-247	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	3
3	ECR-B-247	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
3	ECR-B-247	Mollusca	Gastropoda			Gastropoda (LPIL)	3
3	ECR-B-302	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
3	ECR-B-302	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
3	ECR-B-302	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
3	ECR-B-302	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	46
3	ECR-B-302	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	12
3	ECR-B-302	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	7
3	ECR-B-302	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	171
3	ECR-B-302	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
3	ECR-B-302	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	3
3	ECR-B-302	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	2
3	ECR-B-302	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	17
3	ECR-B-302	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	2
3	ECR-B-302	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinna maculata	8
3	ECR-B-302	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
3	ECR-B-302	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	4

3	ECR-B-302	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	5
3	ECR-B-302	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
3	ECR-B-302	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	2
3	ECR-B-302	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	5
3	ECR-B-302	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
3	ECR-B-302	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
3	ECR-B-302	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	2
3	ECR-B-302	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichnidae (LPIL)	2
3	ECR-B-302	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-302	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
3	ECR-B-302	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae	Phascolion (Phascolion) stror	1
3	ECR-B-308	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
3	ECR-B-308	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	4
3	ECR-B-308	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
3	ECR-B-308	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
3	ECR-B-308	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
3	ECR-B-308	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	4
3	ECR-B-308	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	15
3	ECR-B-308	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
3	ECR-B-308	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	47
3	ECR-B-308	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	1
3	ECR-B-308	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	35
3	ECR-B-308	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
3	ECR-B-308	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	9
3	ECR-B-308	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	7
3	ECR-B-308	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-B-308	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	1
3	ECR-B-308	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	14
3	ECR-B-308	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
3	ECR-B-308	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
3	ECR-B-308	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae	Idunella sp.	1
3	ECR-B-308	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
3	ECR-B-308	Arthropoda	Malacostraca	Decapoda	Paguridae	Paguridae (LPIL)	1
3	ECR-B-308	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
3	ECR-B-308	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	1
3	ECR-B-308	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
3	ECR-B-308	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	9
3	ECR-B-308	Mollusca	Bivalvia			Bivalvia (LPIL)	3
3	ECR-B-308	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichnidae (LPIL)	1
3	ECR-B-308	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina (LPIL)	5
3	ECR-B-308	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
3	ECR-B-308	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-308	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	3
3	ECR-B-308	Sipuncula	Sipunculidea	Golfingiida	Phascolionidae	Phascolion (Phascolion) stror	2
3	ECR-B-312	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
3	ECR-B-312	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
3	ECR-B-312	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	2
3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	6
3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	2

3	ECR-B-312	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	2
3	ECR-B-312	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	9
3	ECR-B-312	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
3	ECR-B-312	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	16
3	ECR-B-312	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
3	ECR-B-312	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
3	ECR-B-312	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	30
3	ECR-B-312	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
3	ECR-B-312	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	30
3	ECR-B-312	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	3
3	ECR-B-312	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	10
3	ECR-B-312	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	4
3	ECR-B-312	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
3	ECR-B-312	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis lecroyae	1
3	ECR-B-312	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	3
3	ECR-B-312	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	3
3	ECR-B-312	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
3	ECR-B-312	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
3	ECR-B-312	Mollusca	Bivalvia			Bivalvia (LPIL)	14
3	ECR-B-312	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	10
3	ECR-B-312	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-312	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-312	Nemertea				Nemertea (LPIL)	3
3	ECR-B-316	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos robustus	1
3	ECR-B-316	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	4
3	ECR-B-316	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
3	ECR-B-316	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
3	ECR-B-316	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
3	ECR-B-316	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
3	ECR-B-316	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	6
3	ECR-B-316	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
3	ECR-B-316	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
3	ECR-B-316	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
3	ECR-B-316	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	5
3	ECR-B-316	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
3	ECR-B-316	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	11
3	ECR-B-316	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	38
3	ECR-B-316	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	89
3	ECR-B-316	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
3	ECR-B-316	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
3	ECR-B-316	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	4
3	ECR-B-316	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnotheres (LPIL)	2
3	ECR-B-316	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
3	ECR-B-316	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
3	ECR-B-316	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
3	ECR-B-316	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	16
3	ECR-B-316	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	4
3	ECR-B-316	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
3	ECR-B-316	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
3	ECR-B-316	Nemertea				Nemertea (LPIL)	1
3	ECR-B-322	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	2
3	ECR-B-322	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1

3	ECR-B-322	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
3	ECR-B-322	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
3	ECR-B-322	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
3	ECR-B-322	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	5
3	ECR-B-322	Annelida	Polychaeta	Terebellida	Terebellidae	Loimia medusa	1
3	ECR-B-322	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	13
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	10
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Parahaustorius holmesi	1
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	37
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Americhelidium americanum	1
3	ECR-B-322	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	17
3	ECR-B-322	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
3	ECR-B-322	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	23
3	ECR-B-322	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
3	ECR-B-322	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
3	ECR-B-322	Mollusca	Bivalvia			Bivalvia (LPIL)	3
3	ECR-B-322	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	23
3	ECR-B-322	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	24
3	ECR-B-322	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	29
3	ECR-B-322	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
3	ECR-B-322	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	2
3	ECR-B-322	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-B-322	Nemertea				Nemertea (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
3	ECR-B-324	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	1
3	ECR-B-324	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
3	ECR-B-324	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
3	ECR-B-324	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	4
3	ECR-B-324	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
3	ECR-B-324	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	16
3	ECR-B-324	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	11
3	ECR-B-324	Arthropoda	Malacostraca	Amphipoda	Aoridae	Pseudunciola obliquua	6
3	ECR-B-324	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	2
3	ECR-B-324	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	4
3	ECR-B-324	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	1
3	ECR-B-324	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	1
3	ECR-B-324	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
3	ECR-B-324	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	2
3	ECR-B-324	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	2
3	ECR-B-324	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (LPIL)	2
3	ECR-B-324	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	4
3	ECR-B-324	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	2

3	ECR-B-324	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	1
3	ECR-B-324	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	2
3	ECR-B-324	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	13
3	ECR-B-324	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	8
3	ECR-B-324	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	7
3	ECR-B-324	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	1
3	ECR-B-324	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
3	ECR-B-324	Mollusca	Gastropoda			Gastropoda (LPIL)	5
3	ECR-B-324	Nemertea				Nemertea (LPIL)	3
3	ECR-C-1101	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
3	ECR-C-1101	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	1
3	ECR-C-1101	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	2
3	ECR-C-1101	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	5
3	ECR-C-1101	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
3	ECR-C-1101	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
3	ECR-C-1101	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
3	ECR-C-1101	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
3	ECR-C-1101	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	24
3	ECR-C-1101	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	9
3	ECR-C-1101	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
3	ECR-C-1101	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
3	ECR-C-1101	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	2
3	ECR-C-1101	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
3	ECR-C-1101	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-C-1101	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	1
3	ECR-C-1101	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	3
3	ECR-C-1101	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	1
3	ECR-C-1101	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
3	ECR-C-1101	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	3
3	ECR-C-1101	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	3
3	ECR-C-1101	Mollusca	Bivalvia			Bivalvia (LPIL)	7
3	ECR-C-1101	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	1
3	ECR-C-1101	Platyhelminthes				Platyhelminthes (LPIL)	1
3	ECR-C-1207	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	6
3	ECR-C-1207	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
3	ECR-C-1207	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	31
3	ECR-C-1207	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	8
3	ECR-C-1207	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
3	ECR-C-1207	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-C-1207	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys (LPIL)	1
3	ECR-C-1207	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	7
3	ECR-C-1207	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
3	ECR-C-1207	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	3
3	ECR-C-1207	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	3
3	ECR-C-1207	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
3	ECR-C-1207	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	19
3	ECR-C-1207	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
3	ECR-C-1207	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	4
3	ECR-C-1207	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
3	ECR-C-1207	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
3	ECR-C-1207	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	11
3	ECR-C-1207	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	2

3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	2
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	7
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	2
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	12
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	236
3	ECR-C-1207	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
3	ECR-C-1207	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
3	ECR-C-1207	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	3
3	ECR-C-1207	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	2
3	ECR-C-1207	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
3	ECR-C-1207	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	1
3	ECR-C-1207	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
3	ECR-C-1207	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	7
3	ECR-C-1207	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	3
3	ECR-C-1207	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
3	ECR-C-1207	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	2
3	ECR-C-1207	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	2
3	ECR-C-1207	Mollusca	Bivalvia			Bivalvia (LPIL)	3
3	ECR-C-1207	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	1
3	ECR-C-1207	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
3	ECR-C-1207	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-C-1207	Nemertea				Nemertea (LPIL)	6
3	ECR-C-1207	Sipuncula				Sipuncula (LPIL)	3
3	ECR-C-1208	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
3	ECR-C-1208	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
3	ECR-C-1208	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	35
3	ECR-C-1208	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	3
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	4
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	19
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	3
3	ECR-C-1208	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	22
3	ECR-C-1208	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	30
3	ECR-C-1208	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
3	ECR-C-1208	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
3	ECR-C-1208	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	6
3	ECR-C-1208	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	4
3	ECR-C-1208	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
3	ECR-C-1208	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	9
3	ECR-C-1208	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	8
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	3
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	26
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	5
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	12
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	10
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	75
3	ECR-C-1208	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Proboloides holmesi	1
3	ECR-C-1208	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	1
3	ECR-C-1208	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
3	ECR-C-1208	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1

3	ECR-C-1208	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
3	ECR-C-1208	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	5
3	ECR-C-1208	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	2
3	ECR-C-1208	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	12
3	ECR-C-1208	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
3	ECR-C-1208	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	5
3	ECR-C-1208	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	1
3	ECR-C-1208	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
3	ECR-C-1208	Mollusca	Bivalvia			Bivalvia (LPIL)	3
3	ECR-C-1208	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	1
3	ECR-C-1208	Mollusca	Gastropoda			Gastropoda (LPIL)	1
3	ECR-C-1208	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
3	ECR-C-1208	Nemertea				Nemertea (LPIL)	4
3	ECR-C-1208	Sipuncula				Sipuncula (LPIL)	3
3	ECR-C-1215	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
3	ECR-C-1215	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	1
3	ECR-C-1215	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
3	ECR-C-1215	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	5
3	ECR-C-1215	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	25
3	ECR-C-1215	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	4
3	ECR-C-1215	Annelida	Polychaeta	Spionida	Spionidae	Prionospio perkinsi	2
3	ECR-C-1215	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
3	ECR-C-1215	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
3	ECR-C-1215	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	4
3	ECR-C-1215	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
3	ECR-C-1215	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Rathbunixa sayana	2
3	ECR-C-1215	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
3	ECR-C-1215	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	13
3	ECR-C-1215	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	5
3	ECR-C-1215	Mollusca	Gastropoda	Neogastropoda	Turridae	Turridae (LPIL)	1
3	ECR-C-1215	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	8
4	ECR-B-328	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	72
4	ECR-B-328	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	8
4	ECR-B-328	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	3
4	ECR-B-328	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
4	ECR-B-328	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
4	ECR-B-328	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	2
4	ECR-B-328	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1
4	ECR-B-328	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
4	ECR-B-328	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	5
4	ECR-B-328	Annelida	Polychaeta	Scolecida	Capitellidae	Notomastus latericeus	6
4	ECR-B-328	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	1
4	ECR-B-328	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
4	ECR-B-328	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	1
4	ECR-B-328	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	4
4	ECR-B-328	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
4	ECR-B-328	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
4	ECR-B-328	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	6
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Aoridae	Pseudunciola obliquua	7
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	4

4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	17
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Americhelidium americanum	1
4	ECR-B-328	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	3
4	ECR-B-328	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	2
4	ECR-B-328	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
4	ECR-B-328	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	27
4	ECR-B-328	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
4	ECR-B-328	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-328	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
4	ECR-B-328	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	2
4	ECR-B-328	Mollusca	Bivalvia			Bivalvia (LPIL)	2
4	ECR-B-328	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	1
4	ECR-B-328	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	1
4	ECR-B-328	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	2
4	ECR-B-328	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
4	ECR-B-328	Nemertea				Nemertea (LPIL)	4
4	ECR-B-334	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	17
4	ECR-B-334	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-334	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
4	ECR-B-334	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
4	ECR-B-334	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Parahaustorius holmesi	2
4	ECR-B-334	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	3
4	ECR-B-334	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	2
4	ECR-B-334	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
4	ECR-B-334	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	1
4	ECR-B-334	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	1
4	ECR-B-334	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	3
4	ECR-B-338	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	14
4	ECR-B-338	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	4
4	ECR-B-338	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	2
4	ECR-B-338	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
4	ECR-B-338	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	6
4	ECR-B-338	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
4	ECR-B-338	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
4	ECR-B-338	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	1
4	ECR-B-338	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
4	ECR-B-338	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
4	ECR-B-338	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
4	ECR-B-338	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	10
4	ECR-B-338	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	1
4	ECR-B-338	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
4	ECR-B-338	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
4	ECR-B-338	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	2
4	ECR-B-338	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
4	ECR-B-338	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
4	ECR-B-338	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-338	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
4	ECR-B-340	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
4	ECR-B-340	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	1
4	ECR-B-340	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-340	Annelida	Polychaeta	Phyllodocida	Syllidae	Salvatoria clavata	1
4	ECR-B-340	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	5

4	ECR-B-340	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
4	ECR-B-340	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
4	ECR-B-340	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	1
4	ECR-B-340	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
4	ECR-B-340	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	18
4	ECR-B-340	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	47
4	ECR-B-340	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	2
4	ECR-B-340	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	9
4	ECR-B-340	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
4	ECR-B-340	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	4
4	ECR-B-340	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	3
4	ECR-B-340	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	1
4	ECR-B-340	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
4	ECR-B-340	Mollusca	Bivalvia			Bivalvia (LPIL)	1
4	ECR-B-340	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	3
4	ECR-B-348	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	13
4	ECR-B-348	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-348	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
4	ECR-B-348	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
4	ECR-B-348	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
4	ECR-B-348	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	2
4	ECR-B-348	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	20
4	ECR-B-348	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
4	ECR-B-348	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
4	ECR-B-348	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	1
4	ECR-B-350	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
4	ECR-B-350	Annelida	Polychaeta	Eunicida	Dorvilleidae	Parougia caeca	1
4	ECR-B-350	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
4	ECR-B-350	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
4	ECR-B-350	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	2
4	ECR-B-350	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
4	ECR-B-350	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
4	ECR-B-350	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	33
4	ECR-B-350	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	5
4	ECR-B-350	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
4	ECR-B-350	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	2
4	ECR-B-350	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	3
4	ECR-B-350	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	2
4	ECR-B-350	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	3
4	ECR-B-350	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	3
4	ECR-B-350	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	1
4	ECR-B-350	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
4	ECR-B-402	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
4	ECR-B-402	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
4	ECR-B-402	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
4	ECR-B-402	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
4	ECR-B-402	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	7
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	3
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	2
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	1

4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	3
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
4	ECR-B-402	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	2
4	ECR-B-402	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
4	ECR-B-402	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	21
4	ECR-B-402	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	4
4	ECR-B-402	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	4
4	ECR-B-402	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
4	ECR-B-402	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	3
4	ECR-B-402	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
4	ECR-B-402	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
4	ECR-B-402	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
4	ECR-B-402	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	5
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	8
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	14
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	2
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	3
4	ECR-B-402	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Parametopella cypris	3
4	ECR-B-402	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	6
4	ECR-B-402	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
4	ECR-B-402	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	1
4	ECR-B-402	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
4	ECR-B-402	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	14
4	ECR-B-402	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
4	ECR-B-402	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	1
4	ECR-B-402	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	4
4	ECR-B-402	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	8
4	ECR-B-402	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	7
4	ECR-B-402	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	40
4	ECR-B-402	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	4
4	ECR-B-402	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	5
4	ECR-B-402	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	2
4	ECR-B-402	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	38
4	ECR-B-402	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
4	ECR-B-402	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	1
4	ECR-B-402	Mollusca	Gastropoda			Gastropoda (LPIL)	3
4	ECR-B-402	Nemertea				Nemertea (LPIL)	1
4	ECR-B-402	Sipuncula				Sipuncula (LPIL)	5
4	ECR-B-404	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
4	ECR-B-404	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
4	ECR-B-404	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
4	ECR-B-404	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
4	ECR-B-404	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	21
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	6
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	1
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sthenelais boa	1
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	2
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Syllidae	Salvatoria clavata	1

4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	6
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	2
4	ECR-B-404	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	2
4	ECR-B-404	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	1
4	ECR-B-404	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	5
4	ECR-B-404	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	2
4	ECR-B-404	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	24
4	ECR-B-404	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	24
4	ECR-B-404	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	8
4	ECR-B-404	Annelida	Polychaeta	Spionida	Acrocirridae	Macrochaeta clavicornis	11
4	ECR-B-404	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
4	ECR-B-404	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	5
4	ECR-B-404	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	5
4	ECR-B-404	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	8
4	ECR-B-404	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	13
4	ECR-B-404	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	2
4	ECR-B-404	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
4	ECR-B-404	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	11
4	ECR-B-404	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	6
4	ECR-B-404	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	12
4	ECR-B-404	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	2
4	ECR-B-404	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	5
4	ECR-B-404	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	5
4	ECR-B-404	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	5
4	ECR-B-404	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	1
4	ECR-B-404	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
4	ECR-B-404	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
4	ECR-B-404	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	35
4	ECR-B-404	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
4	ECR-B-404	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
4	ECR-B-404	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	2
4	ECR-B-404	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
4	ECR-B-404	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-404	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	13
4	ECR-B-404	Mollusca	Bivalvia			Bivalvia (LPIL)	4
4	ECR-B-404	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	10
4	ECR-B-404	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	92
4	ECR-B-404	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	7
4	ECR-B-404	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Costoanachis (LPIL)	1
4	ECR-B-404	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	3
4	ECR-B-404	Mollusca	Gastropoda			Gastropoda (LPIL)	6
4	ECR-B-404	Nemertea				Nemertea (LPIL)	1
4	ECR-B-404	Sipuncula				Sipuncula (LPIL)	1
4	ECR-B-406	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
4	ECR-B-406	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
4	ECR-B-406	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
4	ECR-B-406	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	11
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	1
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	8
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	1

4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sthenelais boa	1
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	3
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
4	ECR-B-406	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	5
4	ECR-B-406	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
4	ECR-B-406	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
4	ECR-B-406	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
4	ECR-B-406	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	4
4	ECR-B-406	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	2
4	ECR-B-406	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
4	ECR-B-406	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	4
4	ECR-B-406	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	2
4	ECR-B-406	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
4	ECR-B-406	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	7
4	ECR-B-406	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	2
4	ECR-B-406	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	6
4	ECR-B-406	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
4	ECR-B-406	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	19
4	ECR-B-406	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	1
4	ECR-B-406	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	8
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	1
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	2
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
4	ECR-B-406	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
4	ECR-B-406	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
4	ECR-B-406	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	9
4	ECR-B-406	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	10
4	ECR-B-406	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	1
4	ECR-B-406	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
4	ECR-B-406	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
4	ECR-B-406	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
4	ECR-B-406	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	18
4	ECR-B-406	Mollusca	Bivalvia			Bivalvia (LPIL)	1
4	ECR-B-406	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	4
4	ECR-B-406	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	11
4	ECR-B-406	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	70
4	ECR-B-406	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	2
4	ECR-B-408	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	2
4	ECR-B-408	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	4
4	ECR-B-408	Annelida	Polychaeta	Eunicida	Eunicidae	Eunicidae (LPIL)	1
4	ECR-B-408	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	2
4	ECR-B-408	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	9
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	2
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	3
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	5
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	2

4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	2
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
4	ECR-B-408	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	8
4	ECR-B-408	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	2
4	ECR-B-408	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
4	ECR-B-408	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	3
4	ECR-B-408	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	14
4	ECR-B-408	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
4	ECR-B-408	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
4	ECR-B-408	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	14
4	ECR-B-408	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	17
4	ECR-B-408	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	7
4	ECR-B-408	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
4	ECR-B-408	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	4
4	ECR-B-408	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	1
4	ECR-B-408	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	6
4	ECR-B-408	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	11
4	ECR-B-408	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	8
4	ECR-B-408	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	5
4	ECR-B-408	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
4	ECR-B-408	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	3
4	ECR-B-408	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
4	ECR-B-408	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (LPIL)	2
4	ECR-B-408	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	22
4	ECR-B-408	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	1
4	ECR-B-408	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	10
4	ECR-B-408	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
4	ECR-B-408	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
4	ECR-B-408	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-408	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	2
4	ECR-B-408	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	77
4	ECR-B-408	Mollusca	Bivalvia			Bivalvia (LPIL)	2
4	ECR-B-408	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	10
4	ECR-B-408	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	21
4	ECR-B-408	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	16
4	ECR-B-408	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	5
4	ECR-B-408	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	9
4	ECR-B-408	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
4	ECR-B-408	Mollusca	Gastropoda			Gastropoda (LPIL)	1
4	ECR-B-408	Nemertea				Nemertea (LPIL)	3
4	ECR-B-408	Sipuncula				Sipuncula (LPIL)	1
4	ECR-B-410	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
4	ECR-B-410	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	23
4	ECR-B-410	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
4	ECR-B-410	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	3
4	ECR-B-410	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	4
4	ECR-B-410	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	2
4	ECR-B-410	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	26
4	ECR-B-410	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
4	ECR-B-410	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
4	ECR-B-410	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
4	ECR-B-410	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1

4	ECR-B-410	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	8
4	ECR-B-410	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
4	ECR-B-410	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	17
4	ECR-B-410	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
4	ECR-B-410	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	12
4	ECR-B-410	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	7
4	ECR-B-410	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	4
4	ECR-B-410	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
4	ECR-B-410	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	7
4	ECR-B-410	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus pollicaris	1
4	ECR-B-410	Arthropoda	Malacostraca	Decapoda	Xanthidae	Panopeus herbstii	1
4	ECR-B-410	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
4	ECR-B-410	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
4	ECR-B-410	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	4
4	ECR-B-410	Echinodermata	Echinoidea	Arbacioida	Arbaciidae	Arbacia punctulata	1
4	ECR-B-410	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	3
4	ECR-B-410	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	2
4	ECR-B-410	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	4
4	ECR-B-410	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	10
4	ECR-B-410	Mollusca	Bivalvia			Bivalvia (LPIL)	6
4	ECR-B-410	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	28
4	ECR-B-410	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	31
4	ECR-B-410	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	287
4	ECR-B-410	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	5
4	ECR-B-410	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	2
4	ECR-B-410	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	3
4	ECR-B-410	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	9
4	ECR-B-410	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
4	ECR-B-410	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
4	ECR-B-410	Sipuncula				Sipuncula (LPIL)	1
4	ECR-B-412	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	3
4	ECR-B-412	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
4	ECR-B-412	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	9
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	2
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Polynoidae	Malmgreniella taylori	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
4	ECR-B-412	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	5
4	ECR-B-412	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	1
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	22
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Capitellidae	Notomastus latericeus	2
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	29
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	7
4	ECR-B-412	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	5

4	ECR-B-412	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	3
4	ECR-B-412	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	2
4	ECR-B-412	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	2
4	ECR-B-412	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	4
4	ECR-B-412	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
4	ECR-B-412	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
4	ECR-B-412	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	2
4	ECR-B-412	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	5
4	ECR-B-412	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	2
4	ECR-B-412	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	11
4	ECR-B-412	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
4	ECR-B-412	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	2
4	ECR-B-412	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	22
4	ECR-B-412	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1
4	ECR-B-412	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	2
4	ECR-B-412	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	2
4	ECR-B-412	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	19
4	ECR-B-412	Mollusca	Bivalvia			Bivalvia (LPIL)	3
4	ECR-B-412	Mollusca	Gastropoda	Littorinimorpha	Eulimidae	Eulimidae (LPIL)	1
4	ECR-B-412	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	11
4	ECR-B-412	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	7
4	ECR-B-412	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	1
4	ECR-B-412	Mollusca	Gastropoda			Gastropoda (LPIL)	2
4	ECR-B-412	Nemertea				Nemertea (LPIL)	1
4	ECR-B-412	Sipuncula				Sipuncula (LPIL)	4
4	ECR-B-414	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
4	ECR-B-414	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
4	ECR-B-414	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
4	ECR-B-414	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
4	ECR-B-414	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
4	ECR-B-414	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-414	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
4	ECR-B-414	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
4	ECR-B-414	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
4	ECR-B-414	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
4	ECR-B-414	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	4
4	ECR-B-414	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
4	ECR-B-414	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	1
4	ECR-B-414	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	11
4	ECR-B-414	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	6
4	ECR-B-414	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
4	ECR-B-414	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
4	ECR-B-414	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
4	ECR-B-414	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	11
4	ECR-B-414	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
4	ECR-B-414	Nemertea				Nemertea (LPIL)	1
4	ECR-B-416	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
4	ECR-B-416	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
4	ECR-B-416	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	5
4	ECR-B-416	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	14
4	ECR-B-416	Annelida	Polychaeta	Phyllodocida	Hesionidae	Microphthalmus (LPIL)	1
4	ECR-B-416	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1

4	ECR-B-416	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	3
4	ECR-B-416	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
4	ECR-B-416	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	6
4	ECR-B-416	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
4	ECR-B-416	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	1
4	ECR-B-416	Mollusca	Bivalvia			Bivalvia (LPIL)	2
4	ECR-B-416	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	2
4	ECR-B-416	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
4	ECR-B-456	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
4	ECR-B-456	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
4	ECR-B-456	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
4	ECR-B-456	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	1
4	ECR-B-456	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
4	ECR-B-456	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	3
4	ECR-B-456	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-456	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
4	ECR-B-456	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
4	ECR-B-456	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
4	ECR-B-456	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
4	ECR-B-456	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
4	ECR-B-456	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	1
4	ECR-B-456	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
4	ECR-B-456	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
4	ECR-B-456	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	2
4	ECR-B-456	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
4	ECR-B-456	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
4	ECR-B-456	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
4	ECR-B-456	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
4	ECR-B-456	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	33
4	ECR-B-456	Mollusca	Bivalvia			Bivalvia (LPIL)	1
4	ECR-B-456	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	5
4	ECR-B-456	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	3
4	ECR-B-456	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	5
4	ECR-B-456	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	25
4	ECR-B-456	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
4	ECR-B-458	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
4	ECR-B-458	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	36
4	ECR-B-458	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
4	ECR-B-458	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
4	ECR-B-458	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
4	ECR-B-458	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
4	ECR-B-458	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
4	ECR-B-458	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	7
4	ECR-B-458	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	2
4	ECR-B-458	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	10
4	ECR-B-458	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
4	ECR-B-458	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
4	ECR-B-458	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	2
4	ECR-B-458	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	7
4	ECR-B-458	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
4	ECR-B-458	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	2

4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	19
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	6
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	14
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	3
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
4	ECR-B-458	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Parametopella cypris	1
4	ECR-B-458	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	2
4	ECR-B-458	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
4	ECR-B-458	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	4
4	ECR-B-458	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	19
4	ECR-B-458	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	13
4	ECR-B-458	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
4	ECR-B-458	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	7
4	ECR-B-458	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	50
4	ECR-B-458	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	1
4	ECR-B-458	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	1
4	ECR-B-458	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
4	ECR-B-460	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	8
4	ECR-B-460	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
4	ECR-B-460	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	5
4	ECR-B-460	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
4	ECR-B-460	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	4
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	5
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	3
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	14
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Polynoidae	Malmgreniella lunulata	1
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	2
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
4	ECR-B-460	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	5
4	ECR-B-460	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	2
4	ECR-B-460	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	14
4	ECR-B-460	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	3
4	ECR-B-460	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	17
4	ECR-B-460	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	10
4	ECR-B-460	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
4	ECR-B-460	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	2
4	ECR-B-460	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	2
4	ECR-B-460	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	20
4	ECR-B-460	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
4	ECR-B-460	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
4	ECR-B-460	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
4	ECR-B-460	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	5
4	ECR-B-460	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	14
4	ECR-B-460	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	3
4	ECR-B-460	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
4	ECR-B-460	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	7
4	ECR-B-460	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	13
4	ECR-B-460	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
4	ECR-B-460	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
4	ECR-B-460	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	2

4	ECR-B-460	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	20
4	ECR-B-460	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
4	ECR-B-460	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	1
4	ECR-B-460	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
4	ECR-B-460	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	1
4	ECR-B-460	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
4	ECR-B-460	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	3
4	ECR-B-460	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
4	ECR-B-460	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	10
4	ECR-B-460	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	12
4	ECR-B-460	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	3
4	ECR-B-460	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	17
4	ECR-B-460	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	2
4	ECR-B-460	Sipuncula				Sipuncula (LPIL)	2
4	ECR-B-462	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	2
4	ECR-B-462	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	20
4	ECR-B-462	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
4	ECR-B-462	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	2
4	ECR-B-462	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	22
4	ECR-B-462	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
4	ECR-B-462	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	5
4	ECR-B-462	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	6
4	ECR-B-462	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	12
4	ECR-B-462	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
4	ECR-B-462	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
4	ECR-B-462	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	5
4	ECR-B-462	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	32
4	ECR-B-462	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	9
4	ECR-B-462	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
4	ECR-B-462	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
4	ECR-B-462	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
4	ECR-B-462	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	6
4	ECR-B-462	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	3
4	ECR-B-462	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	8
4	ECR-B-462	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	3
4	ECR-B-462	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
4	ECR-B-462	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	3
4	ECR-B-462	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
4	ECR-B-462	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	11
4	ECR-B-462	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	3
4	ECR-B-462	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
4	ECR-B-462	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	3
4	ECR-B-462	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	4
4	ECR-B-462	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	29
4	ECR-B-462	Arthropoda	Malacostraca	Decapoda	Upogebiidae	Upogebia affinis	1
4	ECR-B-462	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	9
4	ECR-B-462	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
4	ECR-B-462	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-462	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	52
4	ECR-B-462	Mollusca	Bivalvia			Bivalvia (LPIL)	1
4	ECR-B-462	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	3
4	ECR-B-462	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	11

4	ECR-B-462	Mollusca	Gastropoda			Gastropoda (LPIL)	1
4	ECR-B-464	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
4	ECR-B-464	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
4	ECR-B-464	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	2
4	ECR-B-464	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	2
4	ECR-B-464	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	5
4	ECR-B-464	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
4	ECR-B-464	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	1
4	ECR-B-464	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	49
4	ECR-B-464	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
4	ECR-B-464	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	20
4	ECR-B-464	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
4	ECR-B-464	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	3
4	ECR-B-464	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
4	ECR-B-464	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	10
4	ECR-B-464	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	1
4	ECR-B-464	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	3
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	13
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	2
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	2
4	ECR-B-464	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	2
4	ECR-B-464	Arthropoda	Malacostraca	Mysida	Mysidae	Mysidae (LPIL)	1
4	ECR-B-464	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	5
4	ECR-B-464	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	2
4	ECR-B-464	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	3
4	ECR-B-464	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	3
4	ECR-B-464	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
4	ECR-B-464	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
4	ECR-B-464	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	3
4	ECR-B-464	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
4	ECR-B-464	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	6
4	ECR-B-464	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	14
4	ECR-B-464	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	23
4	ECR-B-464	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	8
4	ECR-B-464	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	1
4	ECR-B-464	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	3
4	ECR-B-466	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
4	ECR-B-466	Annelida	Polychaeta	Opheliida	Opheliidae	Travisia parva	1
4	ECR-B-466	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	6
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	2
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	1
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	2
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	1
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	3
4	ECR-B-466	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
4	ECR-B-466	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	8
4	ECR-B-466	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	15
4	ECR-B-466	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6

4	ECR-B-466	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
4	ECR-B-466	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	4
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	1
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	4
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	7
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	8
4	ECR-B-466	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	5
4	ECR-B-466	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	1
4	ECR-B-466	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
4	ECR-B-466	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	1
4	ECR-B-466	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
4	ECR-B-466	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	1
4	ECR-B-466	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
4	ECR-B-466	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	24
4	ECR-B-466	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	2
4	ECR-B-466	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
4	ECR-B-466	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	10
4	ECR-B-466	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
4	ECR-B-466	Mollusca	Bivalvia			Bivalvia (LPIL)	4
4	ECR-B-466	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	2
4	ECR-B-466	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	6
4	ECR-B-466	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	10
4	ECR-B-466	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	3
4	ECR-B-466	Nemertea				Nemertea (LPIL)	1
4	ECR-B-466	Sipuncula				Sipuncula (LPIL)	1
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	5
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis (LPIL)	1
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	37
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	8
4	ECR-B-468	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis (LPIL)	1
4	ECR-B-468	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
4	ECR-B-468	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	2
4	ECR-B-468	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	1
4	ECR-B-468	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	2
4	ECR-B-468	Arthropoda	Malacostraca	Isopoda	Sphaeromatidae	Ancinus depressus	1
4	ECR-B-468	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
4	ECR-B-468	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
4	ECR-B-468	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	13
4	ECR-B-468	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
4	ECR-B-468	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	12
4	ECR-B-468	Nemertea				Nemertea (LPIL)	1
4	ECR-B-468	Sipuncula				Sipuncula (LPIL)	2
4	ECR-C-1302	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	8
4	ECR-C-1302	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	4
4	ECR-C-1302	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
4	ECR-C-1302	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	9
4	ECR-C-1302	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
4	ECR-C-1302	Mollusca	Bivalvia			Bivalvia (LPIL)	2
4	ECR-C-1302	Sipuncula				Sipuncula (LPIL)	1

5	ECR-B-470	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	5
5	ECR-B-470	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
5	ECR-B-470	Annelida	Polychaeta	Eunicida	Eunicidae	Paucibrancia bellii	1
5	ECR-B-470	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
5	ECR-B-470	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
5	ECR-B-470	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	1
5	ECR-B-470	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
5	ECR-B-470	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	3
5	ECR-B-470	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
5	ECR-B-470	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
5	ECR-B-470	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
5	ECR-B-470	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	2
5	ECR-B-470	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
5	ECR-B-470	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	2
5	ECR-B-470	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	4
5	ECR-B-470	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	5
5	ECR-B-470	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
5	ECR-B-470	Annelida	Polychaeta	Terebellida	Terebellidae	Eupolymnia nebulosa	2
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	5
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	4
5	ECR-B-470	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
5	ECR-B-470	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
5	ECR-B-470	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
5	ECR-B-470	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	1
5	ECR-B-470	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	6
5	ECR-B-470	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	2
5	ECR-B-470	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (Heteromysis) f	2
5	ECR-B-470	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	10
5	ECR-B-470	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
5	ECR-B-470	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	2
5	ECR-B-470	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
5	ECR-B-470	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	13
5	ECR-B-470	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	7
5	ECR-B-470	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	1
5	ECR-B-470	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	50
5	ECR-B-470	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	4
5	ECR-B-470	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	2
5	ECR-B-470	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	7
5	ECR-B-470	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	1
5	ECR-B-470	Mollusca	Gastropoda			Gastropoda (LPIL)	2
5	ECR-B-470	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
5	ECR-B-470	Nemertea				Nemertea (LPIL)	1
5	ECR-B-472	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
5	ECR-B-472	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
5	ECR-B-472	Annelida	Polychaeta	Eunicida	Eunicidae	Eunicidae (LPIL)	1
5	ECR-B-472	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
5	ECR-B-472	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	2
5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	4
5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	4

5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	3
5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	2
5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	1
5	ECR-B-472	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
5	ECR-B-472	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
5	ECR-B-472	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	4
5	ECR-B-472	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
5	ECR-B-472	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	5
5	ECR-B-472	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	4
5	ECR-B-472	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
5	ECR-B-472	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	2
5	ECR-B-472	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	7
5	ECR-B-472	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
5	ECR-B-472	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3
5	ECR-B-472	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
5	ECR-B-472	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	3
5	ECR-B-472	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
5	ECR-B-472	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
5	ECR-B-472	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	4
5	ECR-B-472	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	2
5	ECR-B-472	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	3
5	ECR-B-472	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
5	ECR-B-472	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
5	ECR-B-472	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
5	ECR-B-472	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	42
5	ECR-B-472	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
5	ECR-B-472	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	5
5	ECR-B-472	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	4
5	ECR-B-472	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	1
5	ECR-B-472	Mollusca	Gastropoda			Gastropoda (LPIL)	1
5	ECR-B-472	Nemertea				Nemertea (LPIL)	3
5	ECR-B-474	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
5	ECR-B-474	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	11
5	ECR-B-474	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
5	ECR-B-474	Annelida	Polychaeta	Eunicida	Dorvilleidae	Parougia caeca	1
5	ECR-B-474	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
5	ECR-B-474	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
5	ECR-B-474	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	2
5	ECR-B-474	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
5	ECR-B-474	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
5	ECR-B-474	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
5	ECR-B-474	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
5	ECR-B-474	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	4
5	ECR-B-474	Annelida	Polychaeta	Spionida	Magelonidae	Magelona papillicornis	1
5	ECR-B-474	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	2
5	ECR-B-474	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
5	ECR-B-474	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	2
5	ECR-B-474	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	4
5	ECR-B-474	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
5	ECR-B-474	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	6
5	ECR-B-474	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	8
5	ECR-B-474	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	5

5	ECR-B-474	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
5	ECR-B-474	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	7
5	ECR-B-474	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	1
5	ECR-B-474	Arthropoda	Malacostraca	Decapoda	Portunidae	Ovalipes stephensoni	1
5	ECR-B-474	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	2
5	ECR-B-474	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	4
5	ECR-B-474	Mollusca	Bivalvia	Veneroida	Solenidae	Ensis directus	1
5	ECR-B-474	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	2
5	ECR-B-474	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
5	ECR-B-476	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	1
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	8
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys squamosa	2
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	1
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	1
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
5	ECR-B-476	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
5	ECR-B-476	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
5	ECR-B-476	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
5	ECR-B-476	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	17
5	ECR-B-476	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
5	ECR-B-476	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	3
5	ECR-B-476	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
5	ECR-B-476	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
5	ECR-B-476	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	4
5	ECR-B-476	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	9
5	ECR-B-476	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
5	ECR-B-476	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	7
5	ECR-B-476	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3
5	ECR-B-476	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	4
5	ECR-B-476	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	1
5	ECR-B-476	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	3
5	ECR-B-476	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	3
5	ECR-B-476	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	3
5	ECR-B-476	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	4
5	ECR-B-476	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	2
5	ECR-B-476	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	5
5	ECR-B-476	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	1
5	ECR-B-476	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	13
5	ECR-B-476	Mollusca	Gastropoda	Cephalaspidea	Scaphandridae	Acteocina candei	2
5	ECR-B-476	Mollusca	Gastropoda	Heterostropha	Pyramidellidae	Turbonilla (LPIL)	6
5	ECR-B-476	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	5
5	ECR-B-476	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
5	ECR-B-476	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	1
5	ECR-B-476	Mollusca	Gastropoda			Gastropoda (LPIL)	1
5	ECR-B-476	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
5.1	ECR-B-480-A	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	80
5.1	ECR-B-480-A	Annelida	Polychaeta	Eunicida	Dorvilleidae	Parougia caeca	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Eunicida	Dorvilleidae	Pettiboneia duofurca	7
5.1	ECR-B-480-A	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	8
5.1	ECR-B-480-A	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leodamas rubrus	3
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Hesionidae	Microphthalmus (LPIL)	1

5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	7
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	19
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	3
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	2
5.1	ECR-B-480-A	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	4
5.1	ECR-B-480-A	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonis fulgens	2
5.1	ECR-B-480-A	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
5.1	ECR-B-480-A	Annelida	Polychaeta	Spionida	Magelonidae	Magelona sp. I	2
5.1	ECR-B-480-A	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	5
5.1	ECR-B-480-A	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	13
5.1	ECR-B-480-A	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
5.1	ECR-B-480-A	Annelida	Polychaeta	Terebellida	Terebellidae	Lanicola (LPIL)	1
5.1	ECR-B-480-A	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
5.1	ECR-B-480-A	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	4
5.1	ECR-B-480-A	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
5.1	ECR-B-480-A	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae	Idunella sp.	1
5.1	ECR-B-480-A	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
5.1	ECR-B-480-A	Mollusca	Bivalvia	Solemyoida	Solemyidae	Solemya velum	1
5.1	ECR-B-480-A	Mollusca	Bivalvia	Veneroida	Solenidae	Ensis directus	1
5.1	ECR-B-480-A	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	22
5.1	ECR-B-480-A	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	18
5.1	ECR-B-480-A	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
5.1	ECR-B-480-A	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	1
5.1	ECR-B-480-A	Nemertea				Nemertea (LPIL)	1
5.1	ECR-B-482	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	3
5.1	ECR-B-482	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	5
5.1	ECR-B-482	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	3
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	11
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	1
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	2
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	3
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	3
5.1	ECR-B-482	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
5.1	ECR-B-482	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
5.1	ECR-B-482	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) catherinae	1
5.1	ECR-B-482	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
5.1	ECR-B-482	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
5.1	ECR-B-482	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
5.1	ECR-B-482	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	2
5.1	ECR-B-482	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	2
5.1	ECR-B-482	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
5.1	ECR-B-482	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	4
5.1	ECR-B-482	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	1

5.1	ECR-B-482	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	3
5.1	ECR-B-482	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
5.1	ECR-B-482	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1
5.1	ECR-B-482	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
5.1	ECR-B-482	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	5
5.1	ECR-B-482	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
5.1	ECR-B-482	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	1
5.1	ECR-B-482	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	62
5.1	ECR-B-482	Mollusca	Bivalvia			Bivalvia (LPIL)	1
5.1	ECR-B-482	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	2
5.1	ECR-B-482	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	3
5.1	ECR-B-482	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	2
5.1	ECR-B-482	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	1
5.1	ECR-B-482	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
5.1	ECR-B-482	Nemertea				Nemertea (LPIL)	2
5.1	ECR-B-484	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
5.1	ECR-B-484	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	2
5.1	ECR-B-484	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	8
5.1	ECR-B-484	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	2
5.1	ECR-B-484	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
5.1	ECR-B-484	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
5.1	ECR-B-484	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
5.1	ECR-B-484	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
5.1	ECR-B-484	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	13
5.1	ECR-B-484	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
5.1	ECR-B-484	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
5.1	ECR-B-484	Annelida	Polychaeta	Spionida	Spionidae	Prionospio pygmaeus	5
5.1	ECR-B-484	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
5.1	ECR-B-484	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
5.1	ECR-B-484	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
5.1	ECR-B-484	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
5.1	ECR-B-484	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	3
5.1	ECR-B-484	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	47
5.1	ECR-B-484	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	1
5.1	ECR-B-484	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
5.1	ECR-B-484	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
5.1	ECR-B-484	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	5
5.1	ECR-B-484	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	1
5.1	ECR-B-484	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	20
5.1	ECR-B-484	Mollusca	Bivalvia			Bivalvia (LPIL)	1
5.1	ECR-B-484	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	3
5.1	ECR-B-484	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
5.1	ECR-B-484	Sipuncula				Sipuncula (LPIL)	1
5.1	ECR-B-486	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	3
5.1	ECR-B-486	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
5.1	ECR-B-486	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	6
5.1	ECR-B-486	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	6
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis splendida	1
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	1

5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae	Sphaerodoridium minutum	1
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	6
5.1	ECR-B-486	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
5.1	ECR-B-486	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
5.1	ECR-B-486	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	2
5.1	ECR-B-486	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
5.1	ECR-B-486	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	4
5.1	ECR-B-486	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
5.1	ECR-B-486	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	12
5.1	ECR-B-486	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	4
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	3
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	1
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
5.1	ECR-B-486	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
5.1	ECR-B-486	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	2
5.1	ECR-B-486	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	1
5.1	ECR-B-486	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	2
5.1	ECR-B-486	Chordata	Ascidiacea			Ascidiacea (LPIL)	1
5.1	ECR-B-486	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	15
5.1	ECR-B-486	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	5
5.1	ECR-B-486	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	2
5.1	ECR-B-486	Sipuncula				Sipuncula (LPIL)	1
5.1	ECR-B-488	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
5.1	ECR-B-488	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	177
5.1	ECR-B-488	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
5.1	ECR-B-488	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	14
5.1	ECR-B-488	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	11
5.1	ECR-B-488	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	1
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	15
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	19
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce (LPIL)	1
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
5.1	ECR-B-488	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	2
5.1	ECR-B-488	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	2
5.1	ECR-B-488	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
5.1	ECR-B-488	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
5.1	ECR-B-488	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonis fulgens	2
5.1	ECR-B-488	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	4
5.1	ECR-B-488	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	8
5.1	ECR-B-488	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
5.1	ECR-B-488	Annelida	Polychaeta	Spionida	Spionidae	Prionospio (LPIL)	46
5.1	ECR-B-488	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	22
5.1	ECR-B-488	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	8
5.1	ECR-B-488	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	28
5.1	ECR-B-488	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	3
5.1	ECR-B-488	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
5.1	ECR-B-488	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
5.1	ECR-B-488	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	20
5.1	ECR-B-488	Mollusca	Bivalvia	Veneroida	Tellinidae	Macoma tenta	1

5.1	ECR-B-488	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	73
5.1	ECR-B-488	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	8
5.1	ECR-B-488	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
5.1	ECR-B-488	Mollusca	Gastropoda			Gastropoda (LPIL)	5
5.1	ECR-B-488	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	4
5.1	ECR-B-488	Nemertea				Nemertea (LPIL)	1
5	ECR-C-1437	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	22
5	ECR-C-1437	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	1
5	ECR-C-1437	Annelida	Polychaeta	Eunicida	Dorvilleidae	Pettiboneia duofurca	1
5	ECR-C-1437	Annelida	Polychaeta	Eunicida	Oenonidae	Arabella iricolor	1
5	ECR-C-1437	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
5	ECR-C-1437	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
5	ECR-C-1437	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	3
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	4
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	5
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hypereteone heteropoda	1
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	4
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	1
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	7
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	3
5	ECR-C-1437	Annelida	Polychaeta	Phyllodocida	Syllidae	Odontosyllis enopla	1
5	ECR-C-1437	Annelida	Polychaeta	Sabellida	Serpulidae	Hydroides dianthus	2
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	2
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	14
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	14
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Maldanidae	Sabaco elongatus	3
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
5	ECR-C-1437	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
5	ECR-C-1437	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	10
5	ECR-C-1437	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	4
5	ECR-C-1437	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
5	ECR-C-1437	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	5
5	ECR-C-1437	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
5	ECR-C-1437	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	37
5	ECR-C-1437	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	2
5	ECR-C-1437	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
5	ECR-C-1437	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
5	ECR-C-1437	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Isaeidae (LPIL)	1
5	ECR-C-1437	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
5	ECR-C-1437	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	3
5	ECR-C-1437	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
5	ECR-C-1437	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
5	ECR-C-1437	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (Heteromysis) f	1
5	ECR-C-1437	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	1
5	ECR-C-1437	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
5	ECR-C-1437	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
5	ECR-C-1437	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
5	ECR-C-1437	Mollusca	Bivalvia	Veneroida	Tellinidae	Eurytellina alternata	2
5	ECR-C-1437	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	5
5	ECR-C-1437	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae	Cylichna (LPIL)	1

5	ECR-C-1437	Mollusca	Gastropoda	Heterostropha	Pyramidellidae	Turbonilla (LPIL)	13
5	ECR-C-1437	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	1
5	ECR-C-1437	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	3
5	ECR-C-1437	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	7
5	ECR-C-1437	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
5	ECR-C-1437	Mollusca	Gastropoda			Gastropoda (LPIL)	2
5	ECR-C-1437	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
5	ECR-C-1437	Nemertea				Nemertea (LPIL)	1
6	ECR-B-422	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
6	ECR-B-422	Annelida	Polychaeta	Orbiniida	Orbiniidae	Phylo felix	3
6	ECR-B-422	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	3
6	ECR-B-422	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
6	ECR-B-422	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
6	ECR-B-422	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
6	ECR-B-422	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
6	ECR-B-422	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	3
6	ECR-B-422	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	5
6	ECR-B-422	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	11
6	ECR-B-422	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	1
6	ECR-B-422	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	9
6	ECR-B-422	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Americhelidium americanum	1
6	ECR-B-422	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	5
6	ECR-B-422	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	8
6	ECR-B-422	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	3
6	ECR-B-422	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	5
6	ECR-B-422	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	3
6	ECR-B-422	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
6	ECR-B-422	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	3
6	ECR-B-422	Chordata	Ascidiacea			Ascidiacea (LPIL)	1
6	ECR-B-422	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
6	ECR-B-422	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
6	ECR-B-422	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	1
6	ECR-B-422	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
6	ECR-B-422	Mollusca	Bivalvia			Bivalvia (LPIL)	3
6	ECR-B-422	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
6	ECR-B-422	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	2
6	ECR-B-424	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
6	ECR-B-424	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	1
6	ECR-B-424	Annelida	Polychaeta	Orbiniida	Orbiniidae	Phylo felix	1
6	ECR-B-424	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	5
6	ECR-B-424	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
6	ECR-B-424	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
6	ECR-B-424	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
6	ECR-B-424	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	3
6	ECR-B-424	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
6	ECR-B-424	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
6	ECR-B-424	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
6	ECR-B-424	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	1
6	ECR-B-424	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	21
6	ECR-B-424	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	6
6	ECR-B-424	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	4
6	ECR-B-424	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1

6	ECR-B-424	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	2
6	ECR-B-424	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae	Idunella sp.	4
6	ECR-B-424	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Americhelidium americanum	1
6	ECR-B-424	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	1
6	ECR-B-424	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	14
6	ECR-B-424	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
6	ECR-B-424	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	4
6	ECR-B-424	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	3
6	ECR-B-424	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	2
6	ECR-B-424	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
6	ECR-B-424	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	3
6	ECR-B-424	Mollusca	Bivalvia			Bivalvia (LPIL)	1
6	ECR-B-424	Nemertea				Nemertea (LPIL)	2
6	ECR-B-426	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
6	ECR-B-426	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	23
6	ECR-B-426	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
6	ECR-B-426	Annelida	Polychaeta	Opheliida	Opheliidae	Travisia parva	1
6	ECR-B-426	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
6	ECR-B-426	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
6	ECR-B-426	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
6	ECR-B-426	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	6
6	ECR-B-426	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	5
6	ECR-B-426	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
6	ECR-B-426	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	5
6	ECR-B-426	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
6	ECR-B-426	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
6	ECR-B-426	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	2
6	ECR-B-426	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	3
6	ECR-B-426	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	25
6	ECR-B-426	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	10
6	ECR-B-426	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
6	ECR-B-426	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	6
6	ECR-B-426	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	2
6	ECR-B-426	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	6
6	ECR-B-426	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	1
6	ECR-B-426	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	4
6	ECR-B-426	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	1
6	ECR-B-426	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	2
6	ECR-B-426	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	13
6	ECR-B-426	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
6	ECR-B-426	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
6	ECR-B-426	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	1
6	ECR-B-426	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	3
6	ECR-B-426	Mollusca	Bivalvia			Bivalvia (LPIL)	2
6	ECR-B-426	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Neverita duplicata	2
6	ECR-B-428	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
6	ECR-B-428	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
6	ECR-B-428	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
6	ECR-B-428	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
6	ECR-B-428	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
6	ECR-B-428	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
6	ECR-B-428	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	5

6	ECR-B-428	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) philbinae	1
6	ECR-B-428	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	19
6	ECR-B-428	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	2
6	ECR-B-428	Annelida	Polychaeta	Spionida	Magelonidae	Magelona papillicornis	1
6	ECR-B-428	Annelida	Polychaeta	Spionida	Magelonidae	Magelonidae (LPIL)	3
6	ECR-B-428	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
6	ECR-B-428	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	2
6	ECR-B-428	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	3
6	ECR-B-428	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	15
6	ECR-B-428	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	3
6	ECR-B-428	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	2
6	ECR-B-428	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	2
6	ECR-B-428	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
6	ECR-B-428	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
6	ECR-B-428	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	2
6	ECR-B-428	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
6	ECR-B-428	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	5
6	ECR-B-430	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
6	ECR-B-430	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
6	ECR-B-430	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	4
6	ECR-B-430	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonis fulgens	1
6	ECR-B-430	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	5
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	23
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Parahaustorius holmesi	1
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	35
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	15
6	ECR-B-430	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae	Bathyporeia quoddyensis	8
6	ECR-B-430	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
6	ECR-B-430	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	3
6	ECR-B-430	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	4
6	ECR-B-430	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
6	ECR-B-430	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
6	ECR-B-430	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
6	ECR-B-432	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
6	ECR-B-432	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
6	ECR-B-432	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
6	ECR-B-432	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	3
6	ECR-B-432	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
6	ECR-B-432	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
6	ECR-B-432	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	2
6	ECR-B-432	Annelida	Polychaeta	Spionida	Magelonidae	Magelona papillicornis	1
6	ECR-B-432	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
6	ECR-B-432	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
6	ECR-B-432	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	2
6	ECR-B-432	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
6	ECR-B-432	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
6	ECR-B-432	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	1
6	ECR-B-432	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
6	ECR-B-432	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	3
6	ECR-B-432	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae	Idunella sp.	6
6	ECR-B-432	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	2

6	ECR-B-432	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	3
6	ECR-B-432	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	1
6	ECR-B-432	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	1
6	ECR-B-432	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	3
6	ECR-B-432	Mollusca	Bivalvia	Veneroida	Solenidae	Solen viridis	1
6	ECR-B-432	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	3
6	ECR-B-432	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	2
6	ECR-B-434	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
6	ECR-B-434	Annelida	Polychaeta	Opheliida	Opheliidae	Travisia parva	1
6	ECR-B-434	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	2
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	2
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Polynoidae	Malmgreniella taylori	1
6	ECR-B-434	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
6	ECR-B-434	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	3
6	ECR-B-434	Annelida	Polychaeta	Sabellida	Sabellidae	Parasabella microphthalma	2
6	ECR-B-434	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
6	ECR-B-434	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	2
6	ECR-B-434	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	3
6	ECR-B-434	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
6	ECR-B-434	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
6	ECR-B-434	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	2
6	ECR-B-434	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
6	ECR-B-434	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
6	ECR-B-434	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	2
6	ECR-B-434	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
6	ECR-B-434	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	6
6	ECR-B-434	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
6	ECR-B-434	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	2
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	6
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	8
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Callianiassidae	Gilvossius setimanus	2
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	9
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	5
6	ECR-B-434	Arthropoda	Malacostraca	Decapoda	Porcellanidae	Porcellanidae (LPIL)	1
6	ECR-B-434	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	2
6	ECR-B-434	Mollusca	Bivalvia	Arcoida	Arcidae	Anadara transversa	2
6	ECR-B-434	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	2
6	ECR-B-434	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	11
6	ECR-B-434	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	28
6	ECR-B-434	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	4
6	ECR-B-434	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	70
6	ECR-B-434	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	26
6	ECR-B-434	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	30
6	ECR-B-434	Mollusca	Gastropoda	Nudibranchia		Nudibranchia (LPIL)	1
6	ECR-B-436	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
6	ECR-B-436	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma acicularum	1

6	ECR-B-436	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
6	ECR-B-436	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	1
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	2
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	1
6	ECR-B-436	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	2
6	ECR-B-436	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
6	ECR-B-436	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
6	ECR-B-436	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
6	ECR-B-436	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
6	ECR-B-436	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	4
6	ECR-B-436	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
6	ECR-B-436	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	1
6	ECR-B-436	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	2
6	ECR-B-436	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	3
6	ECR-B-436	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	3
6	ECR-B-436	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
6	ECR-B-436	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
6	ECR-B-436	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	2
6	ECR-B-436	Arthropoda	Malacostraca	Isopoda	Sphaeromatidae	Ancinus depressus	1
6	ECR-B-436	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	5
6	ECR-B-436	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
6	ECR-B-436	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	2
6	ECR-B-436	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	11
6	ECR-B-436	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	7
6	ECR-B-436	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	4
6	ECR-B-436	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	1
6	ECR-B-436	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	3
6	ECR-B-438	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
6	ECR-B-438	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	3
6	ECR-B-438	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
6	ECR-B-438	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
6	ECR-B-438	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) philbinae	1
6	ECR-B-438	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	2
6	ECR-B-438	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	3
6	ECR-B-438	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	2
6	ECR-B-438	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	6
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca sp. R	2
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	1
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Acanthohaustorius millsi	1
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Haustoriidae	Protohaustorius wigleyi	8
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Americhelidium americanum	1
6	ECR-B-438	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	5
6	ECR-B-438	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
6	ECR-B-438	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
6	ECR-B-438	Arthropoda	Malacostraca	Isopoda	Anthuridae	Mesanthura (LPIL)	1
6	ECR-B-438	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
6	ECR-B-438	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
6	ECR-B-438	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1

6	ECR-B-438	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	3
6	ECR-B-438	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	5
6	ECR-B-438	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	16
6	ECR-B-438	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	24
6	ECR-B-438	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	8
6	ECR-B-438	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	9
6	ECR-B-438	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	6
6	ECR-B-438	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	10
6	ECR-B-440	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
6	ECR-B-440	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	8
6	ECR-B-440	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Hesionura elongata	1
6	ECR-B-440	Annelida	Polychaeta	Phyllodocida	Syllidae	Streptosyllis arenae	4
6	ECR-B-440	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	5
6	ECR-B-440	Annelida	Polychaeta	Spionida	Spionidae	Scolelepis (Parascolelepis) te	1
6	ECR-B-440	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
6	ECR-B-440	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	2
6	ECR-B-440	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	4
6	ECR-B-440	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
6	ECR-B-440	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
6	ECR-B-440	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	4
6	ECR-B-440	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	4
6	ECR-B-440	Mollusca	Bivalvia			Bivalvia (LPIL)	1
6	ECR-B-442	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	6
6	ECR-B-442	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	3
6	ECR-B-442	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
6	ECR-B-442	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	11
6	ECR-B-442	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
6	ECR-B-442	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
6	ECR-B-442	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
6	ECR-B-442	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	1
6	ECR-B-442	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	8
6	ECR-B-442	Mollusca	Bivalvia			Bivalvia (LPIL)	1
6	ECR-B-442	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
6	ECR-B-444	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	3
6	ECR-B-444	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	30
6	ECR-B-444	Annelida	Polychaeta	Eunicida	Dorvilleidae	Parougia caeca	2
6	ECR-B-444	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma acicularum	2
6	ECR-B-444	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	5
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	2
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	2
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	2
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Fimbriosthenelais minor	1
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	2
6	ECR-B-444	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	13
6	ECR-B-444	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	5
6	ECR-B-444	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
6	ECR-B-444	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	5
6	ECR-B-444	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	1
6	ECR-B-444	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	3
6	ECR-B-444	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	2

6	ECR-B-444	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	27
6	ECR-B-444	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	50
6	ECR-B-444	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	24
6	ECR-B-444	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
6	ECR-B-444	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
6	ECR-B-444	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	12
6	ECR-B-444	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	4
6	ECR-B-444	Arthropoda	Malacostraca	Decapoda	Axiidae	Axiidae (LPIL)	2
6	ECR-B-444	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	11
6	ECR-B-444	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	2
6	ECR-B-444	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	19
6	ECR-B-444	Arthropoda	Malacostraca	Tanaidacea	Nototaniadae	Tanaissus (LPIL)	3
6	ECR-B-444	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1
6	ECR-B-444	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	2
6	ECR-B-444	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	11
6	ECR-B-444	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	219
6	ECR-B-444	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	8
6	ECR-B-444	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
6	ECR-B-444	Nemertea				Nemertea (LPIL)	4
7	ECR-B-448	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	10
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	18
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis jonesi	1
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	3
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	18
7	ECR-B-448	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	4
7	ECR-B-448	Annelida	Polychaeta	Scolecida	Capitellidae	Notomastus latericeus	1
7	ECR-B-448	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
7	ECR-B-448	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	41
7	ECR-B-448	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	8
7	ECR-B-448	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
7	ECR-B-448	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
7	ECR-B-448	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
7	ECR-B-448	Nemertea				Nemertea (LPIL)	1
7	ECR-B-450	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	13
7	ECR-B-450	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
7	ECR-B-450	Annelida	Polychaeta	Opheliida	Opheliidae	Travisia parva	24
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodoce arenae	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	14
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalion arenicola	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Syllidae	Brania wellfleetensis	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Syllidae	Salvatoria clavata	1
7	ECR-B-450	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	2
7	ECR-B-450	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
7	ECR-B-450	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
7	ECR-B-450	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	11
7	ECR-B-450	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
7	ECR-B-450	Annelida	Polychaeta	Terebellida	Sabellariidae	Sabellaria vulgaris	1

7	ECR-B-450	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus eximius	34
7	ECR-B-450	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
7	ECR-B-450	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	4
7	ECR-B-450	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	2
7	ECR-B-450	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	3
7	ECR-B-450	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	6
7	ECR-B-450	Mollusca	Bivalvia	Veneroida	Mactridae	Mactridae (LPIL)	1
7	ECR-B-450	Mollusca	Bivalvia	Veneroida	Mactridae	Spisula solidissima	1
7	ECR-B-450	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	4
7	ECR-B-452	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	2
7	ECR-B-452	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
7	ECR-B-452	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	2
7	ECR-B-452	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	5
7	ECR-B-452	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	2
7	ECR-B-452	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
7	ECR-B-452	Arthropoda	Malacostraca	Amphipoda	Pontoporeiidae	Amphiporeia gigantea	1
7	ECR-B-452	Echinodermata	Echinoidea			Echinoidea (LPIL)	3
7	ECR-B-452	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
7	ECR-B-452	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	1
7	ECR-B-452	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	1
7	ECR-B-454	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	15
7	ECR-B-454	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	7
7	ECR-B-454	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma verrilli	19
7	ECR-B-454	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
7	ECR-B-454	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	5
7	ECR-B-454	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	2
7	ECR-B-454	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	1
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	5
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	3
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Pilargidae	Sigambra tentaculata	1
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Fimbriosthenelais minor	1
7	ECR-B-454	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	15
7	ECR-B-454	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	8
7	ECR-B-454	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
7	ECR-B-454	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
7	ECR-B-454	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonis fulgens	2
7	ECR-B-454	Annelida	Polychaeta	Spionida	Acrocirridae	Acrocirridae (LPIL)	1
7	ECR-B-454	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	6
7	ECR-B-454	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
7	ECR-B-454	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
7	ECR-B-454	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
7	ECR-B-454	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	2
7	ECR-B-454	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	455
7	ECR-B-454	Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria gouldi	1
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	39
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	88
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	1
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	8
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Caprellidae (LPIL)	1
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	4
7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1

7	ECR-B-454	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	5
7	ECR-B-454	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
7	ECR-B-454	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
7	ECR-B-454	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	2
7	ECR-B-454	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	3
7	ECR-B-454	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
7	ECR-B-454	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	9
7	ECR-B-454	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	1
7	ECR-B-454	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
7	ECR-B-454	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	973
7	ECR-B-454	Mollusca	Bivalvia	Pholadomyoida	Thraciidae	Asthenothaerus hemphilli	1
7	ECR-B-454	Mollusca	Bivalvia	Solemyoida	Solemyidae	Solemya velum	1
7	ECR-B-454	Mollusca	Bivalvia	Veneroida	Cardiidae	Parvicardium pinnulatum	1
7	ECR-B-454	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	19
7	ECR-B-454	Mollusca	Gastropoda	Cephalaspidea	Acteonidae	Acteon candens	4
7	ECR-B-454	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	5
7	ECR-B-454	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	2
7	ECR-B-454	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
7	ECR-B-454	Nemertea				Nemertea (LPIL)	2
7	ECR-B-454	Sipuncula				Sipuncula (LPIL)	18
7	ECR-B-504	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	5
7	ECR-B-504	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	61
7	ECR-B-504	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	124
7	ECR-B-504	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
7	ECR-B-504	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	8
7	ECR-B-504	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	8
7	ECR-B-504	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	1
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	18
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	17
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	2
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	1
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	124
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	1
7	ECR-B-504	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
7	ECR-B-504	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
7	ECR-B-504	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
7	ECR-B-504	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	4
7	ECR-B-504	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	2
7	ECR-B-504	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	3
7	ECR-B-504	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	7
7	ECR-B-504	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
7	ECR-B-504	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
7	ECR-B-504	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	185
7	ECR-B-504	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3
7	ECR-B-504	Arthropoda	Malacostraca	Cumacea	Bodotriidae	Cyclaspis (LPIL)	1
7	ECR-B-504	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	15
7	ECR-B-504	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
7	ECR-B-504	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	2
7	ECR-B-504	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
7	ECR-B-504	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	7

7	ECR-B-504	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	1
7	ECR-B-504	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	4
7	ECR-B-504	Mollusca	Bivalvia	Pholadomyoida	Thraciidae	Asthenothaerus hemphilli	1
7	ECR-B-504	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
7	ECR-B-504	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	2
7	ECR-B-510	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	158
7	ECR-B-510	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	3
7	ECR-B-510	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
7	ECR-B-510	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos foliosus	1
7	ECR-B-510	Annelida	Polychaeta	Orbiniida	Orbiniidae	Orbiniidae (LPIL)	1
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	2
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	3
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	10
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	3
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	2
7	ECR-B-510	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	12
7	ECR-B-510	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	1
7	ECR-B-510	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
7	ECR-B-510	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	9
7	ECR-B-510	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	15
7	ECR-B-510	Annelida	Polychaeta	Terebellida	Cirratulidae	Caulleriella sp. J	1
7	ECR-B-510	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
7	ECR-B-510	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
7	ECR-B-510	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	242
7	ECR-B-510	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	5
7	ECR-B-510	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	2
7	ECR-B-510	Arthropoda	Malacostraca	Cumacea	Bodotriidae	Cyclaspis (LPIL)	3
7	ECR-B-510	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	1
7	ECR-B-510	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis (LPIL)	1
7	ECR-B-510	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
7	ECR-B-510	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	2
7	ECR-B-510	Mollusca	Bivalvia			Bivalvia (LPIL)	1
7	ECR-B-514	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	62
7	ECR-B-514	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	2
7	ECR-B-514	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	8
7	ECR-B-514	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	5
7	ECR-B-514	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	17
7	ECR-B-514	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	23
7	ECR-B-514	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
7	ECR-B-514	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	6
7	ECR-B-514	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	1
7	ECR-B-514	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
7	ECR-B-514	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	8
7	ECR-B-514	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	2
7	ECR-B-514	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	4
7	ECR-B-514	Arthropoda	Malacostraca	Cumacea	Bodotriidae	Cyclaspis (LPIL)	1
7	ECR-B-514	Arthropoda	Malacostraca	Isopoda	Chaetiliidae	Chiridotea tuftsii	1
7	ECR-B-514	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	4
7	ECR-B-514	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Natica (LPIL)	1
7	ECR-B-514	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	2
7	ECR-B-514	Nemertea				Nemertea (LPIL)	3
7	ECR-C-1429	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	20

7	ECR-C-1429	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	3
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	1
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	14
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis splendida	50
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sublevis	6
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sthenelais boa	3
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Syllidae	Myrianida (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Phyllodocida	Syllidae	Odontosyllis enopla	1
7	ECR-C-1429	Annelida	Polychaeta	Scolecida	Capitellidae	Capitella jonesi	3
7	ECR-C-1429	Annelida	Polychaeta	Scolecida	Capitellidae	Capitellidae (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) catherinae	3
7	ECR-C-1429	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
7	ECR-C-1429	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
7	ECR-C-1429	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	1
7	ECR-C-1429	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	2
7	ECR-C-1429	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	8
7	ECR-C-1429	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
7	ECR-C-1429	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	11
7	ECR-C-1429	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	3
7	ECR-C-1429	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Deutella incerta	1
7	ECR-C-1429	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	11
7	ECR-C-1429	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Monocorophium (LPIL)	5
7	ECR-C-1429	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Isaeidae (LPIL)	1
7	ECR-C-1429	Arthropoda	Malacostraca	Amphipoda	Photidae	Gammaropsis (LPIL)	2
7	ECR-C-1429	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	9
7	ECR-C-1429	Arthropoda	Malacostraca	Decapoda	Majidae	Majidae (LPIL)	1
7	ECR-C-1429	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	21
7	ECR-C-1429	Arthropoda	Malacostraca	Decapoda	Xanthidae	Xanthidae (LPIL)	2
7	ECR-C-1429	Arthropoda	Malacostraca	Mysida	Mysidae	Heteromysis (LPIL)	2
7	ECR-C-1429	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1
7	ECR-C-1429	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
7	ECR-C-1429	Mollusca	Bivalvia	Veneroida	Crassatellidae	Crassinella lunulata	11
7	ECR-C-1429	Mollusca	Bivalvia	Veneroida	Tellinidae	Tellinidae (LPIL)	1
7	ECR-C-1429	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	23
7	ECR-C-1429	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula depressa	14
7	ECR-C-1429	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	636
7	ECR-C-1429	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	78
7	ECR-C-1429	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Cotonopsis lafresnayi	5
7	ECR-C-1429	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	50
7	ECR-C-1430	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	3
7	ECR-C-1430	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	3
7	ECR-C-1430	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Opheliida	Opheliidae	Travisia parva	3
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	6
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	2
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	4
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocidae (LPIL)	1

7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Pisionidae	Pisione remota	2
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Syllidae	Parapionosyllis uebelackerae	17
7	ECR-C-1430	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Spionida	Chaetopteridae	Spiochaetopterus oculatus	1
7	ECR-C-1430	Annelida	Polychaeta	Spionida	Spionidae	Dipolydora socialis	2
7	ECR-C-1430	Annelida	Polychaeta	Spionida	Spionidae	Spio setosa	3
7	ECR-C-1430	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	6
7	ECR-C-1430	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
7	ECR-C-1430	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	2
7	ECR-C-1430	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	4
7	ECR-C-1430	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	3
7	ECR-C-1430	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
7	ECR-C-1430	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	7
7	ECR-C-1430	Arthropoda	Malacostraca	Decapoda	Callianassidae	Callianassidae (LPIL)	11
7	ECR-C-1430	Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus (LPIL)	1
7	ECR-C-1430	Arthropoda	Malacostraca	Decapoda	Pinnotheridae	Pinnixa (LPIL)	2
7	ECR-C-1430	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	1
7	ECR-C-1430	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	2
7	ECR-C-1430	Mollusca	Bivalvia	Myoida	Corbulidae	Caryocorbula contracta	7
7	ECR-C-1430	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
7	ECR-C-1430	Mollusca	Gastropoda	Mesogastropoda	Caecidae	Caecum johnsoni	12
7	ECR-C-1430	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula fornicata	30
7	ECR-C-1430	Mollusca	Gastropoda	Neogastropoda	Columbellidae	Astyris multilineata	4
7	ECR-C-1430	Mollusca	Gastropoda	Neogastropoda	Nassariidae	Ilyanassa trivittata	1
7	ECR-C-1430	Nemertea				Nemertea (LPIL)	1
7	ECR-C-1430	Platyhelminthes				Platyhelminthes (LPIL)	1
7	ECR-C-1430	Sipuncula				Sipuncula (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	6
8	ECR-B-516	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	9
8	ECR-B-516	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	4
8	ECR-B-516	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	4
8	ECR-B-516	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	3
8	ECR-B-516	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos foliosus	1
8	ECR-B-516	Annelida	Polychaeta	Phyllodocida	Aphroditidae	Aphroditidae (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	10
8	ECR-B-516	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	1
8	ECR-B-516	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	2
8	ECR-B-516	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	12
8	ECR-B-516	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	2
8	ECR-B-516	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	13
8	ECR-B-516	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
8	ECR-B-516	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	8
8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	29
8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	2
8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	1
8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	2

8	ECR-B-516	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Rhepoxynius hudsoni	7
8	ECR-B-516	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	7
8	ECR-B-516	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	19
8	ECR-B-516	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
8	ECR-B-516	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
8	ECR-B-516	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	93
8	ECR-B-516	Mollusca	Bivalvia	Pholadomyoida	Thraciidae	Asthenothaerus hemphilli	1
8	ECR-B-516	Mollusca	Bivalvia	Venerida	Veneridae	Mercenaria mercenaria	1
8	ECR-B-516	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	18
8	ECR-B-516	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	7
8	ECR-B-516	Mollusca	Bivalvia	Veneroida	Cardiidae	Parvicardium pinnulatum	1
8	ECR-B-516	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	8
8	ECR-B-516	Mollusca	Bivalvia	Veneroida	Lucinidae	Parvilucina crenella	3
8	ECR-B-516	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
8	ECR-B-516	Phoronida			Phoronidae	Phoronis (LPIL)	1
8	ECR-B-516	Platyhelminthes				Platyhelminthes (LPIL)	1
8	ECR-B-518	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	4
8	ECR-B-518	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	5
8	ECR-B-518	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	49
8	ECR-B-518	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
8	ECR-B-518	Annelida	Polychaeta	Eunicida	Oenonidae	Arabella iricolor	1
8	ECR-B-518	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	1
8	ECR-B-518	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	21
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	5
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	6
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	14
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Paranaitis speciosa	1
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sthenelais boa	1
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae	Sphaerodoridium minutum	1
8	ECR-B-518	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	9
8	ECR-B-518	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	1
8	ECR-B-518	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	5
8	ECR-B-518	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	2
8	ECR-B-518	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Aricidea) wassi	8
8	ECR-B-518	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	2
8	ECR-B-518	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
8	ECR-B-518	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
8	ECR-B-518	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
8	ECR-B-518	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	5
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	3
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	153
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoridae (LPIL)	2
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	10
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	32
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	3
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Stenothoe minuta	1
8	ECR-B-518	Arthropoda	Malacostraca	Amphipoda	Synopiidae	Synopiidae (LPIL)	1
8	ECR-B-518	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	2
8	ECR-B-518	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis sculpta	1
8	ECR-B-518	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	21
8	ECR-B-518	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae	Petalosarsia declivis	2

8	ECR-B-518	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	2
8	ECR-B-518	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	2
8	ECR-B-518	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	9
8	ECR-B-518	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	4
8	ECR-B-518	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
8	ECR-B-518	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	3
8	ECR-B-518	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	5
8	ECR-B-518	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-518	Nemertea				Nemertea (LPIL)	1
8	ECR-B-520	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
8	ECR-B-520	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	4
8	ECR-B-520	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	12
8	ECR-B-520	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-520	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	15
8	ECR-B-520	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	10
8	ECR-B-520	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	9
8	ECR-B-520	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	1
8	ECR-B-520	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	7
8	ECR-B-520	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	23
8	ECR-B-520	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
8	ECR-B-520	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-520	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-520	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
8	ECR-B-520	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	14
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	16
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	4
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	11
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Argissidae	Argissa hamatipes	1
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	1
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	9
8	ECR-B-520	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	1
8	ECR-B-520	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	9
8	ECR-B-520	Arthropoda	Malacostraca	Cumacea	Diastylidae	Oxyurostylis smithi	2
8	ECR-B-520	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	23
8	ECR-B-520	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
8	ECR-B-520	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	126
8	ECR-B-520	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	1
8	ECR-B-520	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	3
8	ECR-B-520	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	9
8	ECR-B-520	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucina (LPIL)	6
8	ECR-B-520	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	3
8	ECR-B-520	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
8	ECR-B-520	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-522	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
8	ECR-B-522	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	4
8	ECR-B-522	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	11
8	ECR-B-522	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	13
8	ECR-B-522	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	3
8	ECR-B-522	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	8
8	ECR-B-522	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	1
8	ECR-B-522	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	4

8	ECR-B-522	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
8	ECR-B-522	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	2
8	ECR-B-522	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	3
8	ECR-B-522	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	62
8	ECR-B-522	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	5
8	ECR-B-522	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
8	ECR-B-522	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	11
8	ECR-B-522	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	9
8	ECR-B-522	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	2
8	ECR-B-522	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	6
8	ECR-B-522	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	6
8	ECR-B-522	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
8	ECR-B-522	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
8	ECR-B-522	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	14
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	1
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	10
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	1
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	6
8	ECR-B-522	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	11
8	ECR-B-522	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	1
8	ECR-B-522	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	21
8	ECR-B-522	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	1
8	ECR-B-522	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
8	ECR-B-522	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuria (LPIL)	1
8	ECR-B-522	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	22
8	ECR-B-522	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	4
8	ECR-B-522	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	3
8	ECR-B-522	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	2
8	ECR-B-522	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	2
8	ECR-B-522	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucina (LPIL)	5
8	ECR-B-522	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	1
8	ECR-B-522	Mollusca	Bivalvia			Bivalvia (LPIL)	1
8	ECR-B-526	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	13
8	ECR-B-526	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	38
8	ECR-B-526	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	41
8	ECR-B-526	Annelida	Polychaeta	Eunicida	Dorvilleidae	Parougia caeca	1
8	ECR-B-526	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	16
8	ECR-B-526	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	28
8	ECR-B-526	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma (LPIL)	3
8	ECR-B-526	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	2
8	ECR-B-526	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	6
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	43
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	1
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
8	ECR-B-526	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis (LPIL)	2
8	ECR-B-526	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
8	ECR-B-526	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	2
8	ECR-B-526	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) catherinae	1

8	ECR-B-526	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	4
8	ECR-B-526	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-526	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes bombyx	1
8	ECR-B-526	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
8	ECR-B-526	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-526	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
8	ECR-B-526	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	2
8	ECR-B-526	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	29
8	ECR-B-526	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-526	Arthropoda	Malacostraca	Amphipoda	Argissidae	Argissa hamatipes	1
8	ECR-B-526	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	11
8	ECR-B-526	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	1
8	ECR-B-526	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	2
8	ECR-B-526	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis sculpta	1
8	ECR-B-526	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
8	ECR-B-526	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae	Petalosarsia declivis	1
8	ECR-B-526	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	1
8	ECR-B-526	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	1
8	ECR-B-526	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Cirolanidae (LPIL)	1
8	ECR-B-526	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
8	ECR-B-526	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	4
8	ECR-B-530	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	36
8	ECR-B-530	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	10
8	ECR-B-530	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	14
8	ECR-B-530	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	13
8	ECR-B-530	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-530	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	8
8	ECR-B-530	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	2
8	ECR-B-530	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	1
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniada maculata	3
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadidae (LPIL)	1
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	11
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	2
8	ECR-B-530	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
8	ECR-B-530	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	2
8	ECR-B-530	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	9
8	ECR-B-530	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	20
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Acmira) catherinae	2
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	27
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	4
8	ECR-B-530	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	3
8	ECR-B-530	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-530	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
8	ECR-B-530	Annelida	Polychaeta	Terebellida	Ampharetidae	Anobothrus gracilis	1
8	ECR-B-530	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	4
8	ECR-B-530	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
8	ECR-B-530	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	6
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	176
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2

8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	14
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae	Casco bigelowi	1
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	2
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	7
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	1
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	3
8	ECR-B-530	Arthropoda	Malacostraca	Amphipoda	Pleustidae	Stenopleustes inermis	2
8	ECR-B-530	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	4
8	ECR-B-530	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis sculpta	2
8	ECR-B-530	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	4
8	ECR-B-530	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	11
8	ECR-B-530	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-530	Mollusca	Bivalvia	Mytiloida	Mytilidae	Musculus lateralis	1
8	ECR-B-530	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	6
8	ECR-B-530	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	23
8	ECR-B-530	Mollusca	Bivalvia	Pholadomyoida	Lyonsiidae	Lyonsia hyalina	1
8	ECR-B-530	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	13
8	ECR-B-530	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	6
8	ECR-B-530	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	10
8	ECR-B-530	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	1
8	ECR-B-530	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	2
8	ECR-B-530	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucinoma filosa	1
8	ECR-B-530	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	6
8	ECR-B-530	Mollusca	Gastropoda			Gastropoda (LPIL)	2
8	ECR-B-530	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
8	ECR-B-530	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-530	Nemertea				Nemertea (LPIL)	6
8	ECR-B-536	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	8
8	ECR-B-536	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
8	ECR-B-536	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	22
8	ECR-B-536	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	19
8	ECR-B-536	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-536	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	1
8	ECR-B-536	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	6
8	ECR-B-536	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	2
8	ECR-B-536	Annelida	Polychaeta	Orbiniida	Orbiniidae	Leitoscoloplos (LPIL)	1
8	ECR-B-536	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	2
8	ECR-B-536	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	5
8	ECR-B-536	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
8	ECR-B-536	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	6
8	ECR-B-536	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	39
8	ECR-B-536	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
8	ECR-B-536	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	4
8	ECR-B-536	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
8	ECR-B-536	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	17
8	ECR-B-536	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	2
8	ECR-B-536	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
8	ECR-B-536	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	3
8	ECR-B-536	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	10
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	100
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3

8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Liljeborgiidae	Idunella barnardi	1
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Melitidae	Melitidae (LIPL)	2
8	ECR-B-536	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	1
8	ECR-B-536	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	5
8	ECR-B-536	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis sculpta	1
8	ECR-B-536	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	1
8	ECR-B-536	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	5
8	ECR-B-536	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-536	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuriidae (LPIL)	1
8	ECR-B-536	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	4
8	ECR-B-536	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	7
8	ECR-B-536	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	22
8	ECR-B-536	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	1
8	ECR-B-536	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	23
8	ECR-B-536	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	3
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Arcticidae	Arctica islandica	1
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	12
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	1
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	4
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucinoma filosa	6
8	ECR-B-536	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	4
8	ECR-B-536	Mollusca	Bivalvia			Bivalvia (LPIL)	1
8	ECR-B-536	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula convexa	1
8	ECR-B-536	Mollusca	Gastropoda	Neotaenioglossa	Rissoidae	Rissoidae (LPIL)	1
8	ECR-B-536	Mollusca	Gastropoda			Gastropoda (LPIL)	2
8	ECR-B-536	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	4
8	ECR-B-540	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
8	ECR-B-540	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	18
8	ECR-B-540	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	283
8	ECR-B-540	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	27
8	ECR-B-540	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	5
8	ECR-B-540	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma (LPIL)	1
8	ECR-B-540	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	8
8	ECR-B-540	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	12
8	ECR-B-540	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	5
8	ECR-B-540	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	2
8	ECR-B-540	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
8	ECR-B-540	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sigalionidae (LPIL)	2
8	ECR-B-540	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	7
8	ECR-B-540	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	10
8	ECR-B-540	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	18
8	ECR-B-540	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
8	ECR-B-540	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
8	ECR-B-540	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	2
8	ECR-B-540	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	1
8	ECR-B-540	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-540	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	21
8	ECR-B-540	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	3
8	ECR-B-540	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	1
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca (LPIL)	2
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	4

8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	3
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Lysianassidae	Orchomenella minuta	1
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	3
8	ECR-B-540	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Phoxocephalus holbolli	1
8	ECR-B-540	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	1
8	ECR-B-540	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	5
8	ECR-B-540	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	7
8	ECR-B-540	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-540	Arthropoda	Malacostraca	Cumacea	Pseudocumatidae	Petalosarsia declivis	1
8	ECR-B-540	Mollusca	Bivalvia	Mytiloida	Mytilidae	Musculus lateralis	1
8	ECR-B-540	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	3
8	ECR-B-540	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	1
8	ECR-B-540	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
8	ECR-B-540	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	6
8	ECR-B-540	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucinoma filosa	4
8	ECR-B-540	Mollusca	Gastropoda			Gastropoda (LPIL)	2
8	ECR-B-542	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
8	ECR-B-542	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
8	ECR-B-542	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	124
8	ECR-B-542	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	13
8	ECR-B-542	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	6
8	ECR-B-542	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
8	ECR-B-542	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma (LPIL)	9
8	ECR-B-542	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-542	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	10
8	ECR-B-542	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	19
8	ECR-B-542	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera americana	3
8	ECR-B-542	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	14
8	ECR-B-542	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	2
8	ECR-B-542	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	9
8	ECR-B-542	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis (LPIL)	2
8	ECR-B-542	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	2
8	ECR-B-542	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
8	ECR-B-542	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	10
8	ECR-B-542	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	2
8	ECR-B-542	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	61
8	ECR-B-542	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	8
8	ECR-B-542	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
8	ECR-B-542	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	1
8	ECR-B-542	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	1
8	ECR-B-542	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-542	Arthropoda	Malacostraca	Amphipoda	Argissidae	Argissa hamatipes	1
8	ECR-B-542	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	4
8	ECR-B-542	Arthropoda	Malacostraca	Amphipoda	Pleustidae	Stenopleustes inermis	1
8	ECR-B-542	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	3
8	ECR-B-542	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	1
8	ECR-B-542	Arthropoda	Malacostraca	Decapoda	Pasiphaeidae	Leptochela papulata	1
8	ECR-B-542	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	3
8	ECR-B-542	Mollusca	Gastropoda			Gastropoda (LPIL)	7
8	ECR-B-542	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1

8	ECR-B-544	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
8	ECR-B-544	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	2
8	ECR-B-544	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	3
8	ECR-B-544	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	17
8	ECR-B-544	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	21
8	ECR-B-544	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-544	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	2
8	ECR-B-544	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	13
8	ECR-B-544	Annelida	Polychaeta	Oweniida	Oweniidae	Galathowenia oculata	2
8	ECR-B-544	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
8	ECR-B-544	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	10
8	ECR-B-544	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoidae (LPIL)	1
8	ECR-B-544	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	13
8	ECR-B-544	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	1
8	ECR-B-544	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	65
8	ECR-B-544	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
8	ECR-B-544	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
8	ECR-B-544	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	11
8	ECR-B-544	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	2
8	ECR-B-544	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
8	ECR-B-544	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	2
8	ECR-B-544	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	39
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	101
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Aeginina (LPIL)	1
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae	Casco bigelowi	1
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	1
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	1
8	ECR-B-544	Arthropoda	Malacostraca	Amphipoda	Pleustidae	Stenopleustes inermis	2
8	ECR-B-544	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	3
8	ECR-B-544	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
8	ECR-B-544	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	1
8	ECR-B-544	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	5
8	ECR-B-544	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	2
8	ECR-B-544	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	5
8	ECR-B-544	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	10
8	ECR-B-544	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	11
8	ECR-B-544	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	5
8	ECR-B-544	Mollusca	Gastropoda	Neotaenioglossa	Rissoidae	Rissoidae (LPIL)	5
8	ECR-B-544	Mollusca	Gastropoda			Gastropoda (LPIL)	9
8	ECR-B-544	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	3
8	ECR-B-544	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-544	Nemertea				Nemertea (LPIL)	4
8	ECR-B-548	Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	Enchytraeidae (LPIL)	1
8	ECR-B-548	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	3
8	ECR-B-548	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	3
8	ECR-B-548	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	117
8	ECR-B-548	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	3
8	ECR-B-548	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	3
8	ECR-B-548	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	6
8	ECR-B-548	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	19

8	ECR-B-548	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
8	ECR-B-548	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	46
8	ECR-B-548	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	1
8	ECR-B-548	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	1
8	ECR-B-548	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	1
8	ECR-B-548	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	3
8	ECR-B-548	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	6
8	ECR-B-548	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-548	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	68
8	ECR-B-548	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	22
8	ECR-B-548	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	3
8	ECR-B-548	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	1
8	ECR-B-548	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-548	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Aeginina (LPIL)	2
8	ECR-B-548	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	2
8	ECR-B-548	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	1
8	ECR-B-548	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	1
8	ECR-B-548	Arthropoda	Malacostraca	Isopoda	Munnidae	Uromunna (LPIL)	1
8	ECR-B-548	Echinodermata	Asteroidea	Paxillosida	Astropectinidae	Astropecten articulatus	1
8	ECR-B-548	Echinodermata	Echinoidea	Clypeasteroida	Echinarachniidae	Echinarachnius parma	3
8	ECR-B-548	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	1
8	ECR-B-548	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	7
8	ECR-B-548	Mollusca	Gastropoda			Gastropoda (LPIL)	1
8	ECR-B-602	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	35
8	ECR-B-602	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	3
8	ECR-B-602	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	35
8	ECR-B-602	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	24
8	ECR-B-602	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	1
8	ECR-B-602	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	1
8	ECR-B-602	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	9
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	13
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys (LPIL)	1
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	1
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae	Sphaerodoridium minutum	1
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone (LPIL)	1
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
8	ECR-B-602	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	1
8	ECR-B-602	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	3
8	ECR-B-602	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	93
8	ECR-B-602	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	50
8	ECR-B-602	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	2
8	ECR-B-602	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	6
8	ECR-B-602	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	1
8	ECR-B-602	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	7
8	ECR-B-602	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
8	ECR-B-602	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	4
8	ECR-B-602	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-602	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	8
8	ECR-B-602	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
8	ECR-B-602	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
8	ECR-B-602	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	35

8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Aeginellidae	Paracaprella tenuis	7
8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	28
8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	6
8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	1
8	ECR-B-602	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	3
8	ECR-B-602	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	7
8	ECR-B-602	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	6
8	ECR-B-602	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	1
8	ECR-B-602	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-602	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer irroratus	1
8	ECR-B-602	Arthropoda	Malacostraca	Decapoda	Pasiphaeidae	Leptochela papulata	1
8	ECR-B-602	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	4
8	ECR-B-602	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	3
8	ECR-B-602	Echinodermata	Asteroidea	Paxillosida	Astropectinidae	Astropectinidae (LPIL)	1
8	ECR-B-602	Mollusca	Bivalvia	Mytiloida	Mytilidae	Musculus lateralis	1
8	ECR-B-602	Mollusca	Bivalvia	Mytiloida	Mytilidae	Mytilidae (LPIL)	1
8	ECR-B-602	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
8	ECR-B-602	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	6
8	ECR-B-602	Mollusca	Bivalvia	Pholadomyoida	Pandoridae	Pandora gouldiana	1
8	ECR-B-602	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	14
8	ECR-B-602	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
8	ECR-B-602	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	7
8	ECR-B-602	Mollusca	Bivalvia	Veneroida	Carditidae	Cyclocardia borealis	1
8	ECR-B-602	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	4
8	ECR-B-602	Mollusca	Bivalvia			Bivalvia (LPIL)	1
8	ECR-B-602	Mollusca	Gastropoda	Pyramidelloida	Pyramidellidae	Pyramidellidae (LPIL)	1
8	ECR-B-602	Mollusca	Gastropoda			Gastropoda (LPIL)	1
8	ECR-B-602	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	3
8	ECR-B-602	Nemertea				Nemertea (LPIL)	6
8	ECR-B-608	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	1
8	ECR-B-608	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	94
8	ECR-B-608	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
8	ECR-B-608	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	14
8	ECR-B-608	Annelida	Polychaeta	Eunicida	Lumbrineridae	Scoletoma acicularum	4
8	ECR-B-608	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	1
8	ECR-B-608	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	9
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	82
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	9
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Sigalionidae	Fimbriosthenelais (LPIL)	1
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	5
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	3
8	ECR-B-608	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	1
8	ECR-B-608	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
8	ECR-B-608	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	5
8	ECR-B-608	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
8	ECR-B-608	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	1
8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	6
8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Aeginina (LPIL)	2

8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	12
8	ECR-B-608	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	1
8	ECR-B-608	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	6
8	ECR-B-608	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
8	ECR-B-608	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-608	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	2
8	ECR-B-608	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	1
8	ECR-B-608	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	5
8	ECR-B-608	Mollusca	Gastropoda			Gastropoda (LPIL)	2
8	ECR-B-614	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	11
8	ECR-B-614	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	3
8	ECR-B-614	Annelida	Polychaeta	Eunicida	Dorvilleidae	Pettiboneia duofurca	1
8	ECR-B-614	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	20
8	ECR-B-614	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	8
8	ECR-B-614	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-614	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	1
8	ECR-B-614	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	8
8	ECR-B-614	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	2
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniada maculata	1
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	11
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sanguinea	1
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	1
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Syllidae	Salvatoria clavata	1
8	ECR-B-614	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	1
8	ECR-B-614	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	3
8	ECR-B-614	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	145
8	ECR-B-614	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	5
8	ECR-B-614	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	10
8	ECR-B-614	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	25
8	ECR-B-614	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	4
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	50
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	30
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	8
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
8	ECR-B-614	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	28
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	22
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	5
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Aeginina (LPIL)	2
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae	Casco bigelowi	4
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	6
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Melitidae	Dulichiella appendiculata	1
8	ECR-B-614	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	3
8	ECR-B-614	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	2
8	ECR-B-614	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	6
8	ECR-B-614	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	9
8	ECR-B-614	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	1
8	ECR-B-614	Arthropoda	Malacostraca	Isopoda	Anthuridae	Anthuridae (LPIL)	1
8	ECR-B-614	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	2
8	ECR-B-614	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
8	ECR-B-614	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
8	ECR-B-614	Echinodermata				Echinodermata (LPIL)	3

8	ECR-B-614	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
8	ECR-B-614	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	3
8	ECR-B-614	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	6
8	ECR-B-614	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
8	ECR-B-614	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	2
8	ECR-B-614	Mollusca	Bivalvia	Veneroida	Lucinidae	Lucinoma filosa	1
8	ECR-B-614	Mollusca	Gastropoda			Gastropoda (LPIL)	12
8	ECR-B-614	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	5
8	ECR-B-620	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	9
8	ECR-B-620	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	2
8	ECR-B-620	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	12
8	ECR-B-620	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-620	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Pherusa affinis	1
8	ECR-B-620	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	2
8	ECR-B-620	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	16
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	6
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadidae (LPIL)	1
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	13
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Pilargidae	Ancistrosyllis hartmanae	1
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	2
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	1
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alosae	1
8	ECR-B-620	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	2
8	ECR-B-620	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	7
8	ECR-B-620	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	6
8	ECR-B-620	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	11
8	ECR-B-620	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	26
8	ECR-B-620	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	1
8	ECR-B-620	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	26
8	ECR-B-620	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
8	ECR-B-620	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	3
8	ECR-B-620	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes wigleyi	5
8	ECR-B-620	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-620	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	13
8	ECR-B-620	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
8	ECR-B-620	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	5
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	137
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	2
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Caprellidae	Aeginina (LPIL)	1
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Cheirocratidae	Casco bigelowi	2
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	6
8	ECR-B-620	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	10
8	ECR-B-620	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	4
8	ECR-B-620	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	3
8	ECR-B-620	Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer (LPIL)	1
8	ECR-B-620	Arthropoda	Malacostraca	Isopoda	Anthuridae	Ptilanthura tenuis	2
8	ECR-B-620	Arthropoda	Malacostraca	Isopoda	Cirolanidae	Politolana polita	1
8	ECR-B-620	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	5
8	ECR-B-620	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	6
8	ECR-B-620	Echinodermata				Echinodermata (LPIL)	6

8	ECR-B-620	Mollusca	Bivalvia	Nuculanida	Yoldiidae	Yoldia limatula	1
8	ECR-B-620	Mollusca	Bivalvia	Veneroida	Montacutidae	Kurtiella planulata	34
8	ECR-B-620	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	1
8	ECR-B-620	Mollusca	Gastropoda			Gastropoda (LPIL)	5
8	ECR-B-620	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	5
8	ECR-B-620	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-620	Nemertea				Nemertea (LPIL)	4
8	ECR-B-624	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	7
8	ECR-B-624	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	102
8	ECR-B-624	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
8	ECR-B-624	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	2
8	ECR-B-624	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Flabelligeridae (LPIL)	3
8	ECR-B-624	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	149
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	1
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	19
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	3
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	1
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	3
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alosae	1
8	ECR-B-624	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	1
8	ECR-B-624	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	1
8	ECR-B-624	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	51
8	ECR-B-624	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	25
8	ECR-B-624	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	74
8	ECR-B-624	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	11
8	ECR-B-624	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	27
8	ECR-B-624	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-624	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes wigleyi	10
8	ECR-B-624	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
8	ECR-B-624	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	2
8	ECR-B-624	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	17
8	ECR-B-624	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	2
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	87
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	3
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	1
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	5
8	ECR-B-624	Arthropoda	Malacostraca	Amphipoda	Podoceridae	Dyopedos porrectus	3
8	ECR-B-624	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	1
8	ECR-B-624	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	5
8	ECR-B-624	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	4
8	ECR-B-624	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	2
8	ECR-B-624	Echinodermata	Asteroidea	Paxillosida	Astropectinidae	Astropecten articulatus	2
8	ECR-B-624	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	12
8	ECR-B-624	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	7
8	ECR-B-624	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	7
8	ECR-B-624	Echinodermata				Echinodermata (LPIL)	18
8	ECR-B-624	Mollusca	Aplacophora			Aplacophora (LPIL)	1
8	ECR-B-624	Mollusca	Bivalvia	Veneroida	Montacutidae	Kurtiella planulata	6
8	ECR-B-624	Mollusca	Gastropoda			Gastropoda (LPIL)	2
8	ECR-B-624	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	5

8	ECR-B-624	Nemertea				Nemertea (LPIL)	4
8	ECR-B-628	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	26
8	ECR-B-628	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-628	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Flabelligeridae (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	21
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	4
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	16
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	2
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alosae	1
8	ECR-B-628	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	4
8	ECR-B-628	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	13
8	ECR-B-628	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	65
8	ECR-B-628	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	6
8	ECR-B-628	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	7
8	ECR-B-628	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	1
8	ECR-B-628	Annelida	Polychaeta	Terebellida	Ampharetidae	Anobothrus gracilis	4
8	ECR-B-628	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	3
8	ECR-B-628	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	2
8	ECR-B-628	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
8	ECR-B-628	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	52
8	ECR-B-628	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	4
8	ECR-B-628	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	2
8	ECR-B-628	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	4
8	ECR-B-628	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	1
8	ECR-B-628	Echinodermata	Asteroidea	Paxillosida	Astropectinidae	Astropecten articulatus	1
8	ECR-B-628	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	6
8	ECR-B-628	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuria (LPIL)	3
8	ECR-B-628	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	14
8	ECR-B-628	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	1
8	ECR-B-628	Echinodermata	Ophiuroidea			Ophiuroidea (LPIL)	7
8	ECR-B-628	Mollusca	Bivalvia	Venerida	Veneridae	Veneridae (LPIL)	1
8	ECR-B-628	Mollusca	Bivalvia	Veneroida	Montacutidae	Kurtiella planulata	6
8	ECR-B-628	Mollusca	Bivalvia			Bivalvia (LPIL)	2
8	ECR-B-628	Mollusca	Gastropoda			Gastropoda (LPIL)	1
8	ECR-B-628	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	3
8	ECR-B-628	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-628	Sipuncula				Sipuncula (LPIL)	2
8	ECR-B-630	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
8	ECR-B-630	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	8
8	ECR-B-630	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	35
8	ECR-B-630	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
8	ECR-B-630	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	2
8	ECR-B-630	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	9
8	ECR-B-630	Annelida	Polychaeta	Oweniida	Oweniidae	Galathowenia oculata	1
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniada maculata	1
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	1
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	3

8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	14
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	4
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	2
8	ECR-B-630	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	1
8	ECR-B-630	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	4
8	ECR-B-630	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	16
8	ECR-B-630	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	33
8	ECR-B-630	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	28
8	ECR-B-630	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	61
8	ECR-B-630	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	2
8	ECR-B-630	Annelida	Polychaeta	Spionida	Spionidae	Spiophanes wigleyi	14
8	ECR-B-630	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	1
8	ECR-B-630	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	3
8	ECR-B-630	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	3
8	ECR-B-630	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	4
8	ECR-B-630	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	49
8	ECR-B-630	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-630	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	1
8	ECR-B-630	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae	Deflexilodes intermedius	1
8	ECR-B-630	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	1
8	ECR-B-630	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	4
8	ECR-B-630	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	3
8	ECR-B-630	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	4
8	ECR-B-630	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	6
8	ECR-B-630	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuria (LPIL)	22
8	ECR-B-630	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuriidae (LPIL)	19
8	ECR-B-630	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	14
8	ECR-B-630	Echinodermata				Echinodermata (LPIL)	6
8	ECR-B-630	Mollusca	Aplacophora			Aplacophora (LPIL)	3
8	ECR-B-630	Mollusca	Bivalvia	Veneroida	Montacutidae	Kurtiella planulata	16
8	ECR-B-630	Mollusca	Gastropoda			Gastropoda (LPIL)	1
8	ECR-B-630	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	3
8	ECR-B-630	Sipuncula				Sipuncula (LPIL)	1
8	ECR-B-634	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	9
8	ECR-B-634	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	70
8	ECR-B-634	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	1
8	ECR-B-634	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	3
8	ECR-B-634	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Flabelligeridae (LPIL)	19
8	ECR-B-634	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	4
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde multidens	1
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	2
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	2
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	12
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Pholoidae	Pholoe minuta	1
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	8
8	ECR-B-634	Annelida	Polychaeta	Phyllodocida	Syllidae	Parexogone hebes	2
8	ECR-B-634	Annelida	Polychaeta	Sabellida	Sabellidae	Chone (LPIL)	3
8	ECR-B-634	Annelida	Polychaeta	Sabellida	Sabellidae	Chone infundibuliformis	1
8	ECR-B-634	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	20
8	ECR-B-634	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	10
8	ECR-B-634	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	20

8	ECR-B-634	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	10
8	ECR-B-634	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (Strelzovia) suecica	25
8	ECR-B-634	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	55
8	ECR-B-634	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	5
8	ECR-B-634	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	8
8	ECR-B-634	Annelida	Polychaeta	Spionida	Apistobranchidae	Apistobranchus tullbergi	2
8	ECR-B-634	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
8	ECR-B-634	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	15
8	ECR-B-634	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
8	ECR-B-634	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	4
8	ECR-B-634	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	20
8	ECR-B-634	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-634	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	3
8	ECR-B-634	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	1
8	ECR-B-634	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis sculpta	1
8	ECR-B-634	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	2
8	ECR-B-634	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	7
8	ECR-B-634	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	14
8	ECR-B-634	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuria (LPIL)	2
8	ECR-B-634	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuriidae (LPIL)	217
8	ECR-B-634	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	23
8	ECR-B-634	Echinodermata				Echinodermata (LPIL)	14
8	ECR-B-634	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	1
8	ECR-B-636	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	5
8	ECR-B-636	Annelida	Polychaeta	Canalipalpata	Sternaspidae	Sternaspis scutata	1
8	ECR-B-636	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	67
8	ECR-B-636	Annelida	Polychaeta	Eunicida	Dorvilleidae	Pettiboneia duofurca	1
8	ECR-B-636	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	1
8	ECR-B-636	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	5
8	ECR-B-636	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	4
8	ECR-B-636	Annelida	Polychaeta	Opheliida	Opheliidae	Armandia agilis	1
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	1
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Hesionidae	Podarkeopsis levifuscina	6
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	3
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	4
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	11
8	ECR-B-636	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	5
8	ECR-B-636	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	132
8	ECR-B-636	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	14
8	ECR-B-636	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	45
8	ECR-B-636	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	2
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	2
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	8
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	11
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	1
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	1
8	ECR-B-636	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	12
8	ECR-B-636	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	8
8	ECR-B-636	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	4
8	ECR-B-636	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	4
8	ECR-B-636	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	3
8	ECR-B-636	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1

8	ECR-B-636	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	19
8	ECR-B-636	Echinodermata				Echinodermata (LPIL)	2
8	ECR-B-640	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	17
8	ECR-B-640	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	3
8	ECR-B-640	Annelida	Polychaeta	Phyllodocida	Hesionidae	Hesionidae (LPIL)	9
8	ECR-B-640	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	4
8	ECR-B-640	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys picta	1
8	ECR-B-640	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	2
8	ECR-B-640	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alosae	1
8	ECR-B-640	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	1
8	ECR-B-640	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	9
8	ECR-B-640	Annelida	Polychaeta	Scolecida	Maldanidae	Clymenella torquata	1
8	ECR-B-640	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	9
8	ECR-B-640	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
8	ECR-B-640	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	14
8	ECR-B-640	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	4
8	ECR-B-640	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	2
8	ECR-B-640	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	8
8	ECR-B-640	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
8	ECR-B-640	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	2
8	ECR-B-640	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	6
8	ECR-B-640	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
8	ECR-B-640	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	1
8	ECR-B-640	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiura (LPIL)	26
8	ECR-B-640	Echinodermata	Ophiuroidea			Ophiuroidea (LPIL)	3
8	ECR-B-640	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	5
8	ECR-B-640	Nemertea	Anopla	Paleonemertea	Tubulanidae	Tubulanus sp. A	1
8	ECR-B-646	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	6
8	ECR-B-646	Annelida	Polychaeta	Canalipalpata	Sternaspidae	Sternaspis scutata	2
8	ECR-B-646	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	101
8	ECR-B-646	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	6
8	ECR-B-646	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	6
8	ECR-B-646	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	1
8	ECR-B-646	Annelida	Polychaeta	Oweniida	Oweniidae	Galathowenia oculata	1
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniada maculata	2
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Hesionidae	Oxydromus obscurus	8
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Hesionidae	Podarkeopsis levifuscina	2
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	8
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	3
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Paralacydoniidae	Paralacydonia paradoxa	1
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae	Sphaerodoridium minutum	2
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	13
8	ECR-B-646	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	7
8	ECR-B-646	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	47
8	ECR-B-646	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	68
8	ECR-B-646	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	79
8	ECR-B-646	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	122
8	ECR-B-646	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	3
8	ECR-B-646	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-646	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	30
8	ECR-B-646	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	7
8	ECR-B-646	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	34

8	ECR-B-646	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	1
8	ECR-B-646	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	13
8	ECR-B-646	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	41
8	ECR-B-646	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	2
8	ECR-B-646	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-646	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	4
8	ECR-B-646	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis quadrispinosa	2
8	ECR-B-646	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	1
8	ECR-B-646	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	7
8	ECR-B-646	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
8	ECR-B-646	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	4
8	ECR-B-646	Echinodermata	Holothuroidea	Apodida	Synaptidae	Synaptidae (LPIL)	3
8	ECR-B-646	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuriidae (LPIL)	5
8	ECR-B-646	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	17
8	ECR-B-646	Mollusca	Aplacophora			Aplacophora (LPIL)	3
8	ECR-B-646	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	10
8	ECR-B-646	Nemertea				Nemertea (LPIL)	2
8	ECR-B-650	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	22
8	ECR-B-650	Annelida	Polychaeta	Canalipalpata	Sternaspidae	Sternaspis scutata	4
8	ECR-B-650	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	67
8	ECR-B-650	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-650	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	5
8	ECR-B-650	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	3
8	ECR-B-650	Annelida	Polychaeta	Oweniida	Oweniidae	Galathowenia oculata	39
8	ECR-B-650	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	3
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Hesionidae	Podarkeopsis levifuscina	6
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	1
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereididae (LPIL)	1
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogone dispar	6
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllidae (LPIL)	4
8	ECR-B-650	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllides longocirratus	1
8	ECR-B-650	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	85
8	ECR-B-650	Annelida	Polychaeta	Scolecida	Capitellidae	Mediomastus (LPIL)	1
8	ECR-B-650	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	152
8	ECR-B-650	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	21
8	ECR-B-650	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	10
8	ECR-B-650	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	4
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharete finmarchica	1
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	33
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	6
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	69
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
8	ECR-B-650	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	4
8	ECR-B-650	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	19
8	ECR-B-650	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	2
8	ECR-B-650	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	2
8	ECR-B-650	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	1
8	ECR-B-650	Arthropoda	Malacostraca	Decapoda	Crangonidae	Crangon septemspinosa	1
8	ECR-B-650	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	4
8	ECR-B-650	Echinodermata	Holothuroidea	Holothuriida	Holothuriidae	Holothuriidae (LPIL)	3
8	ECR-B-650	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	16
8	ECR-B-650	Mollusca	Bivalvia	Limoida	Limidae	Limidae (LPIL)	2

8	ECR-B-650	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	5
8	ECR-B-656	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	4
8	ECR-B-656	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	1
8	ECR-B-656	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	1
8	ECR-B-656	Annelida	Polychaeta	Canalipalpata	Sternaspidae	Sternaspis scutata	3
8	ECR-B-656	Annelida	Polychaeta	Cossurida	Cossuridae	Cossura soyeri	18
8	ECR-B-656	Annelida	Polychaeta	Eunicida	Dorvilleidae	Pettiboneia duofurca	1
8	ECR-B-656	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	13
8	ECR-B-656	Annelida	Polychaeta	Eunicida	Oenonidae	Drilonereis longa	1
8	ECR-B-656	Annelida	Polychaeta	Flabelligerida	Flabelligeridae	Bradabyssa villosa	1
8	ECR-B-656	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	1
8	ECR-B-656	Annelida	Polychaeta	Opheliida	Scalibregmatidae	Scalibregma inflatum	2
8	ECR-B-656	Annelida	Polychaeta	Oweniida	Oweniidae	Galathowenia oculata	94
8	ECR-B-656	Annelida	Polychaeta	Oweniida	Oweniidae	Owenia fusiformis	1
8	ECR-B-656	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	5
8	ECR-B-656	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	5
8	ECR-B-656	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae	Sphaerodoridium minutum	2
8	ECR-B-656	Annelida	Polychaeta	Phyllodocida	Syllidae	Salvatoria clavata	2
8	ECR-B-656	Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	2
8	ECR-B-656	Annelida	Polychaeta	Sabellida	Sabellidae	Euchone (LPIL)	166
8	ECR-B-656	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellidae (LPIL)	1
8	ECR-B-656	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	131
8	ECR-B-656	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
8	ECR-B-656	Annelida	Polychaeta	Scolecida	Paraonidae	Levinsenia gracilis	19
8	ECR-B-656	Annelida	Polychaeta	Spionida	Spionidae	Spionidae (LPIL)	4
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetidae (LPIL)	1
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	31
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Cirratulidae	Kirkegaardia dorsobranchialis	1
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	15
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellidae (LPIL)	2
8	ECR-B-656	Annelida	Polychaeta	Terebellida	Trichobranchidae	Terebellides stroemi	36
8	ECR-B-656	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca agassizi	36
8	ECR-B-656	Arthropoda	Malacostraca	Amphipoda	Aoridae	Leptocheirus pinguis	1
8	ECR-B-656	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	1
8	ECR-B-656	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ericthonius brasiliensis	29
8	ECR-B-656	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpinia propinqua	3
8	ECR-B-656	Arthropoda	Malacostraca	Cumacea	Diastylidae	Diastylis polita	1
8	ECR-B-656	Arthropoda	Malacostraca	Cumacea	Diastylidae	Leptostylis longimana	1
8	ECR-B-656	Arthropoda	Malacostraca	Cumacea	Leuconidae	Eudorella pusilla	3
8	ECR-B-656	Arthropoda	Malacostraca	Cumacea	Nannastacidae	Campylaspis sp. AA	1
8	ECR-B-656	Arthropoda	Malacostraca	Isopoda	Idoteidae	Edotia triloba	1
8	ECR-B-656	Cnidaria	Anthozoa	Actiniaria		Actiniaria (LPIL)	1
8	ECR-B-656	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphioplus (LPIL)	6
8	ECR-B-656	Echinodermata	Ophiuroidea	Ophiurida	Amphiuridae	Amphiuridae (LPIL)	3
8	ECR-B-656	Mollusca	Bivalvia	Pholadomyoida	Periplomatidae	Periploma papyratium	6
8	ECR-B-656	Mollusca	Bivalvia	Veneroida	Thyasiridae	Thyasira trisinuata	4
8	ECR-B-656	Nemertea	Anopla	Heteronemertea	Lineidae	Lineidae (LPIL)	1
8	ECR-B-656	Nemertea				Nemertea (LPIL)	1
8	ECR-C-1516	Annelida	Oligochaeta	Tubificida	Naididae	Naididae (LPIL)	11
8	ECR-C-1516	Annelida	Pollychaeta	Phyllodocida	Polynoidae	Harmothoe extenuata	4
8	ECR-C-1516	Annelida	Polychaeta	Archiannelida	Polygordiidae	Polygordius (LPIL)	69
8	ECR-C-1516	Annelida	Polychaeta	Canalipalpata	Sternaspidae	Sternaspis scutata	12

8	ECR-C-1516	Annelida	Polychaeta	Eunicida	Dorvilleidae	Dorvilleidae (LPIL)	1
8	ECR-C-1516	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrineridae (LPIL)	3
8	ECR-C-1516	Annelida	Polychaeta	Eunicida	Lumbrineridae	Lumbrinerides dayi	54
8	ECR-C-1516	Annelida	Polychaeta	Eunicida	Lumbrineridae	Ninoe nigripes	15
8	ECR-C-1516	Annelida	Polychaeta	Opheliida	Opheliidae	Ophelina acuminata	2
8	ECR-C-1516	Annelida	Polychaeta	Phyllodocida	Glyceridae	Glyceridae (LPIL)	3
8	ECR-C-1516	Annelida	Polychaeta	Phyllodocida	Goniadidae	Goniadella gracilis	89
8	ECR-C-1516	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtyidae (LPIL)	6
8	ECR-C-1516	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Nephtys incisa	2
8	ECR-C-1516	Annelida	Polychaeta	Phyllodocida	Syllidae	Sphaerosyllis piriferopsis	2
8	ECR-C-1516	Annelida	Polychaeta	Scolecida	Maldanidae	Maldanidae (LPIL)	1
8	ECR-C-1516	Annelida	Polychaeta	Scolecida	Paraonidae	Aricidea (LPIL)	3
8	ECR-C-1516	Annelida	Polychaeta	Scolecida	Paraonidae	Paradoneis lyra	3
8	ECR-C-1516	Annelida	Polychaeta	Scolecida	Paraonidae	Paraonidae (LPIL)	1
8	ECR-C-1516	Annelida	Polychaeta	Spionida	Spionidae	Carazziella hobsonae	7
8	ECR-C-1516	Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulidae (LPIL)	17
8	ECR-C-1516	Annelida	Polychaeta	Terebellida	Cirratulidae	Tharyx acutus	1
8	ECR-C-1516	Annelida	Polychaeta	Terebellida	Terebellidae	Streblosoma spiralis	1
8	ECR-C-1516	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Ampelisca vadorum	1
8	ECR-C-1516	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae	Byblis serrata	5
8	ECR-C-1516	Arthropoda	Malacostraca	Amphipoda	Aoridae	Unciola irrorata	5
8	ECR-C-1516	Arthropoda	Malacostraca	Amphipoda	Isaeidae	Photis (LPIL)	2
8	ECR-C-1516	Arthropoda	Malacostraca	Amphipoda	Pleustidae	Stenopleustes inermis	2
8	ECR-C-1516	Arthropoda	Malacostraca	Decapoda	Paguridae	Paguridae (LPIL)	1
8	ECR-C-1516	Hemichordata	Enteropneusta		Ptychoderidae	Balanoglossus (LPIL)	4
8	ECR-C-1516	Mollusca	Bivalvia	Mytiloida	Mytilidae	Crenella decussata	1
8	ECR-C-1516	Mollusca	Bivalvia	Nuculida	Nuculidae	Nucula proxima	1
8	ECR-C-1516	Mollusca	Bivalvia	Veneroida	Astartidae	Astarte undata	2
8	ECR-C-1516	Mollusca	Bivalvia	Veneroida	Cardiidae	Cerastoderma pinnulatum	1
8	ECR-C-1516	Mollusca	Gastropoda	Mesogastropoda	Calyptraeidae	Crepidula (LPIL)	2
8	ECR-C-1516	Mollusca	Gastropoda	Neotaenioglossa	Naticidae	Naticidae (LPIL)	9
8	ECR-C-1516	Nemertea				Nemertea (LPIL)	3

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520
Attachment D - Benthic Infauna Results - Data Analysis

Segment	Station	Number of Individuals	Number of Taxa	Density (SD) Individuals m^{-2}
1	ECR-B-101	452	32	11,300
1	ECR-B-106	63	10	1,575
1	ECR-B-110	158	34	3,950
1	ECR-B-1150	638	47	15,950
1	ECR-B-1151	263	32	6,575
1	ECR-B-1152	621	47	15,525
1	ECR-B-1154	696	31	17,400
1	ECR-B-1155	166	30	4,150
1	ECR-B-1156	561	18	14,025
1	ECR-B-1157	227	37	5,675
1	ECR-B-1158	9	2	225
2	ECR-B-112	292	38	7,300
2	ECR-B-114	124	18	3,100
2	ECR-B-116	147	15	3,675
2	ECR-B-122	174	17	4,350
2	ECR-B-124	82	18	2,050
2	ECR-B-126	118	23	2,950
2	ECR-B-128	162	27	4,050
2	ECR-B-132	97	26	2,425
2	ECR-B-140	95	23	2,375
2	ECR-B-142	563	44	14,075
2	ECR-B-148	145	23	3,625
2	ECR-B-150	52	16	1,300
2	ECR-B-1131	36	8	900
2	ECR-B-1133	49	15	1,225
2	ECR-B-1135	155	29	3,875
2	ECR-B-1137	76	18	1,900
3	ECR-B-201	77	15	1,925
3	ECR-B-205	67	9	1,675
3	ECR-B-209	152	14	3,800
3	ECR-B-213	206	20	5,150
3	ECR-B-217	269	23	6,725
3	ECR-B-219	232	25	5,800
3	ECR-B-221	332	30	8,300
3	ECR-B-223	231	31	5,775
3	ECR-B-227	81	20	2,025
3	ECR-B-231	201	22	5,025
3	ECR-B-235	98	33	2,450
3	ECR-B-241	199	26	4,975
3	ECR-B-247	147	24	3,675
3	ECR-B-302	312	26	7,800
3	ECR-B-308	188	33	4,700
3	ECR-B-312	167	31	4,175
3	ECR-B-316	200	27	5,000
3	ECR-B-322	203	26	5,075
3	ECR-B-324	116	37	2,900
3	ECR-C-1101	80	24	2,000

3	ECR-C-1207	411	43	10,275
3	ECR-C-1208	332	42	8,300
3	ECR-C-1215	77	17	1,925
4	ECR-B-328	197	37	4,925
4	ECR-B-334	33	11	825
4	ECR-B-338	53	20	1,325
4	ECR-B-340	105	20	2,625
4	ECR-B-348	42	10	1,050
4	ECR-B-350	65	17	1,625
4	ECR-B-402	255	50	6,375
4	ECR-B-404	391	55	9,775
4	ECR-B-406	242	49	6,050
4	ECR-B-408	338	53	8,450
4	ECR-B-410	533	41	13,325
4	ECR-B-412	215	47	5,375
4	ECR-B-414	52	21	1,300
4	ECR-B-416	40	14	1,000
4	ECR-B-456	99	27	2,475
4	ECR-B-458	229	34	5,725
4	ECR-B-460	255	49	6,375
4	ECR-B-462	289	39	7,225
4	ECR-B-464	200	37	5,000
4	ECR-B-466	153	40	3,825
4	ECR-B-468	97	19	2,425
4	ECR-C-1302	26	7	650
5	ECR-B-470	170	45	4,250
5	ECR-B-472	133	38	3,325
5	ECR-B-474	83	30	2,075
5	ECR-B-476	125	37	3,125
5.1	ECR-B-480-A	224	37	5,600
5.1	ECR-B-482	140	36	3,500
5.1	ECR-B-484	135	28	3,375
5.1	ECR-B-486	102	33	2,550
5.1	ECR-B-488	488	34	12,200
5	ECR-C-1437	212	54	5,300
6	ECR-B-422	84	28	2,100
6	ECR-B-424	91	29	2,275
6	ECR-B-426	139	32	3,475
6	ECR-B-428	81	24	2,025
6	ECR-B-430	106	17	2,650
6	ECR-B-432	46	25	1,150
6	ECR-B-434	254	43	6,350
6	ECR-B-436	77	32	1,925
6	ECR-B-438	127	30	3,175
6	ECR-B-440	38	14	950
6	ECR-B-442	35	11	875
6	ECR-B-444	490	38	12,250
7	ECR-B-448	116	17	2,900
7	ECR-B-450	138	25	3,450
7	ECR-B-452	23	11	575
7	ECR-B-454	1756	52	43,900
7	ECR-B-504	624	37	15,600

7	ECR-B-510	484	27	12,100
7	ECR-B-514	153	19	3,825
7	ECR-C-1429	1014	43	25,350
7	ECR-C-1430	152	39	3,800
8	ECR-B-516	285	39	7,125
8	ECR-B-518	407	45	10,175
8	ECR-B-520	336	35	8,400
8	ECR-B-522	270	42	6,750
8	ECR-B-526	274	39	6,850
8	ECR-B-530	500	58	12,500
8	ECR-B-536	376	52	9,400
8	ECR-B-540	485	43	12,125
8	ECR-B-542	329	34	8,225
8	ECR-B-544	398	44	9,950
8	ECR-B-548	332	31	8,300
8	ECR-B-602	466	59	11,650
8	ECR-B-608	279	31	6,975
8	ECR-B-614	482	51	12,050
8	ECR-B-620	416	51	10,400
8	ECR-B-624	694	46	17,350
8	ECR-B-628	293	40	7,325
8	ECR-B-630	418	45	10,450
8	ECR-B-634	621	41	15,525
8	ECR-B-636	384	31	9,600
8	ECR-B-640	132	25	3,300
8	ECR-B-646	678	42	16,950
8	ECR-B-650	606	36	15,150
8	ECR-B-656	666	47	16,650
8	ECR-C-1516	346	36	8,650

BENTHIC REPORT FOR THE EXPORT CABLE ROUTE (ECR) OCS-A 0520

Attachment D - Benthic Infauna Results - Biomass

Segment	Station	Oligochaeta	Polychaeta	Malacostraca	Bivalvia	Gastropoda	Echinoidea	Ophiuroidea	Asteroidea	Holothuroidea	Anthozoa	Anopla	Enteropneusta	Alpacophora	Sipunculidea	Ascidiacea	Platyhelminthes	Pycnogonida	Phoronida	Clitellata	Sample Total
1	ECR-B-101	--	1.2677	0.0262	0.5180	--	--	--	--	--	--	--	--	--	--	0.0300	--	--	--	0.0005	1.84
1	ECR-B-106	--	0.4674	--	0.0062	--	--	--	--	--	--	0.0001	--	--	--	--	--	--	--	--	0.47
1	ECR-B-110	--	0.2496	0.0175	0.3336	0.0153	--	--	--	--	0.0068	0.0010	--	--	--	0.0936	--	0.0001	--	0.0002	0.72
1	ECR-B-1150	--	1.1440	0.0361	6.2550	--	--	--	--	--	0.0483	0.0053	--	--	--	--	--	0.0001	--	0.0001	7.49
1	ECR-B-1151	--	1.2199	0.0401	0.0171	--	--	--	--	--	0.0043	0.0093	--	--	--	--	--	--	--	0.0003	1.29
1	ECR-B-1152	--	1.3663	0.1175	0.0908	--	--	--	--	--	0.0158	0.0058	--	--	--	0.1406	0.0116	0.0001	--	0.0002	1.75
1	ECR-B-1154	--	1.0008	0.0082	0.7522	--	--	--	--	--	0.0196	0.0090	--	--	--	--	0.0070	--	--	0.0389	1.84
1	ECR-B-1155	--	0.3996	0.0095	0.1320	0.0199	--	--	--	--	--	0.0055	--	--	--	--	--	--	--	0.0001	0.57
1	ECR-B-1156	--	0.3520	0.0001	0.0049	0.7516	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0005	1.11
1	ECR-B-1157	--	0.5390	0.0119	0.0124	0.0002	--	--	--	--	--	0.0077	--	--	0.0114	--	--	--	--	0.0001	0.58
1	ECR-B-1158	--	0.0005	--	--	--	--	--	--	--	0.0099	--	--	--	--	--	--	--	--	--	0.01
2	ECR-B-112	--	0.1116	0.0696	12.0235	0.0001	--	--	--	--	--	0.5786	--	--	--	--	--	--	--	0.0003	12.78
2	ECR-B-114	--	0.1569	0.0022	0.4062	--	--	--	--	--	0.0116	0.0015	--	--	--	--	--	--	--	0.0001	0.58
2	ECR-B-116	--	0.0419	0.0001	0.3772	0.0196	--	--	--	--	--	0.0002	--	--	--	--	--	--	--	0.0002	0.44
2	ECR-B-122	--	0.1324	0.0016	7.8280	--	--	--	--	--	--	--	--	--	--	--	0.0001	--	--	0.0001	7.96
2	ECR-B-124	--	0.3115	0.0004	0.5600	0.0496	--	--	--	--	0.0095	0.0012	--	--	--	--	0.0016	--	--	0.0001	0.93
2	ECR-B-126	--	0.6450	0.0002	84.9816	0.0340	--	--	--	--	0.0042	0.0030	--	--	--	--	0.0046	--	--	0.0001	85.67
2	ECR-B-128	--	0.2626	0.4189	2.4536	0.0028	--	--	--	--	--	0.0060	0.0179	--	0.0197	--	0.0010	--	--	0.0001	3.18
2	ECR-B-132	--	0.6656	0.0732	0.9802	0.0053	--	--	--	--	--	0.0046	--	--	--	--	0.0060	--	--	--	1.73
2	ECR-B-140	--	0.5577	0.0469	0.1251	0.5546	--	--	--	--	0.0002	0.0025	--	--	0.0020	--	0.0006	--	--	--	1.29
2	ECR-B-142	--	0.7145	3.0855	1.2999	6.8165	--	--	--	--	--	0.0053	--	--	--	0.0002	0.0007	--	--	--	11.92
2	ECR-B-148	--	0.6845	0.0060	0.1777	0.0486	--	--	--	--	--	0.0035	--	--	0.0001	--	0.0028	--	--	--	0.92
2	ECR-B-150	--	0.1499	0.0018	0.0072	0.0001	--	--	--	--	--	0.0016	--	--	--	--	0.0010	--	--	0.0001	0.16
2	ECR-B-1131	--	0.1556	--	0.7160	0.0127	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.88
2	ECR-B-1133	--	0.8380	--	0.2465	0.0170	--	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	1.10
2	ECR-B-1135	--	0.2965	0.1589	0.0856	0.0280	--	--	--	--	--	0.0002	0.0031	--	--	--	0.0001	--	0.0002	0.0001	0.57
2	ECR-B-1137	--	0.1727	0.0002	0.0822	0.0456	--	--	--	--	--	0.0030	--	--	0.0020	--	0.0012	--	--	0.0001	0.31
3	ECR-B-201	--	0.4926	--	0.1943	0.2087	--	--	--	--	--	0.0010	--	--	--	--	--	--	--	0.0001	0.90
3	ECR-B-205	--	0.1359	--	--	0.0025	--	--	--	--	--	0.0020	0.0026	--	--	--	--	--	--	--	0.14
3	ECR-B-209	--	0.0991	--	0.0812	0.0087	--	--	--	--	--	0.0027	--	--	--	--	--	--	--	0.0001	0.19
3	ECR-B-213	--	0.4785	--	0.4772	0.1171	--	--	--	--	--	0.0020	--	--	0.0147	--	--	--	--	0.0001	1.09
3	ECR-B-217	--	0.8330	0.0526	0.0512	0.0650	--	--	--	--	--	0.0004	--	--	--	--	--	--	--	0.0001	1.00
3	ECR-B-219	--	0.3305	0.0481	0.9430	1.4776	--	--	--	--	--	0.0343	--	--	0.0031	--	--	--	--	--	2.84
3	ECR-B-221	--	0.6126	0.0106	0.2583	0.3428	--	--	--	--	--	0.0121	0.0148	--	--	--	--	--	--	--	1.25
3	ECR-B-223	--	0.1835	0.1348	0.0235	0.0022	--	--	--	--	--	0.0056	--	--	--	--	--	--	--	0.0001	0.35
3	ECR-B-227	--	0.1425	0.0269	0.0980	0.0055	--	0.0067	--	--	--	0.0019	--	--	--	--	--	--	--	--	0.28
3	ECR-B-231	--	0.3318	0.0054	0.7442	0.0218	--	--	--	--	--	0.0001	0.0125	--	--	--	--	--	--	--	1.12
3	ECR-B-235	--	0.1682	0.4673	0.0066	0.0030	--	--	--	--	--	0.0001	--	--	--	--	--	--	--	0.0001	0.65
3	ECR-B-241	--	0.3983	0.0022	1.2523	7.7455	--	--	--	--	--	0.0031	--	--	--	--	--	--	--	0.0001	9.40
3	ECR-B-247	--	0.4729	0.0028	0.2295	0.6668	--	--	--	--	--	--	0.0195	--	--	--	--	--	--	0.0001	1.39
3	ECR-B-302	--	0.5595	0.6731	0.0618	0.0089	--	--	--	--	--	0.0020	0.0671	--	0.0248	--	--	--	--	0.0001	1.40
3	ECR-B-308	--	0.9335	0.1435	0.1396	0.0165	--	--	--	--	--	0.0020	0.0199	--	0.0375	--	--	--	--	0.0001	1.29
3	ECR-B-312	--	5.0113	0.0758	0.0115	0.1530	--	--	--	--	--	0.0023	--	--	--	--	--	--	--	0.0001	5.25
3	ECR-B-316	--	0.9098	1.4157	0.1355	0.3785	--	--	--	--	--	0.0071	--	--	--	--	--	--	--	--	2.85
3	ECR-B-322	--	0.0349	0.1510	0.1216	47.0210	1.1425	--	--	--	--	0.0026	--	--	--	--	--	--	--	--	48.47
3	ECR-B-324	--	0.6399	0.1212	0.0080	0.6079	--	--	--	--	--	0.0062	--	--	--	--	--	--	--	--	1.38
3	ECR-C-1101	--	0.8687	0.0851	0.1317	0.0001	--	--	--	--	--	--	--	--	--	--	0.0002	--	--	0.0001	1.09
3	ECR-C-1207	--	0.2372	0.4263	5.7010	0.0002	--	--	--	--	--	0.0119	--	--	0.2463	--	--	--	--	0.0001	6.62
3	ECR-C-1208	--	0.2187	0.2119	5.6173	0.0083	--	--	--	0.1955	0.0846	0.0068	--	--	0.0045	--	--	--	--	0.0002	6.35

3	ECR-C-1215	--	0.1719	4.5975	0.0484	0.0166	--	--	--	--	--	0.0016	--	--	--	--	--	--	--	--	4.84
4	ECR-B-328	--	0.2431	0.0727	0.0038	0.0061	--	--	--	--	--	0.0175	--	--	--	--	--	--	--	0.0005	0.34
4	ECR-B-334	--	0.1755	0.0609	--	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24
4	ECR-B-338	--	0.0685	0.0515	0.0093	--	0.0109	--	--	--	--	--	--	--	--	--	--	--	--	0.0007	0.14
4	ECR-B-340	--	0.0120	0.2282	0.0025	0.0174	0.0189	0.4490	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.73
4	ECR-B-348	--	0.0241	0.0990	--	0.0030	0.0398	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17
4	ECR-B-350	--	0.0231	0.1015	--	0.0079	0.0402	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.17
4	ECR-B-402	--	0.2941	0.3430	1.9976	2.6193	--	0.0005	--	--	0.0017	0.0019	--	--	0.0028	--	--	--	--	0.0002	5.26
4	ECR-B-404	--	0.8375	0.2566	0.9633	0.4166	--	--	--	--	0.5491	0.0020	--	--	0.0010	--	--	--	--	0.0002	3.03
4	ECR-B-406	--	0.7510	0.1899	8.8417	9.1372	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	18.92
4	ECR-B-408	--	0.3443	0.0541	3.8300	0.7432	--	0.0156	--	--	--	0.0071	--	--	0.0101	--	--	--	--	0.0001	5.00
4	ECR-B-410	--	1.0567	0.9110	1.9438	8.3093	4.1292	--	--	--	--	0.0002	--	--	0.0002	--	--	--	--	--	16.35
4	ECR-B-412	--	0.6862	0.0488	1.6222	0.0443	--	1.7246	--	0.0072	--	0.0039	--	--	0.0063	--	--	--	--	0.0001	4.14
4	ECR-B-414	--	0.0940	0.0224	--	--	0.2166	--	--	--	--	0.0010	--	--	--	--	--	--	--	0.0001	0.33
4	ECR-B-416	--	0.0149	0.0666	0.0002	0.0001	--	--	--	--	--	0.0042	--	--	--	--	--	--	--	0.0001	0.09
4	ECR-B-456	--	0.0999	0.0048	0.0313	4.6764	0.0694	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	4.88
4	ECR-B-458	--	1.1100	1.7397	0.4376	0.4178	--	--	--	--	--	0.0047	--	--	--	--	--	--	--	0.0001	3.71
4	ECR-B-460	--	0.5825	0.1033	1.7735	0.0528	--	0.8202	--	--	0.2836	--	--	--	0.0001	--	--	--	--	0.0002	3.62
4	ECR-B-462	--	0.7934	0.7227	3.1198	0.0438	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0003	4.68
4	ECR-B-464	--	0.6429	0.0690	1.9132	0.2218	--	--	--	0.0196	--	--	--	--	--	--	--	--	--	--	2.87
4	ECR-B-466	--	0.3875	0.0309	1.2116	0.0594	--	--	--	--	--	0.0048	--	--	0.0001	--	--	--	--	--	1.69
4	ECR-B-468	--	0.5768	0.2192	0.0661	0.0010	0.0206	--	--	--	--	0.0015	--	--	0.0010	--	--	--	--	--	0.89
4	ECR-C-1302	--	0.0082	1.7015	0.0025	--	--	--	--	--	--	--	--	--	0.0002	--	--	--	--	--	1.71
5	ECR-B-470	--	1.4876	0.3703	3.3750	13.8548	--	--	--	--	0.0003	0.0012	--	--	--	--	--	--	--	0.0002	19.09
5	ECR-B-472	--	0.2182	0.0945	1.5512	0.2375	--	--	--	--	--	0.0001	--	--	--	--	--	--	--	--	2.10
5	ECR-B-474	--	0.0968	0.1832	0.0102	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.29
5	ECR-B-476	--	0.4829	0.1640	0.0098	0.5974	--	0.0543	--	--	--	0.0126	--	--	--	--	--	--	--	0.0001	1.32
5	ECR-C-1437	--	0.8263	0.0180	177.8342	11.3528	--	--	--	--	--	0.0041	--	--	--	--	--	--	--	0.0002	190.04
5.1	ECR-B-480-A	--	0.3638	0.2594	1.8724	0.3267	--	--	--	--	--	0.0069	--	--	--	--	--	--	--	0.0025	2.83
5.1	ECR-B-482	--	0.1708	0.0312	1.2872	0.2997	0.2924	--	--	0.0006	--	0.0035	--	--	--	--	--	--	--	0.0001	2.09
5.1	ECR-B-484	--	0.6269	0.2147	0.0446	0.4293	--	0.4182	--	--	--	0.0266	--	--	0.0321	--	--	--	--	0.0001	1.79
5.1	ECR-B-486	--	0.0534	0.0882	1.3954	0.0010	--	--	--	--	--	--	--	--	0.0021	0.0015	--	--	--	0.0001	1.54
5.1	ECR-B-488	--	0.7508	1.2879	0.3110	0.8919	--	--	--	--	--	0.0021	--	--	--	--	--	--	--	0.0665	3.31
6	ECR-B-422	--	0.1553	0.2385	0.0020	0.0278	0.0089	--	--	--	--	--	--	--	--	0.0056	--	--	--	--	0.44
6	ECR-B-424	--	0.0906	0.3214	0.3049	0.0000	--	--	--	--	--	0.0813	--	--	--	--	--	--	--	--	0.80
6	ECR-B-426	--	0.1999	0.0439	1.6471	0.0088	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0003	1.90
6	ECR-B-428	--	0.1959	0.0162	0.0126	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.22
6	ECR-B-430	--	0.0047	0.1673	0.0029	0.0002	0.0100	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.19
6	ECR-B-432	--	0.0734	0.0343	0.0242	0.0293	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.16
6	ECR-B-434	--	0.5432	0.2592	12.4166	137.4664	--	1.0560	--	--	--	--	--	--	--	--	--	--	--	--	151.74
6	ECR-B-436	--	0.2608	0.0447	0.1579	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47
6	ECR-B-438	--	0.0154	0.0422	0.0766	22.6442	0.0126	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	22.79
6	ECR-B-440	--	0.0106	0.0001	0.0285	--	0.0020	--	--	--	--	--	--	--	--	--	--	--	--	--	0.04
6	ECR-B-442	--	0.0140	0.0027	0.0122	0.3348	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36
6	ECR-B-444	--	0.6072	0.3264	0.1564	3.7982	--	--	--	0.0126	--	0.0065	--	--	--	--	--	--	--	0.0001	4.91
7	ECR-B-448	--	0.3402	0.0015	0.8955	--	--	--	--	--	--	0.0018	--	--	--	--	--	--	--	--	1.24
7	ECR-B-450	--	0.1845	0.0430	2.9996	0.0271	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.25
7	ECR-B-452	--	0.0177	0.0057	0.0458	0.0002	0.0001	--	--	--	--	--	--	--	--	--	--	--	--	0.0001	0.07
7	ECR-B-454	--	2.7245	0.2088	3.9644	0.0939	0.1371	--	--	--	0.5916	0.2067	--	--	1.5519	--	--	--	--	0.0007	9.48
7	ECR-B-504	--	0.6752	0.2609	0.0124	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0010	0.95
7	ECR-B-510	--	0.5638	0.3415	0.0289	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.93
7	ECR-B-514	--	0.1625	0.1312	--	0.2102	--	--	--	--	--	0.0021	--	--	--	--	--	--	--	--	0.51

7	ECR-C-1429	--	0.6527	0.1286	1.7872	521.6498	--	--	--	0.0167	--	--	--	--	--	--	--	--	--	--	524.24
7	ECR-C-1430	--	0.3059	0.0456	0.2356	0.4260	--	--	--	0.0244	--	0.0001	--	--	0.0045	--	0.0001	--	--	0.0001	1.04
8	ECR-B-516	--	0.8445	0.2089	17.2089	--	--	--	--	--	--	0.0008	--	--	--	--	0.0012	--	0.0009	--	18.27
8	ECR-B-518	0.0322	0.3365	1.1630	0.1608	--	--	--	--	--	--	0.0799	--	--	--	--	--	--	--	--	1.77
8	ECR-B-520	--	0.5505	0.2347	3.6780	--	--	--	--	--	--	0.0066	--	--	--	--	--	--	--	--	4.47
8	ECR-B-522	--	0.6468	0.2026	0.1488	--	--	--	--	0.0325	--	--	--	--	--	--	--	--	--	0.0001	1.03
8	ECR-B-526	0.0565	0.2278	0.3620	0.0375	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.68
8	ECR-B-530	0.0158	1.1728	0.7737	0.5000	0.0105	--	--	--	--	--	0.0110	--	--	--	--	--	--	--	--	2.48
8	ECR-B-536	0.0105	0.5848	0.7316	49.2914	0.0197	--	--	--	0.0132	--	0.1903	--	--	--	--	--	--	--	--	50.84
8	ECR-B-540	0.0152	0.5978	0.1420	0.0596	0.0075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.82
8	ECR-B-542	0.0112	1.1083	0.0529	0.0116	0.0191	--	--	--	--	--	0.0082	--	--	--	--	--	--	--	--	1.21
8	ECR-B-544	0.0001	0.6758	0.4812	0.3322	0.0059	--	--	--	--	--	0.1446	--	--	--	--	--	--	--	--	1.64
8	ECR-B-548	0.0001	0.8456	0.1474	0.0002	0.0002	29.4985	--	4.6087	--	--	--	--	--	--	--	--	--	--	--	35.10
8	ECR-B-602	--	1.0689	0.2781	0.4648	0.0025	--	--	0.0179	--	--	0.0432	--	--	--	--	--	--	--	0.0010	1.88
8	ECR-B-608	0.0001	0.5495	0.1186	0.0001	0.0010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67
8	ECR-B-614	0.0006	0.8879	0.4316	0.0738	0.0116	--	0.0016	--	--	0.0585	0.0451	--	--	--	--	--	--	--	--	1.51
8	ECR-B-620	0.0001	3.3574	0.8225	0.2480	0.0020	--	0.8741	--	0.0182	--	0.0356	--	--	--	--	--	--	--	--	5.36
8	ECR-B-624	0.0001	2.7710	0.4594	0.0128	0.0021	--	1.0125	17.0806	0.0340	0.0247	0.0273	--	0.0001	--	--	--	--	--	--	21.42
8	ECR-B-628	--	0.5313	0.1745	0.0047	0.0012	--	1.4802	3.7508	0.0081	--	0.0079	--	--	0.0002	--	--	--	--	--	5.96
8	ECR-B-630	0.0001	3.0416	0.3591	0.0318	0.0135	--	1.8353	--	45.6918	0.1617	0.0186	--	0.0679	0.0153	--	--	--	--	--	51.24
8	ECR-B-634	0.0001	0.3560	0.1691	0.0088	--	--	1.9782	--	10.2715	0.0180	--	--	--	--	--	--	--	--	--	12.80
8	ECR-B-636	0.0001	0.6922	0.0689	--	--	--	2.9250	--	0.0025	0.0209	--	--	--	--	--	--	--	--	--	3.71
8	ECR-B-640	--	0.1720	0.0335	--	--	--	2.8646	--	0.0005	0.0037	0.0079	--	--	--	--	--	--	--	--	3.08
8	ECR-B-646	0.0002	2.0189	0.5811	--	--	--	2.3745	--	0.0345	0.0186	0.0435	--	0.0023	--	--	--	--	--	--	5.07
8	ECR-B-650	0.0002	1.6213	0.0965	0.0001	--	--	1.6998	--	0.0071	0.0147	0.0232	--	--	--	--	--	--	--	--	3.46
8	ECR-B-656	0.0001	1.3479	0.2244	0.1766	--	--	0.6955	--	--	0.0357	0.0011	--	--	--	--	--	--	--	--	2.48
8	ECR-C-1516	0.0001	0.9589	0.1879	0.3475	0.0021	--	--	--	--	--	0.0002	0.0146	--	--	--	--	--	--	--	1.51

ATTACHMENT E SPI AND PV FIELD COLLECTION FORMS

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
1	ECR-B-101-A	A	11/12/21	16:15:59	-6.4	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-101-A	B	11/12/21	16:17:05	-7.0	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-101-A	C	11/12/21	16:18:48	-6.0	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-102	A	11/12/21	16:29:53	-14.9	12.0	2	1.5	N	PV black; SPI ok
1	ECR-B-102	B	11/12/21	16:31:52	-14.6	12.0	2	1.5	N	PV ok; SPI ok
1	ECR-B-102	C	11/12/21	16:33:30	-14.3	12.0	2	1.5	N	PV ok and SPI ok
1	ECR-A-103	A	11/12/21	16:55:54	-22.2	12.0	2	1.5	N	SPI ok - shallow penetration
1	ECR-A-103	B	11/12/21	16:59:36	-22.7	12.0	2	1.5	N	SPI ok - shallow penetration
1	ECR-A-103	C	11/12/21	17:02:35	-22.2	12.0	2	1.5	N	SPI ok - shallow penetration
1	ECR-B-104	A	11/13/21	18:11:28	-15.4	12.0	5	1.5	N	SPI underpenetrated; PV ok
1	ECR-B-104	B	11/13/21	18:13:57	-15.8	12.0	5	1.5	N	SPI underpenetrated; PV slightly out of focus
1	ECR-B-104	C	11/13/21	18:15:51	-16.0	12.0	5	1.5	N	SPI OP; PV ok
1	ECR-A-105	A	11/13/21	17:54:28	-10.1	12.0	5	1.5	N	SPI ok and PV ok.
1	ECR-A-105	B	11/13/21	17:56:38	-9.9	12.0	5	1.5	N	SPI ok and PV ok.
1	ECR-A-105	C	11/13/21	17:58:26	-9.8	12.0	5	1.5	N	SPI ok and PV ok.
1	ECR-B-106	A	11/13/21	17:26:02	-19.8	12.0	5	1.5	N	SPI ok; PV ok
1	ECR-B-106	B	11/13/21	17:28:10	-19.7	12.0	5	1.5	N	SPI ok; PV ok
1	ECR-B-106	C	11/13/21	17:30:05	-20.2	12.0	5	1.5	N	SPI ok; PV disturbed
1	ECR-B-106	D	11/13/21	17:31:33	-19.8	12.0	5	1.5	N	SPI underpenetrated; PV ok
1	ECR-A-107	A	11/13/21	16:58:33	-13.0	12.0	5	1.5	N	SPI underpenetrated; no PV
1	ECR-A-107	B	11/13/21	17:00:32	-13.5	12.0	5	1.5	N	SPI underpenetrated; no PV
1	ECR-A-107	C	11/13/21	17:01:58	-13.6	12.0	5	1.5	N	SPI ok; PV ok
1	ECR-A-107	D	11/13/21	17:03:54	-13.3	12.0	5	1.5	N	SPI ok; PV ok
1	ECR-B-108	A	11/13/21	16:35:17	-9.2	12.0	5	1.5	N	SPI ok; PV no flash but analyzable
1	ECR-B-108	B	11/13/21	16:38:03	-9.6	12.0	5	1.5	N	SPI ok and PV ok.
1	ECR-B-108	C	11/13/21	16:39:31	-9.5	12.0	5	1.5	N	SPI ok; PV no flash - rejected
1	ECR-A-109	A	9/18/21	11:49:57	-19.04	12.5	5	50	N	All SPI ok; All PV slightly turbid but ok
1	ECR-A-109	B	9/18/21	11:54:02	-19.12	12.5	5	50	N	All SPI ok; All PV slightly turbid but ok
1	ECR-A-109	C	9/18/21	11:58:29	-18.94	12.5	5	50	N	All SPI ok; All PV slightly turbid but ok
1	ECR-B-110	A	9/18/21	10:34:44	-10.57	12.5	5	50	N	SPI ok and PV sightly turbid but accepted.
1	ECR-B-110	B	9/18/21	10:42:20	-9.04	12.5	5	50	N	SPI ok and PV sightly turbid but accepted.
1	ECR-B-110	C	9/18/21	10:48:45	-11.02	12.5	5	50	N	SPI ok and PV sightly turbid but accepted.
1	ECR-A-111	A	9/18/21	9:07:45	-16.44	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
1	ECR-A-111	B	9/18/21	9:13:34	-16.61	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
1	ECR-A-111	C	9/18/21	9:18:51	-16.64	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
1	ECR-B-1150	A	11/12/21	15:26:18	-10.3	12.0	2	1.5	N	A, All SPI and PV ok
1	ECR-B-1150	B	11/12/21	15:30:52	-9.9	12.0	2	1.5	N	A, All SPI and PV ok
1	ECR-B-1150	C	11/12/21	15:35:34	-10.2	12.0	2	1.5	N	A, All SPI and PV ok
1	ECR-B-1151	A	11/12/21	15:06:27	-9.7	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-1151	B	11/12/21	15:08:32	-10.0	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-1151	C	11/12/21	15:11:52	-9.6	12.0	2	1.5	N	PV ok; No SPI bc hard bottom
1	ECR-B-1152	A	11/12/21	14:26:03	-8.6	12.0	2	1.5	N	SPI underpenetrated; PV ok
1	ECR-B-1152	B	11/12/21	14:33:05	-8.5	12.0	2	1.5	N	SPI watershot; PV ok
1	ECR-B-1152	C	11/12/21	14:37:24	-8.4	12.0	2	1.5	N	SPI underpenetrated; no PV
1	ECR-B-1153	A	11/12/21	13:46:37	-8.9	12.0	2	1.5	N	SPI undershoot; PV ok
1	ECR-B-1153	B	11/12/21	13:52:45	-8.9	12.0	2	1.5	N	SPI ok; PV out of focus
1	ECR-B-1153	C	11/12/21	13:55:21	-9.2	12.0	2	1.5	N	SPI ok; PV slightly out of focus
1	ECR-B-1153	D	11/12/21	14:01:07	-8.6	12.0	2	1.5	N	SPI ok; PV out of focus
1	ECR-B-1154	A	11/12/21	13:21:45	-11.2	12.0	2	1.5	N	SPI ok; PV out of focus
1	ECR-B-1154	B	11/12/21	13:24:48	-11.6	12.0	2	1.5	N	SPI ok; PV ok
1	ECR-B-1154	C	11/12/21	13:27:06	-10.8	12.0	2	1.5	N	SPI ok; PV ok
1	ECR-B-1155	A	11/12/21	11:49:16	-13.4	12.0	0	1.5	N	OP SPI; PV ok
1	ECR-B-1155	B	11/12/21	11:53:53	-13.4	12.0	0	1.5	N	OP SPI; PV disturbed
1	ECR-B-1155	C	11/12/21	11:55:58	-13.5	12.0	0	1.5	N	OP SPI; PV out of focus; Removed 2 weights @ side
1	ECR-B-1155	D	11/12/21	12:18:02	-13.4	12.0	3	1.5	N	OP SPI; (3 weights on @ side)
1	ECR-B-1155	E	11/12/21	12:20:40	-13.6	12.0	3	1.5	N	SPI ok
1	ECR-B-1155	F	11/12/21	12:22:29	-13.4	12.0	3	1.5	N	SPI ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
1	ECR-B-1156	A	11/12/21	9:37:32	-6.4	12.0	5	0.5	N	OP SPI; PV ok
1	ECR-B-1156	B	11/12/21	9:39:53	-6.8	12.0	5	0.5	N	OP SPI; PV ok
1	ECR-B-1156	C	11/12/21	9:42:23	-6.0	12.0	5	0.5	N	OP SPI; PV ok
1	ECR-B-1156	D	11/12/21	10:08:16	-6.3	12.0	0	1.5	N	OP SPI; PV ok
1	ECR-B-1156	E	11/12/21	10:13:22	-6.7	12.0	0	1.5	N	OP SPI; PV ok
1	ECR-B-1156	F	11/12/21	10:16:42	-6.0	12.0	0	1.5	N	All SPI and PV ok
1	ECR-B-1156	G	11/12/21	10:59:25	-6.8	12.0	0	1.5	N	Added mud doors
1	ECR-B-1156	H	11/12/21	11:03:34	-6.3	12.0	0	1.5	N	Added mud doors
1	ECR-B-1156	I	11/12/21	11:06:49	-5.8	12.0	0	1.5	N	Added mud doors
1	ECR-B-1157	A	11/12/21	12:56:38	-8.0	12.0	2	1.5	N	SPI low penetration; PV black
1	ECR-B-1157	B	11/12/21	12:59:34	-7.7	12.0	2	1.5	N	SPI low penetration; PV ok
1	ECR-B-1157	C	11/12/21	13:01:51	-7.7	12.0	2	1.5	N	SPI gravel; PV ok
1	ECR-B-1158	A	11/12/21	15:54:56	-8.4	12.0	2	1.5	N	A, All SPI and PV ok
1	ECR-B-1158	B	11/12/21	15:56:46	-9.5	12.0	2	1.5	N	A, All SPI and PV ok
1	ECR-B-1158	C	11/12/21	15:58:20	-8.4	12.0	2	1.5	N	A, All SPI and PV ok
2	ECR-B-112	A	9/18/21	8:14:52	-32.97	12.5	5	50	N	SPI ok and PV ok.
2	ECR-B-112	B	9/18/21	8:20:17	-33.04	12.5	5	50	N	SPI ok and PV ok.
2	ECR-B-112	C	9/18/21	8:26:17	-33.07	12.5	5	50	N	SPI ok and PV turbid.
2	ECR-A-113	A	9/18/21	5:42:28	-15.51	12.5	5	50	N	SPI underpenetration and PV ok.
2	ECR-A-113	B	9/18/21	5:47:01	-15.87	12.5	5	50	N	SPI underpenetration and PV ok.
2	ECR-A-113	C	9/18/21	5:51:12	-16.02	12.5	5	50	N	SPI ok and PV ok.
2	ECR-A-113	D	9/18/21	6:49:18	-16.17	12.5	5	50	N	SPI ok and PV ok.
2	ECR-A-113	E	9/18/21	6:54:03	-16.27	12.5	5	50	N	SPI ok and PV ok.
2	ECR-A-113	F	9/18/21	6:58:28	-16.62	12.5	5	50	N	SPI ok and PV turbid.
2	ECR-B-114	A	9/18/21	4:56:40	-10.57	12.5	1	50	N	SPI underpenetration and PV turbid.
2	ECR-B-114	B	9/18/21	5:00:46	-10.34	12.5	1	50	N	SPI ok and PV turbid.
2	ECR-B-114	C	9/18/21	5:04:55	-10.67	12.5	1	50	N	SPI underpenetration and PV okAdd more weight for next drops.
2	ECR-A-115	A	9/18/21	3:05:52	-19.99	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-115	B	9/18/21	3:09:37	-19.01	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-115	C	9/18/21	3:13:42	-19.01	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-115	D	9/18/21	3:36:55	-19.07	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
2	ECR-A-115	E	9/18/21	3:41:43	-20.08	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
2	ECR-A-115	F	9/18/21	3:46:44	-20.62	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
2	ECR-B-116	A	9/18/21	1:03:57	-14.97	12.5	1	50	N	SPI ok and no PV images collected.
2	ECR-B-116	B	9/18/21	1:08:32	-14.74	12.5	1	50	N	SPI ok and no PV images collected.
2	ECR-B-116	C	9/18/21	1:12:26	-20.58	12.5	1	50	N	SPI ok and no PV images collected.
2	ECR-A-117	A	9/17/21	23:20:08	-16.27	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-117	B	9/17/21	23:25:35	-16.53	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-117	C	9/17/21	23:31:05	-16.67	12.5	1	50	N	SPI ok and PV ok.
2	ECR-B-118	A	9/17/21	22:03:56	-18.96	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-118	B	9/17/21	22:10:51	-19.18	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-118	C	9/17/21	22:16:23	-19.19	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-119	A	9/17/21	19:43:04	-15.51	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-119	B	9/17/21	19:56:40	-14.97	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-119	C	9/17/21	20:02:01	-15.11	12.5	1	50	N	SPI ok and PV ok.
2	ECR-B-120	A	9/17/21	17:14:22	-17.24	12.5	1	50	N	SPI ok and PV ok.
2	ECR-B-120	B	9/17/21	17:20:14	-17.04	12.5	1	50	N	SPI ok and PV ok.
2	ECR-B-120	C	9/17/21	17:25:22	-16.92	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-121	A	9/17/21	15:32:34	-25.82	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-121	B	9/17/21	15:37:02	-25.82	12.5	1	50	N	SPI ok and PV ok.
2	ECR-A-121	C	9/17/21	15:42:21	-25.79	12.5	1	50	N	SPI ok and PV ok.
2	ECR-B-122	A	9/17/21	13:43:43	-32.64	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-122	B	9/17/21	13:49:17	-32.33	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
2	ECR-B-122	C	9/17/21	13:55:27	-31.78	12.5	1	50	N	SPI ok and PV highly turbid - supplement with dropcam.
2	ECR-A-123	A	9/17/21	10:57:54	-22.28	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-123	B	9/17/21	11:07:16	-22.31	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-123	C	9/17/21	11:10:53	-22.04	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-123	D	9/17/21	11:35:02	-22.08	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
2	ECR-A-123	E	9/17/21	11:42:00	-21.83	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-123	F	9/17/21	11:46:43	-21.66	12.5	1	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-124	A	9/17/21	10:03:08	-15.19	12.5	5	50	N	SPI overpenetraded and PV slightly turbid but accepted.
2	ECR-B-124	B	9/17/21	10:08:32	-14.88	12.5	5	50	N	SPI overpenetraded and PV slightly turbid but accepted.
2	ECR-B-124	C	9/17/21	10:13:38	-14.89	12.5	5	50	N	SPI overpenetraded and PV slightly turbid but accepted.
2	ECR-A-125	A	9/17/21	8:46:10	-12.83	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-125	B	9/17/21	8:51:40	-12.39	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-125	C	9/17/21	8:57:17	-12.49	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-126	A	9/17/21	7:56:20	-12.16	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-126	B	9/17/21	8:01:58	-12.33	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-126	C	9/17/21	8:08:21	-12.34	12.5	5	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-127	A	9/17/21	6:28:41	-11.84	12.5	5	50	N	SPI and PV ok.
2	ECR-A-127	B	9/17/21	6:33:55	-12.14	12.5	5	50	N	SPI and PV ok.
2	ECR-A-127	C	9/17/21	6:38:54	-11.90	12.5	5	50	N	SPI and PV ok.
2	ECR-B-128	A	9/17/21	5:17:43	-12.51	12.5	3	50	N	SPI ok. PV turbid and rejected. Replaced PV with video drop still.
2	ECR-B-128	B	9/17/21	5:21:38	-12.31	12.5	3	50	N	SPI ok. PV turbid and rejected. Replaced PV with video drop still.
2	ECR-B-128	C	9/17/21	5:25:00	-12.54	12.5	3	50	N	SPI ok. PV turbid and rejected. Replaced PV with video drop still.
2	ECR-A-129	A	9/17/21	3:48:55	-12.83	12.5	3	50	N	SPI ok and PV moderate to slightly turbid but accepted.
2	ECR-A-129	B	9/17/21	3:52:43	-12.78	12.5	3	50	N	SPI ok and PV moderate to slightly turbid but accepted.
2	ECR-A-129	C	9/17/21	3:56:24	-12.74	12.5	3	50	N	SPI ok and PV moderate to slightly turbid but accepted.
2	ECR-B-130	A	9/17/21	3:01:26	-14.59	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-130	B	9/17/21	3:06:12	-14.53	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-130	C	9/17/21	3:10:06	-14.49	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-131	A	9/17/21	1:45:44	-15.26	12.5	3	50	N	SPI ok and PV too turbid. rejected
2	ECR-A-131	B	9/17/21	1:50:31	-15.16	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-131	C	9/17/21	1:55:47	-15.33	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-132	A	9/17/21	0:53:51	-15.18	12.5	3	50	N	SPI ok and PV slightly turbid. 3/4 area visible but accepted
2	ECR-B-132	B	9/17/21	0:58:19	-15.13	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-132	C	9/17/21	1:02:35	-15.09	12.5	3	50	N	SPI ok and PV highly turbid rejected.
2	ECR-A-133	A	9/16/21	21:57:53	-15.38	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-133	B	9/16/21	22:03:42	-15.33	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-133	C	9/16/21	22:09:49	-15.23	12.5	3	50	N	SPI water shot due to cable yanking and PV slightly turbid but accepted.
2	ECR-B-134	A	9/16/21	21:15:16	-14.67	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-134	B	9/16/21	21:20:43	-14.68	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-134	C	9/16/21	21:27:12	-14.66	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-135	A	9/16/21	19:38:22	-13.87	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-135	B	9/16/21	19:44:05	-13.87	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-135	C	9/16/21	19:50:01	-13.89	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-136	A	9/16/21	18:58:39	-13.32	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-136	B	9/16/21	19:03:03	-13.53	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-136	C	9/16/21	19:08:10	-13.60	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-137	A	9/16/21	16:24:00	-11.89	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-A-137	B	9/16/21	16:29:00	-11.82	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-A-137	C	9/16/21	16:34:00	-11.70	12.5	3	50	N	SPI ok and PV moderate-high turbidity. Slightly improved but still need DropCam footage to supplement analysis
2	ECR-A-137	D	9/16/21	16:58:00	-11.80	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-137	E	9/16/21	17:04:00	-12.02	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-A-137	F	9/16/21	17:10:00	-11.90	12.5	3	50	N	SPI ok and PV slightly turbid but accepted.
2	ECR-B-138	A	9/16/21	15:06:00	-11.73	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-B-138	B	9/16/21	15:12:00	-11.60	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-B-138	C	9/16/21	15:19:00	-11.67	12.5	3	50	N	SPI ok and PV moderate-high turbidity.Slightly improved but still need DropCam footage to supplement analysis..
2	ECR-B-138	D	9/16/21	15:45:00	-11.52	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-B-138	E	9/16/21	15:50:00	-11.62	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-B-138	F	9/16/21	15:56:00	-11.90	12.5	3	50	N	SPI ok and PV moderate-high turbidity. Redo station due to turbidity..
2	ECR-A-139	A	9/16/21	13:39:00	-13.68	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-A-139	B	9/16/21	13:41:00	-13.61	12.5	3	50	N	SPI ok and PV moderate-high turbidity.
2	ECR-A-139	C	9/16/21	13:46:00	-13.81	12.5	3	50	N	SPI ok and PV moderate-high turbidity. Redo station due to turbidity..

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
2	ECR-B-140	A	9/16/21	12:50:00	-17.51	12.5	5	50	N	SPI ok and PV slightly turbid but ok..
2	ECR-B-140	B	9/16/21	12:56:00	-17.35	12.5	5	50	N	SPI and PV slightly turbid but ok..
2	ECR-B-140	C	9/16/21	13:02:00	-17.38	12.5	5	50	N	SPI overpen and PV slightly turbid but ok..
2	ECR-A-141	A	9/16/21	11:20:00	-18.81	12.5	5	50	N	SPI and PV ok.
2	ECR-A-141	B	9/16/21	11:25:00	-18.85	12.5	5	50	N	SPI and PV ok.
2	ECR-A-141	C	9/16/21	11:31:00	-18.72	12.5	5	50	N	SPI and PV ok.
2	ECR-B-142	A	9/16/21	10:02:11	-17.37	12.5	5	50	N	SPI and PV ok.
2	ECR-B-142	B	9/16/21	10:07:05	-17.40	12.5	5	50	N	SPI and PV ok.
2	ECR-B-142	C	9/16/21	10:13:01	-16.98	12.5	5	50	N	SPI and PV ok.
2	ECR-A-143	A	9/16/21	8:31:31	-22.37	12.5	5	50	N	SPI underpenetration medium o coarse sand and shell hash and PV ok. water moderately turbid.
2	ECR-A-143	B	9/16/21	8:37:23	-22.47	12.5	5	50	N	SPI underpenetration medium o coarse sand and shell hash and PV ok. water moderately turbid.
2	ECR-A-143	C	9/16/21	8:42:32	-22.35	12.5	5	50	N	SPI underpenetration medium o coarse sand and shell hash and PV ok. water moderately turbid.
2	ECR-B-144	A	9/16/21	7:08:39	-21.61	12.5	5	50	N	SPI and PV ok.
2	ECR-B-144	B	9/16/21	7:14:14	-21.42	12.5	5	50	N	SPI and PV ok.
2	ECR-B-144	C	9/16/21	7:19:31	-21.74	12.5	5	50	N	SPI and PV ok.
2	ECR-A-145	A	9/16/21	5:00:34	-20.98	12.5	5	50	N	SPI and PV ok.
2	ECR-A-145	B	9/16/21	5:04:58	-21.14	12.5	5	50	N	SPI and PV ok.
2	ECR-A-145	C	9/16/21	5:09:19	1.24	12.5	5	50	N	SPI and PV ok.
2	ECR-B-146	A	9/16/21	4:18:06	-19.31	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-B-146	B	9/16/21	4:22:05	-19.51	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-B-146	C	9/16/21	4:26:05	-19.61	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-A-147	A	9/16/21	2:10:11	-19.31	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-A-147	B	9/16/21	2:13:42	-19.55	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-A-147	C	9/16/21	2:16:56	-19.50	12.5	5	50	N	SPI and PV ok. water slightly turbid.
2	ECR-B-148	A	9/16/21	1:17:19	-18.89	12.5	5	50	N	SPI and PV ok.
2	ECR-B-148	B	9/16/21	1:23:34	-18.87	12.5	5	50	N	SPI and PV ok.
2	ECR-B-148	C	9/16/21	1:28:59	-19.06	12.5	5	50	N	SPI and PV ok.
2	ECR-A-149	A	9/15/21	22:37:40	-18.17	12.5	5	50	N	SPI and PV ok.
2	ECR-A-149	B	9/15/21	22:44:08	-18.12	12.5	5	50	N	SPI and PV ok.
2	ECR-A-149	C	9/15/21	22:49:23	-17.99	12.5	5	50	N	SPI and PV ok.
2	ECR-B-150	A	9/15/21	21:44:52	-18.39	12.5	5	50	N	SPI and PV ok.
2	ECR-B-150	B	9/15/21	21:50:31	-18.30	12.5	5	50	N	SPI and PV ok.
2	ECR-B-150	C	9/15/21	21:56:06	-18.34	12.5	5	50	N	SPI and PV ok.
2	ECR-A-151	A	9/15/21	20:00:37	-18.37	12.5	5	50	N	SPI and PV ok.
2	ECR-A-151	B	9/15/21	20:05:01	-18.21	12.5	5	50	N	SPI and PV ok.
2	ECR-A-151	C	9/15/21	20:09:03	-18.19	12.5	5	50	N	SPI and PV ok.
2	ECR-B-152	A	9/15/21	19:17:45	-21.64	12.5	5	50	N	SPI and PV ok.
2	ECR-B-152	B	9/15/21	19:21:33	-21.72	12.5	5	50	N	SPI and PV ok.
2	ECR-B-152	C	9/15/21	19:27:13	-21.61	12.5	5	50	N	SPI and PV ok.
2	ECR-A-153	A	9/15/21	16:52:23	-16.10	11.0	5	50	N	SPI and PV ok.
2	ECR-A-153	B	9/15/21	16:58:29	-16.16	11.0	5	50	N	SPI and PV ok.
2	ECR-A-153	C	9/15/21	17:03:34	-16.36	11.0	5	50	N	SPI and PV ok.
2	ECR-B-154	A	9/15/21	14:36:06	-9.92	13.5	5	50	N	SPI and PV ok.
2	ECR-B-154	B	9/15/21	14:41:13	-9.60	13.5	5	50	N	SPI and PV ok.
2	ECR-B-154	C	9/15/21	14:46:06	-9.56	13.5	5	50	N	SPI and PV ok.
2	ECR-A-155	A	9/15/21	11:36:00	-15.56	13.5	5	50	N	SPI improved with full weight and PV ok.
2	ECR-A-155	B	9/15/21	11:43:00	-15.45	13.5	5	50	N	SPI improved with full weight and PV ok.
2	ECR-A-155	C	9/15/21	11:48:00	-15.66	13.5	5	50	N	SPI improved with full weight and PV ok.
2	ECR-A-155	D	9/15/21	12:47:00	-15.50	13.5	5	50	N	SPI and PV ok.
2	ECR-A-155	E	9/15/21	12:52:00	-15.58	13.5	5	50	N	SPI and PV ok.
2	ECR-A-155	F	9/15/21	12:59:00	-15.18	13.5	5	50	N	SPI and PV ok.
2	ECR-A-1130	A	11/13/21	8:13:52	-19.7	12.0	2	1.5	N	SPI OP; PV ok
2	ECR-A-1130	B	11/13/21	8:16:20	-18.6	12.0	2	1.5	N	SPI OP; PV ok
2	ECR-A-1130	C	11/13/21	8:18:13	-18.7	12.0	2	1.5	N	SPI OP; PV disturbed
2	ECR-A-1130	D	11/13/21	8:38:07	-18.5	12.0	0	1.5	N	SPI ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
2	ECR-A-1130	E	11/13/21	8:40:27	-18.5	12.0	0	1.5	N	SPI ok
2	ECR-A-1130	F	11/13/21	8:42:59	-18.4	12.0	0	1.5	N	SPI ok
2	ECR-B-1131	A	11/13/21	8:58:54	-26.2	12.0	0	1.5	N	SPI overpenetrated; PV out of focus
2	ECR-B-1131	B	11/13/21	9:02:20	-25.9	12.0	0	1.5	N	SPI overpenetrated; PV out of focus
2	ECR-B-1131	C	11/13/21	9:04:30	-26.7	12.0	0	1.5	N	SPI ok; PV out of focus Added two cross bars to the base of SPI frame
2	ECR-B-1131	D	11/13/21	9:50:11	-26.8	12.0	0	1.5	N	SPI ok; PV out of focus
2	ECR-B-1131	E	11/13/21	9:52:12	-26.8	12.0	0	1.5	N	SPI ok; PV out of focus
2	ECR-B-1131	F	11/13/21	9:54:41	-26.4	12.0	0	1.5	N	SPI ok; No PV
2	ECR-B-1131	G	11/13/21	10:14:00	-26.3	12.0	0	1.5	N	SPI ok; PV ok
2	ECR-B-1131	H	11/13/21	10:15:58	-26.1	12.0	0	1.5	N	SPI ok; No PV
2	ECR-B-1131	I	11/13/21	10:18:22	-26.6	12.0	0	1.5	N	SPI ok; PV slightly out of focus
2	ECR-A-1132	A	11/13/21	10:40:11	-27.5	12.0	0	1.5	N	SPI ok and PV ok.
2	ECR-A-1132	B	11/13/21	10:42:15	-26.9	12.0	0	1.5	N	SPI ok and PV ok.
2	ECR-A-1132	C	11/13/21	10:44:21	-28.0	12.0	0	1.5	N	SPI ok; No PV flash but laser is on
2	ECR-B-1133	A	11/13/21	11:14:19	-34.6	12.0	0	1.5	N	SPI ok and PV ok.
2	ECR-B-1133	B	11/13/21	11:18:00	-32.9	12.0	0	1.5	N	SPI ok and PV ok.
2	ECR-B-1133	C	11/13/21	11:19:58	0.0	12.0	0	1.5	N	SPI ok; PV disturbed
2	ECR-A-1134	A	11/13/21	11:42:25	-15.9	12.0	0	1.5	N	SPI ok
2	ECR-A-1134	B	11/13/21	11:44:36	-15.0	12.0	0	1.5	N	SPI ok
2	ECR-A-1134	C	11/13/21	11:49:40	-15.6	12.0	0	1.5	N	SPI ok
2	ECR-B-1135	A	11/13/21	12:10:35	-13.8	12.0	2	1.5	N	SPI ok and PV ok.
2	ECR-B-1135	B	11/13/21	12:12:06	-13.9	12.0	2	1.5	N	SPI ok and PV ok.
2	ECR-B-1135	C	11/13/21	12:13:34	-13.9	12.0	2	1.5	N	SPI ok and PV ok.
2	ECR-A-1136	A	11/13/21	12:34:01	-13.8	12.0	2	1.5	N	SPI ok and PV ok.
2	ECR-A-1136	B	11/13/21	12:36:18	-13.8	12.0	2	1.5	N	SPI ok and PV ok.
2	ECR-A-1136	C	11/13/21	12:43:41	-13.7	12.0	2	1.5	N	SPI ok; PV disturbed
2	ECR-B-1137	A	11/14/21	9:32:47	-15.6	12.0	5	1.5	N	SPI OP; PV ok
2	ECR-B-1137	B	11/14/21	9:34:58	-15.7	12.0	5	1.5	N	SPI OP; PV ok
2	ECR-B-1137	C	11/14/21	9:36:27	-15.6	12.0	5	1.5	N	SPI OP; PV ok
2	ECR-B-1137	D	11/14/21	9:38:19	-15.6	12.0	5	1.5	N	SPI OP; PV ok
2	ECR-A-1138	A	11/14/21	9:58:52	-16.3	12.0	5	1.5	N	SPI ok
2	ECR-A-1138	B	11/14/21	10:01:21	-16.3	12.0	5	1.5	N	SPI ok
2	ECR-A-1138	C	11/14/21	10:03:17	-16.3	12.0	5	1.5	N	SPI ok
2	ECR-A-1138	D	11/14/21	10:05:51	-16.2	12.0	5	1.5	N	SPI ok
3	ECR-B-201	A	8/29/21	17:11:47	-24.5	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-201	B	8/29/21	17:18:19	-24.3	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-201	C	8/29/21	17:23:45	-24.3	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-202	A	8/29/21	15:22:30	-24.4	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-202	B	8/29/21	15:28:05	-24.4	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-202	C	8/29/21	15:33:24	-24.7	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-203	A	8/29/21	13:30:47	-23.4	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-203	B	8/29/21	13:36:08	-23.4	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-203	C	8/29/21	13:41:51	-23.4	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-204	A	8/29/21	10:57:54	-22.1	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-204	B	8/29/21	11:02:02	-22.0	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-204	C	8/29/21	11:08:10	-22.0	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-205	A	8/29/21	10:09:59	-21.8	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-205	B	8/29/21	10:16:08	-21.8	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-205	C	8/29/21	10:21:10	-21.8	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-206	A	8/29/21	7:52:48	-22.5	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-206	B	8/29/21	7:57:42	-22.6	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-206	C	8/29/21	8:03:30	-22.5	12.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-207	A	8/29/21	7:01:36	-24.3	12.0	0	0.5	Y	All SPI good; PV visibility improved
3	ECR-B-207	B	8/29/21	7:06:29	-24.1	12.0	0	0.5	Y	All SPI good; PV visibility improved
3	ECR-B-207	C	8/29/21	7:11:57	-24.2	12.0	0	0.5	Y	All SPI good; PV visibility improved
3	ECR-A-208	A	8/29/21	4:48:44	-26.4	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-A-208	B	8/29/21	4:54:49	-26.6	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-A-208	C	8/29/21	5:00:05	-26.5	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
3	ECR-B-209	A	8/29/21	4:00:41	-28.7	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-B-209	B	8/29/21	4:07:33	-28.6	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-B-209	C	8/29/21	4:12:07	-28.6	12.0	0	0.5	Y	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-A-210	A	8/29/21	1:55:06	-27.1	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles. Chg focal length on PV from 0.5 to 0.5
3	ECR-A-210	B	8/29/21	2:00:59	-27.2	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles.
3	ECR-A-210	C	8/29/21	2:06:13	-27.2	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles.
3	ECR-B-211	A	8/29/21	0:59:04	-28.1	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-B-211	B	8/29/21	1:04:25	-28.2	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-B-211	C	8/29/21	1:09:57	-28.2	12.0	0	0.5	N	All SPI good; PV high turbidity w very fine suspended particles
3	ECR-A-212	A	8/28/21	22:44:18	-30.5	12.0	0	0.5	N	SPI OP; PV good
3	ECR-A-212	B	8/28/21	22:49:54	-30.6	12.0	0	0.5	N	SPI OP; PV good
3	ECR-A-212	C	8/28/21	22:55:07	-30.6	12.0	0	0.5	N	SPI OP; PV good
3	ECR-A-212	D	8/28/21	23:25:28	-30.6	12.0	0	0.5	N	A, All SPI and PV ok
3	ECR-A-212	E	8/28/21	23:30:45	-30.4	12.0	0	0.5	N	A, All SPI and PV ok
3	ECR-A-212	F	8/28/21	23:36:22	-30.6	12.0	0	0.5	N	A, All SPI and PV ok
3	ECR-B-213	A	8/28/21	0:52:25	-34.0	13.0	0	0.5	N	A, All SPI and PV ok
3	ECR-B-213	B	8/28/21	0:56:43	-34.1	13.0	0	0.5	N	All SPI good; No PV
3	ECR-B-213	C	8/28/21	1:03:00	-34.2	13.0	0	0.5	N	All SPI good; PV turbid
3	ECR-B-213	D	8/28/21	1:41:14	-34.3	13.0	0	0.5	N	All SPI good; 2 PV too turbid
3	ECR-B-213	E	8/28/21	1:45:49	-34.4	13.0	0	0.5	N	All SPI good; 2 PV too turbid
3	ECR-B-213	F	8/28/21	1:49:48	-34.5	13.0	0	0.5	N	All SPI good; 2 PV too turbid
3	ECR-A-214	A	8/27/21	22:45:36	-34.4	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-A-214	B	8/27/21	22:51:42	-34.4	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-A-214	C	8/27/21	22:57:09	-34.3	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-B-215	A	8/27/21	21:12:28	-34.6	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-B-215	B	8/27/21	21:17:49	-34.5	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-B-215	C	8/27/21	21:23:24	-34.6	13.0	1	0.5	N	A, All SPI and PV ok
3	ECR-A-216	A	8/27/21	19:43:16	-35.1	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-216	B	8/27/21	19:47:35	-35.1	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-216	C	8/27/21	19:52:16	-35.2	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-217	A	8/27/21	18:50:09	-36.3	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-217	B	8/27/21	18:56:38	-36.4	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-217	C	8/27/21	19:02:00	-36.4	13.0	1	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-218	A	8/27/21	16:34:08	-35.6	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-218	B	8/27/21	16:39:43	-35.5	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-218	C	8/27/21	16:44:57	-35.5	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-219	A	8/27/21	14:40:50	-36.7	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-219	B	8/27/21	14:46:16	-36.8	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-219	C	8/27/21	14:50:37	-36.8	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-220	A	8/27/21	12:57:54	-32.7	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-220	B	8/27/21	13:02:19	-32.9	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-220	C	8/27/21	13:07:45	-33.1	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-221	A	8/27/21	10:56:09	-35.0	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-221	B	8/27/21	11:00:37	-35.1	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-221	C	8/27/21	11:05:03	-34.9	13.0	0	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-222	A	8/27/21	6:35:06	-20.6	13.0	5	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-222	B	8/27/21	6:42:23	-20.8	13.0	5	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-A-222	C	8/27/21	6:47:53	-20.5	13.0	5	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-B-223	A	8/25/21	16:37:54	-24.5	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-223	B	8/25/21	16:42:31	-24.3	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-223	C	8/25/21	16:48:15	-24.2	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-224	A	8/25/21	15:03:56	-29.1	13.0	3	0.5	Y	A, All SPI and PV ok
3	ECR-A-224	B	8/25/21	15:07:49	-29.1	13.0	3	0.5	Y	A, All SPI and PV ok
3	ECR-A-224	C	8/25/21	15:12:17	-29.0	13.0	3	0.5	Y	A, All SPI and PV ok
3	ECR-B-225	A	8/25/21	11:29:18	-33.0	13.0	0	0.5	Y	All SPI good; 2 PV too turbid
3	ECR-B-225	B	8/25/21	11:34:05	-33.1	13.0	0	0.5	Y	All SPI good; 2 PV too turbid
3	ECR-B-225	C	8/25/21	11:37:40	-33.1	13.0	0	0.5	Y	All SPI good; 2 PV too turbid

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
3	ECR-A-226	A	8/25/21	10:29:37	-33.3	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-226	B	8/25/21	10:35:16	-33.3	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-226	C	8/25/21	10:39:40	-33.4	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-227	A	8/25/21	9:02:02	-33.5	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-227	B	8/25/21	9:06:45	-33.4	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-227	C	8/25/21	9:11:19	-33.5	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-228	A	8/25/21	8:05:36	-33.3	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-228	B	8/25/21	8:11:39	-33.4	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-228	C	8/25/21	8:16:04	-33.4	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-229	A	8/25/21	6:45:25	-35.8	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-229	B	8/25/21	6:50:29	-35.9	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-229	C	8/25/21	6:56:49	-35.8	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-230	A	8/25/21	5:15:41	-36.0	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-230	B	8/25/21	5:22:01	-35.9	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-230	C	8/25/21	5:26:11	-35.9	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-231	A	8/25/21	3:48:12	-36.7	13.0	0	0.5	Y	All SPI good; 2 PV too turbid
3	ECR-B-231	B	8/25/21	3:53:05	-36.6	13.0	0	0.5	Y	All SPI good; 2 PV too turbid
3	ECR-B-231	C	8/25/21	3:56:44	-36.6	13.0	0	0.5	Y	All SPI good; 2 PV too turbid
3	ECR-A-232	A	8/25/21	1:37:50	-35.2	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-232	B	8/25/21	1:42:35	-35.2	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-232	C	8/25/21	1:47:50	-35.1	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-233	A	8/25/21	0:36:43	-34.8	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-233	B	8/25/21	0:41:26	-34.9	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-233	C	8/25/21	0:47:39	-34.9	13.0	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-234	A	8/24/21	22:08:58	-28.7	13.0	5	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-A-234	B	8/24/21	22:14:00	-28.5	13.0	5	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-A-234	C	8/24/21	22:18:19	-28.4	13.0	5	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-B-235	A	8/24/21	20:54:45	-27.6	13.0	0	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-B-235	B	8/24/21	20:59:14	-27.6	13.0	0	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-B-235	C	8/24/21	21:03:40	-27.6	13.0	0	0.5	N	A, All SPI good (sandy); PV images are satisfactory - turbidity causes images to be hazy
3	ECR-A-236	A	8/24/21	19:17:36	-29.0	13.0	0	0.5	N	A, All SPI and PV ok
3	ECR-A-236	B	8/24/21	19:21:41	-29.0	13.0	0	0.5	N	A, All SPI and PV ok
3	ECR-A-236	C	8/24/21	19:26:08	-28.8	13.0	0	0.5	N	A, All SPI and PV ok
3	ECR-B-237	A	8/24/21	14:29:04	-31.1	13.0	0	0.5	N	All SPI ok; 2 PV ok 1 turbid but still can see the sediment surface
3	ECR-B-237	B	8/24/21	14:34:33	-31.0	13.0	0	0.5	N	All SPI ok; 2 PV ok 1 turbid but still can see the sediment surface
3	ECR-B-237	C	8/24/21	14:38:59	-31.3	13.0	0	0.5	N	All SPI ok; 2 PV ok 1 turbid but still can see the sediment surface
3	ECR-A-238	A	8/24/21	11:43:18	-30.4	13.0	0	0.5	N	All SPI ok; Need to retake PV images
3	ECR-A-238	B	8/24/21	11:49:17	-30.4	13.0	0	0.5	N	All SPI ok; Need to retake PV images
3	ECR-A-238	C	8/24/21	11:53:05	-30.4	13.0	0	0.5	N	All SPI ok; Need to retake PV images
3	ECR-A-238	D	8/24/21	12:55:07	-30.7	13.0	0	0.5	N	All images are ok
3	ECR-A-238	E	8/24/21	13:04:00	-30.8	13.0	0	0.5	N	All images are ok
3	ECR-A-238	F	8/24/21	13:08:46	-30.8	13.0	0	0.5	N	All images are ok
3	ECR-B-239	A	8/24/21	10:16:18	-29.8	13.0	0	0.5	N	All SPI ok; All PV turbid
3	ECR-B-239	B	8/24/21	10:20:59	-29.8	13.0	0	0.5	N	All SPI ok; All PV turbid
3	ECR-B-239	C	8/24/21	10:25:05	-29.8	13.0	0	0.5	N	All SPI ok; All PV turbid
3	ECR-A-240	A	8/24/21	7:13:00	-28.5	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-A-240	B	8/24/21	7:19:10	-28.5	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-A-240	C	8/24/21	7:24:18	-28.6	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-B-241	A	8/24/21	4:41:33	-28.9	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-B-241	B	8/24/21	4:46:31	-28.9	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-B-241	C	8/24/21	4:53:32	-28.9	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-A-242	A	8/24/21	3:18:38	-29.3	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-A-242	B	8/24/21	3:24:41	-29.3	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-A-242	C	8/24/21	3:31:41	-29.3	13.0	0	0.5	Y	A, All SPI and PV ok (shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5)
3	ECR-B-243	A	8/24/21	0:38:43	-29.7	13.0	0	1	Y	SPI ok but PV is turbid
3	ECR-B-243	B	8/24/21	0:45:05	-29.7	13.0	0	1	Y	SPI ok but PV is turbid
3	ECR-B-243	C	8/24/21	0:48:55	-29.7	13.0	0	1	Y	SPI ok but PV is turbid

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
3	ECR-B-243	D	8/30/21	4:52:33	-29.3	13.5	0	0.5	Y	All SPI and PV good; Camera settings: Strobe 45%, shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 0.5
3	ECR-B-243	E	8/30/21	4:58:04	-29.2	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-243	F	8/30/21	5:03:50	-29.2	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-244	A	8/23/21	22:40:26	-28.7	13.0	5	1	Y	OP, all SPI overpenetrated; PV is turbid. Remove all weights from SPI and redeployed.
3	ECR-A-244	B	8/23/21	22:47:03	-28.9	13.0	5	1	Y	OP, all SPI overpenetrated; PV is turbid. Remove all weights from SPI and redeployed.
3	ECR-A-244	C	8/23/21	22:52:10	-28.9	13.0	5	1	Y	OP, all SPI overpenetrated; PV is turbid. Remove all weights from SPI and redeployed.
3	ECR-A-244	D	8/23/21	23:22:30	-29.2	13.0	0	1	Y	SPI ok but PV is turbid
3	ECR-A-244	E	8/23/21	23:27:19	-29.1	13.0	0	1	Y	SPI ok but PV is turbid
3	ECR-A-244	F	8/23/21	23:32:59	-29.1	13.0	0	1	Y	SPI ok but PV is turbid
3	ECR-A-244	G	8/30/21	6:27:22	-28.9	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-244	H	8/30/21	6:34:14	-28.8	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-244	I	8/30/21	6:39:17	-28.9	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-245	A	8/30/21	8:08:04	-28.3	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-245	B	8/30/21	8:13:13	-28.2	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-245	C	8/30/21	8:18:00	-28.3	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-246	A	8/30/21	8:51:18	-28.0	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-246	B	8/30/21	8:58:03	-28.0	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-246	C	8/30/21	9:02:09	-28.0	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-247	A	8/30/21	10:28:07	-27.4	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-247	B	8/30/21	10:34:48	-27.4	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-B-247	C	8/30/21	10:39:44	-27.3	13.5	0	0.5	Y	A, All SPI and PV ok
3	ECR-A-301	A	8/30/21	11:18:14	-27.3	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-301	B	8/30/21	11:23:51	-27.3	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-301	C	8/30/21	11:30:15	-27.2	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-302	A	8/30/21	13:27:40	-27.6	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-302	B	8/30/21	13:33:12	-27.6	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-302	C	8/30/21	13:38:38	-27.7	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-303	A	8/30/21	14:21:20	-27.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-303	B	8/30/21	14:26:55	-27.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-303	C	8/30/21	14:34:34	-27.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-304	A	8/30/21	15:50:42	-28.2	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-304	B	8/30/21	15:56:20	-28.2	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-304	C	8/30/21	16:01:20	-28.3	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-305	A	8/30/21	16:50:10	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-305	B	8/30/21	16:55:52	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-305	C	8/30/21	17:01:04	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-306	A	8/30/21	19:04:52	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-306	B	8/30/21	19:10:38	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-306	C	8/30/21	19:15:08	-28.6	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-307	A	8/30/21	19:55:00	-28.5	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-307	B	8/30/21	20:00:24	-28.4	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-307	C	8/30/21	20:05:41	-28.3	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-308	A	8/30/21	21:46:05	-28.0	13.5	2	0.5	N	A, All SPI and PV ok. GoPro battery died
3	ECR-B-308	B	8/30/21	21:51:49	-27.8	13.5	2	0.5	N	A, All SPI and PV ok. GoPro battery died
3	ECR-B-308	C	8/30/21	21:56:55	-27.8	13.5	2	0.5	N	A, All SPI and PV ok. GoPro battery died
3	ECR-A-309	A	8/31/21	9:52:31	-27.9	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-309	B	8/31/21	9:57:18	-28.0	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-309	C	8/31/21	10:00:56	-28.1	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-310	A	8/30/21	23:26:25	-27.1	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-310	B	8/30/21	23:32:34	-27.1	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-310	C	8/30/21	23:37:48	-27.1	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-311	A	8/31/21	0:50:03	-26.8	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-311	B	8/31/21	0:55:54	-26.8	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-A-311	C	8/31/21	1:01:08	-26.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-312	A	8/31/21	2:35:40	-26.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-312	B	8/31/21	2:41:19	-26.9	13.5	2	0.5	Y	A, All SPI and PV ok
3	ECR-B-312	C	8/31/21	2:46:16	-27.0	13.5	2	0.5	Y	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
3	ECR-A-313	A	8/31/21	3:19:03	-26.7	13.5	4	0.5	Y	A, All SPI and PV ok
3	ECR-A-313	B	8/31/21	3:23:56	-26.8	13.5	4	0.5	Y	A, All SPI and PV ok
3	ECR-A-313	C	8/31/21	3:28:47	-26.7	13.5	4	0.5	Y	A, All SPI and PV ok
3	ECR-B-314	A	8/31/21	4:54:03	-27.0	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-B-314	B	8/31/21	4:59:50	-27.0	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-B-314	C	8/31/21	5:04:01	-26.9	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-A-315	A	8/31/21	5:32:41	-26.9	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-A-315	B	8/31/21	5:38:30	-26.9	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-A-315	C	8/31/21	5:43:16	-26.9	13.5	5	0.5	N	A, All SPI and PV ok
3	ECR-B-316	A	8/31/21	8:18:30	-26.6	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-316	B	8/31/21	8:24:34	-26.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-316	C	8/31/21	8:29:17	-26.4	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-317	A	8/31/21	11:12:24	-25.6	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-317	B	8/31/21	11:18:03	-25.4	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-317	C	8/31/21	11:22:53	-25.6	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-318	A	8/31/21	13:19:55	-25.1	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-318	B	8/31/21	13:25:24	-25.2	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-318	C	8/31/21	13:30:58	-25.2	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-319	A	8/31/21	14:14:22	-24.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-319	B	8/31/21	14:19:58	-24.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-319	C	8/31/21	14:25:00	-24.6	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-320	A	8/31/21	15:39:09	-23.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-320	B	8/31/21	15:44:40	-23.4	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-320	C	8/31/21	15:54:39	-23.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-321	A	8/31/21	16:30:44	-22.6	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-321	B	8/31/21	16:36:41	-22.7	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-321	C	8/31/21	16:41:41	-22.8	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-322	A	8/31/21	19:02:24	-21.5	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-322	B	8/31/21	19:09:50	-22.1	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-322	C	8/31/21	19:15:06	-21.9	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-323	A	9/1/21	10:46:33	-22.5	13.5	5	1.3	Y	All SPI underpenetrated; medium to fine sand; All PV ok
3	ECR-A-323	B	9/1/21	10:51:50	-22.7	13.5	5	1.3	Y	All SPI underpenetrated; medium to fine sand; All PV ok
3	ECR-A-323	C	9/1/21	10:58:38	-20.6	13.5	5	1.3	Y	All SPI underpenetrated; medium to fine sand; All PV ok
3	ECR-B-324	A	8/31/21	21:14:55	-21.8	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-324	B	8/31/21	21:20:46	-21.7	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-B-324	C	8/31/21	21:27:28	-21.4	13.5	5	0.5	Y	A, All SPI and PV ok
3	ECR-A-325	A	8/31/21	22:23:57	-25.5	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-A-325	B	8/31/21	22:29:33	-25.2	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-A-325	C	8/31/21	22:35:54	-25.2	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-B-326	A	9/1/21	1:03:10	-28.4	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-B-326	B	9/1/21	1:09:54	-28.6	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-B-326	C	9/1/21	1:15:05	-28.0	13.5	5	1.3	Y	A, All SPI and PV ok
3	ECR-C-1101	A	9/15/21	10:37:00	-21.44	13.5	3	50	N	SPI underpenetration with 3 weights on each side - reshoot and PV ok
3	ECR-C-1101	B	9/15/21	10:43:00	-21.45	13.5	3	50	N	SPI underpenetration with 3 weights on each side - reshoot and PV ok
3	ECR-C-1101	C	9/15/21	10:50:00	-21.46	13.5	3	50	N	SPI underpenetration with 3 weights on each side - reshoot and PV ok
3	ECR-C-1207	A	8/27/21	8:44:20	-20.3	13.0	5	0.5	Y	USBL did not work - brought camera on deck
3	ECR-C-1207	B	8/27/21	9:09:31	-20.0	13.0	5	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-C-1207	C	8/27/21	9:12:02	-20.0	13.0	5	0.5	Y	A, All SPI and PV ok; GoPro
3	ECR-C-1208	A	8/25/21	19:23:25	-19.4	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-C-1208	B	8/25/21	19:27:09	-21.5	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-C-1208	C	8/25/21	19:31:13	-21.6	13.0	5	0.5	Y	A, All SPI and PV ok
3	ECR-C-1215	A	9/15/21	9:03:38	-23.49	13.5	3	50	N	SPI and PV ok.
3	ECR-C-1215	B	9/15/21	9:08:50	-23.45	13.5	3	50	N	SPI and PV ok.
3	ECR-C-1215	C	9/15/21	9:15:43	-23.42	13.5	3	50	N	SPI and PV ok.
4	ECR-A-327	A	9/1/21	2:07:27	-28.4	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-A-327	B	9/1/21	2:12:53	-28.5	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-A-327	C	9/1/21	2:18:25	-28.7	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-B-328	A	9/1/21	4:01:47	-26.5	13.5	5	1.3	Y	UP SPI, and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
4	ECR-B-328	B	9/1/21	4:06:30	-26.7	13.5	5	1.3	Y	UP SPI, and PV ok
4	ECR-B-328	C	9/1/21	4:12:19	-26.9	13.5	5	1.3	Y	UP SPI, and PV ok
4	ECR-A-329	A	9/1/21	4:53:01	-28.8	13.5	5	1.3	Y	UP SPI, and PV ok
4	ECR-A-329	B	9/1/21	4:58:10	-28.9	13.5	5	1.3	Y	UP SPI, and PV ok
4	ECR-A-329	C	9/1/21	5:03:31	-28.8	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-B-330	A	9/1/21	6:50:51	-29.8	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-B-330	B	9/1/21	6:57:03	-29.8	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-B-330	C	9/1/21	7:02:38	-30.0	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-A-331	A	9/1/21	7:30:06	-32.8	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-A-331	B	9/1/21	7:35:38	-32.9	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-A-331	C	9/1/21	7:40:21	-32.8	13.5	5	1.3	Y	All SPI underpenetrated (shell hash); medium to fine sand; All PV ok
4	ECR-B-332	A	9/1/21	13:27:41	-32.7	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-B-332	B	9/1/21	13:33:36	-32.8	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-B-332	C	9/1/21	13:38:48	-32.9	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-A-333	A	9/1/21	14:39:56	-38.3	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-A-333	B	9/1/21	14:44:44	-38.9	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-A-333	C	9/1/21	14:49:57	-39.0	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-B-334	A	9/1/21	17:34:09	-35.7	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-B-334	B	9/1/21	17:41:52	-35.7	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-B-334	C	9/1/21	17:47:30	-36.2	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-A-335	A	9/2/21	14:05:42	-37.9	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-A-335	B	9/2/21	14:10:24	-38.0	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-A-335	C	9/2/21	14:14:51	-39.9	13.5	5	1.3	N	A, All SPI and PV ok
4	ECR-B-336	A	9/2/21	15:49:49	-37.7	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-B-336	B	9/2/21	15:54:16	-37.9	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-B-336	C	9/2/21	16:01:30	-38.3	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-B-336	D	9/2/21	16:46:16	-38.8	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-B-336	E	9/2/21	16:52:18	-38.7	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-B-336	F	9/2/21	16:58:38	-38.3	13.5	5	0.5	N	SPI ok, PV not clear - too turbid
4	ECR-A-337	A	9/2/21	18:22:15	-36.9	13.5	5	0.5	Y	SPI ok, PV not clear - but acceptable.
4	ECR-A-337	B	9/2/21	18:27:00	-36.7	13.5	5	0.5	Y	SPI UP, PV Particulates in water column
4	ECR-A-337	C	9/2/21	18:31:13	-36.9	13.5	5	0.5	Y	SPI ok, Adjust to S 1/125, F 5.6, ISO 1250
4	ECR-B-338	A	9/2/21	19:59:34	-37.1	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-338	B	9/2/21	20:05:23	-37.2	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-338	C	9/2/21	20:10:09	-37.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-339	A	9/2/21	21:09:14	-44.1	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-339	B	9/2/21	21:13:23	-44.0	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-339	C	9/2/21	21:17:54	-43.7	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-340	A	9/3/21	1:34:06	-42.7	13.5	5	0.5	Y	All SPI underpenetrated
4	ECR-B-340	B	9/3/21	1:40:01	-42.5	13.5	5	0.5	Y	A&B PV borderline acceptable - visible at 0.8 m
4	ECR-B-340	C	9/3/21	1:50:54	-42.8	13.5	5	0.5	Y	C PV unacceptable
4	ECR-B-340	D	9/3/21	6:36:36	-43.5	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-340	E	9/3/21	6:45:25	-43.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-340	F	9/3/21	6:53:28	-43.6	13.5	5	0.5	Y	A, All SPI and PV ok; PV shot at 1/160 instead of 1/60
4	ECR-A-341	A	9/3/21	2:49:06	-43.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-341	B	9/3/21	2:56:08	-43.5	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-341	C	9/3/21	2:59:59	-43.7	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-342	A	9/3/21	5:09:45	-41.8	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-342	B	9/3/21	5:13:58	-41.6	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-342	C	9/3/21	5:19:51	-41.6	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-343	A	9/3/21	7:56:11	-39.1	13.5	5	0.5	N	A, All SPI good; changed PV speed to 1/125; good PV-shows limpet shells @ f5.6
4	ECR-A-343	B	9/3/21	8:01:34	-39.6	13.5	5	0.5	N	Attempted 2nd drop down really slowly but all 3 PV were disturbed. Spoke w/client and he said 1st shot was good enough
4	ECR-A-343	C	9/3/21	8:07:11	-39.5	13.5	5	0.5	N	Attempted 2nd drop down really slowly but all 3 PV were disturbed. Spoke w/client and he said 1st shot was good enough
4	ECR-A-343	D	9/3/21	8:42:51	-39.7	13.5	5	0.5	N	Attempted 2nd drop down really slowly but all 3 PV were disturbed. Spoke w/client and he said 1st shot was good enough

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
4	ECR-A-343	E	9/3/21	8:52:29	-39.6	13.5	5	0.5	N	Attempted 2nd drop down really slowly but all 3 PV were disturbed. Spoke w/client and he said 1st shot was good enough
4	ECR-A-343	F	9/3/21	9:00:30	-39.7	13.5	5	0.5	N	Attempted 2nd drop down really slowly but all 3 PV were disturbed. Spoke w/client and he said 1st shot was good enough
4	ECR-B-344	A	9/3/21	10:54:25	-34.9	13.5	5	0.5	N	All SPI ok; One PV w/poor visibility; All PV are turbid. 1st video showed high turbidity. No 2nd attempt
4	ECR-B-344	B	9/3/21	11:00:17	-34.9	13.5	5	0.5	N	it wouldn't improve chances better images 0.5m from bottom; Reset PV camera: 45 Power, 1/60, f8
4	ECR-B-344	C	9/3/21	11:05:36	-34.8	13.5	5	0.5	N	ISO 1250, focal length 0.5m.
4	ECR-B-344	D	9/3/21	15:57:28	-34.1	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-344	E	9/3/21	16:04:35	-34.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-344	F	9/3/21	16:09:38	-34.2	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-345	A	9/3/21	12:38:44	-30.2	13.5	5	0.5	Y	SPI ok, PV images acceptable but 'cloudy'
4	ECR-A-345	B	9/3/21	12:43:05	-30.2	13.5	5	0.5	Y	SPI ok, PV images acceptable but 'cloudy'
4	ECR-A-345	C	9/3/21	12:48:18	-30.0	13.5	5	0.5	Y	SPI ok, PV images acceptable but 'cloudy'
4	ECR-B-346	A	9/3/21	17:01:30	-30.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-346	B	9/3/21	17:10:14	-30.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-346	C	9/3/21	17:16:19	-30.2	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-347	A	9/3/21	18:31:11	-31.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-347	B	9/3/21	18:37:38	-31.1	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-347	C	9/3/21	18:41:52	-30.9	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-348	A	9/3/21	21:59:19	-40.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-348	B	9/3/21	22:04:37	-40.7	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-348	C	9/3/21	22:10:55	-39.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-349	A	9/3/21	22:51:59	-42.6	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-349	B	9/3/21	22:57:11	-42.6	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-349	C	9/3/21	23:02:03	-42.6	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-350	A	9/4/21	8:54:01	-41.0	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-350	B	9/4/21	9:00:25	-41.1	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-350	C	9/4/21	9:06:53	-41.0	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-A-401	A	9/4/21	10:29:40	-43.0	13.5	5.0	0.5	N	A, All SPI and PV ok
4	ECR-A-401	B	9/4/21	10:35:03	-43.0	13.5	5.0	0.5	N	A, All SPI and PV ok
4	ECR-A-401	C	9/4/21	10:40:39	-43.0	13.5	5.0	0.5	N	A, All SPI and PV ok
4	ECR-B-402	A	9/4/21	12:53:37	-45.1	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-B-402	B	9/4/21	12:57:54	-44.8	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-B-402	C	9/4/21	13:03:32	-44.5	13.5	5.0	0.5	Y	SPI shallow penetration and PV ok
4	ECR-A-403	A	9/4/21	13:45:36	-49.1	13.5	5.0	0.5	Y	SPI shallow penetration and PV ok
4	ECR-A-403	B	9/4/21	13:50:34	-49.1	13.5	5.0	0.5	Y	SPI shallow penetration and PV ok
4	ECR-A-403	C	9/4/21	13:55:23	-48.8	13.5	5.0	0.5	Y	SPI shallow penetration and PV ok
4	ECR-B-404	A	9/4/21	15:21:03	-50.1	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-B-404	B	9/4/21	15:26:27	-49.9	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-B-404	C	9/4/21	15:32:01	-49.9	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-A-405	A	9/4/21	16:19:43	-50.1	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-A-405	B	9/4/21	16:24:51	-50.0	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-A-405	C	9/4/21	16:29:44	-50.0	13.5	5.0	0.5	Y	A, All SPI and PV ok
4	ECR-B-406	A	9/4/21	19:19:45	-49.6	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-B-406	B	9/4/21	19:26:10	-49.4	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-B-406	C	9/4/21	19:40:03	-49.4	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-A-407	A	9/4/21	21:55:26	-48.1	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-A-407	B	9/4/21	21:59:55	-48.0	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-A-407	C	9/4/21	22:04:32	-47.9	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-B-408	A	9/4/21	23:31:41	-49.4	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-B-408	B	9/4/21	23:36:55	-49.3	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-B-408	C	9/4/21	23:42:28	-49.6	13.5	5.0	0.8	N	SPI shallow penetration and PV ok
4	ECR-A-409	A	9/5/21	0:33:26	-51.3	13.5	5.0	0.8	N	All SPI underpenetrated (shell hash); gravel; All PV ok;
4	ECR-A-409	B	9/5/21	0:39:24	-50.6	13.5	5.0	0.8	N	All SPI underpenetrated (shell hash); gravel; All PV ok;
4	ECR-A-409	C	9/5/21	0:43:24	-50.9	13.5	5.0	0.8	N	Adjusted focal length on PV to 0.7m+5
4	ECR-B-410	A	9/5/21	2:15:23	-52.6	13.5	5.0	0.8	Y	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
4	ECR-B-410	B	9/5/21	2:21:29	-52.7	13.5	5.0	0.8	Y	All SPI underpenetrated
4	ECR-B-410	C	9/5/21	2:27:44	-51.1	13.5	5.0	0.8	Y	PV images are sharp a 0.7m+5
4	ECR-A-411	A	9/5/21	3:52:35	-45.9	13.5	5.0	0.8	Y	All SPI underpenetrated
4	ECR-A-411	B	9/5/21	3:56:33	-46.1	13.5	5.0	0.8	Y	All PV ok and GoPro (chgd to 1080i 60fps)
4	ECR-A-411	C	9/5/21	4:02:24	-46.1	13.5	5.0	0.8	Y	A
4	ECR-B-412	A	9/4/21	1:20:30	-37.5	13.5	5	0.5	Y	All SPI underpenetrated, All PV ok
4	ECR-B-412	B	9/4/21	1:24:06	-37.1	13.5	5	0.5	Y	All SPI underpenetrated, All PV ok
4	ECR-B-412	C	9/4/21	1:31:21	-38.2	13.5	5	0.5	Y	All SPI underpenetrated, All PV ok
4	ECR-A-413	A	9/4/21	2:56:18	-41.2	13.5	5	0.5	Y	SPI shallow penetration but can still see aRPDs; PV ok
4	ECR-A-413	B	9/4/21	3:01:24	-49.4	13.5	5	0.5	Y	SPI shallow penetration but can still see aRPDs; PV ok
4	ECR-A-413	C	9/4/21	3:06:11	-49.4	13.5	5	0.5	Y	SPI shallow penetration but can still see aRPDs; PV ok
4	ECR-B-414	A	9/5/21	11:42:26	-47.5	13.5	5.0	0.8	Y	All SPI underpenetrated. Can see aRPDs, All PVs are marginal.
4	ECR-B-414	B	9/5/21	11:48:25	-47.8	13.5	5.0	0.8	Y	All SPI underpenetrated. Can see aRPDs, All PVs are marginal.
4	ECR-B-414	C	9/5/21	11:53:05	-47.5	13.5	5.0	0.8	Y	All SPI underpenetrated. Can see aRPDs, All PVs are marginal.
4	ECR-B-414	D	9/5/21	12:41:47	-47.7	13.5	5.0	0.8	Y	SPI ok but underpenetrated
4	ECR-B-414	E	9/5/21	12:46:57	-48.0	13.5	5.0	0.8	Y	SPI ok but underpenetrated
4	ECR-B-414	F	9/5/21	12:55:20	-48.0	13.5	5.0	0.8	Y	PV is low visibility - high particle loading
4	ECR-A-415	A	9/5/21	17:22:48	-46.9	13.5	5.0	0.8	Y	A, All SPI and PV ok; GoPro light died
4	ECR-A-415	B	9/5/21	17:29:59	-44.3	13.5	5.0	0.8	Y	A, All SPI and PV ok; GoPro light died
4	ECR-A-415	C	9/5/21	17:40:13	-44.4	13.5	5.0	0.8	Y	A, All SPI and PV ok; GoPro light died
4	ECR-B-416	A	9/5/21	20:24:18	-49.6	13.5	5.0	0.8	N	A, All SPI and PV ok
4	ECR-B-416	B	9/5/21	20:31:51	-49.5	13.5	5.0	0.8	N	A, All SPI and PV ok
4	ECR-B-416	C	9/5/21	20:40:52	-49.9	13.5	5.0	0.8	N	A, All SPI and PV ok
4	ECR-A-417	A	9/5/21	21:32:24	-51.5	13.5	5.0	0.8	Y	A, SPI and PV ok
4	ECR-A-417	B	9/5/21	21:37:51	-51.4	13.5	5.0	0.8	Y	SPI underpenetrated compact sand
4	ECR-A-417	C	9/5/21	21:45:51	-51.2	13.5	5.0	0.8	Y	SPI underpenetrated compact sand
4	ECR-B-418	A	9/6/21	1:09:20	-43.3	13.5	5.0	0.8	N	All SPI underpenetrated; large ~3cm cobble
4	ECR-B-418	B	9/6/21	1:17:47	-43.9	13.5	5.0	0.8	N	1 PV good; other 2 slightly turbid;
4	ECR-B-418	C	9/6/21	1:24:51	-43.3	13.5	5.0	0.8	N	very strong currents; high tension on winch wire cable
4	ECR-A-419	A	9/6/21	2:13:21	-15.3	13.5	5.0	0.8	Y	All SPI underpenetrated; cobble
4	ECR-A-419	B	9/6/21	2:19:10	-15.3	13.5	5.0	0.8	Y	All PV are good
4	ECR-A-419	C	9/6/21	2:24:32	-14.93	13.5	5.0	0.8	Y	Presence of white coral
4	ECR-B-420	A	9/8/21	10:26:30	-23.00	13.5	5	50	Y	SPI low penetration due to cobble. PV accepted.
4	ECR-B-420	B	9/8/21	10:34:52	-23.90	13.5	5	50	Y	SPI low penetration due to cobble. PV accepted.
4	ECR-B-420	C	9/8/21	10:40:54	-24.85	13.5	5	50	Y	SPI low penetration due to cobble. PV accepted.
4	ECR-A-421	A	9/6/21	3:19:00	-30.52	13.5	5.0	0.8	Y	All SPI aRPDs are visible
4	ECR-A-421	B	9/6/21	3:25:14	-30.37	13.5	5.0	0.8	Y	All PV ok
4	ECR-A-421	C	9/6/21	3:32:02	-30.15	13.5	5.0	0.8	Y	Medium to fine sand
4	ECR-B-456	A	9/10/21	10:59:03	-43.66	13.5	5	50	Y	SPI and PV accepted.
4	ECR-B-456	B	9/10/21	11:07:58	-43.56	13.5	5	50	Y	SPI and PV accepted.
4	ECR-B-456	C	9/10/21	11:15:24	-43.57	13.5	5	50	Y	SPI and PV accepted.
4	ECR-A-457	A	9/10/21	8:36:38	-45.08	13.5	5	50	Y	SPI accepted. PV shows high turbidity in water column with shell hash and gravel over medium sand
4	ECR-A-457	B	9/10/21	8:45:45	-45.18	13.5	5	50	Y	SPI accepted. PV shows high turbidity in water column with shell hash and gravel over medium sand
4	ECR-A-457	C	9/10/21	8:56:11	-45.31	13.5	5	50	Y	SPI accepted. PV shows high turbidity in water column with shell hash and gravel over medium sand
4	ECR-A-457	D	9/10/21	13:13:14	-46.25	13.5	5	50	Y	SPI and PV accepted.
4	ECR-A-457	E	9/10/21	13:19:43	-46.41	13.5	5	50	Y	SPI and PV accepted.
4	ECR-A-457	F	9/10/21	13:26:42	-46.24	13.5	5	50	Y	SPI and PV accepted.
4	ECR-B-458	A	9/10/21	7:13:36	-47.26	13.5	5	50	Y	SPI and PV accepted.
4	ECR-B-458	B	9/10/21	7:15:49	-47.12	13.5	5	50	Y	SPI and PV accepted.
4	ECR-B-458	C	9/10/21	7:49:47	-48.23	13.5	5	50	Y	SPI and PV accepted.
4	ECR-A-459	A	9/8/21	22:06:55	-52.14	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-459	B	9/8/21	22:13:12	-51.94	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-459	C	9/8/21	22:17:57	-52.03	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-B-460	A	9/8/21	21:06:09	-53.01	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-B-460	B	9/8/21	21:16:19	-53.17	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
4	ECR-B-460	C	9/8/21	21:21:53	-53.07	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-461	A	9/8/21	17:13:11	-46.88	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-461	B	9/8/21	17:16:45	-46.84	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-461	C	9/8/21	17:20:48	-46.76	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-B-462	A	9/8/21	16:15:39	-51.98	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-B-462	B	9/8/21	16:20:56	-51.74	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-B-462	C	9/8/21	16:25:39	-51.65	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
4	ECR-A-463	A	9/8/21	13:51:08	-47.92	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV accepted.
4	ECR-A-463	B	9/8/21	13:57:35	-48.06	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV not accepted.
4	ECR-A-463	C	9/8/21	14:02:27	-48.01	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low Vis - PV not accepted.
4	ECR-A-463	D	9/8/21	14:39:30	-47.81	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV not accepted.
4	ECR-A-463	E	9/8/21	14:44:12	-47.94	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV not accepted.
4	ECR-A-463	F	9/8/21	14:48:27	-47.91	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV accepted.
4	ECR-B-464	A	9/5/21	7:20:59	-51.4	13.5	5.0	0.8	Y	All SPI underpenetrated; PV disturbed A
4	ECR-B-464	B	9/5/21	7:27:59	-51.4	13.5	5.0	0.8	Y	PV ok for B and C
4	ECR-B-464	C	9/5/21	7:34:51	-51.3	13.5	5.0	0.8	Y	See above
4	ECR-A-465	A	9/4/21	7:02:13	-49.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-465	B	9/4/21	7:09:54	-49.3	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-A-465	C	9/4/21	7:17:15	-49.4	13.5	5	0.5	Y	A, All SPI and PV ok
4	ECR-B-466	A	9/5/21	8:43:14	-42.8	13.5	5.0	0.8	Y	All SPI low penetration. Can see aRPDs
4	ECR-B-466	B	9/5/21	8:50:26	-42.2	13.5	5.0	0.8	Y	All PVs ok; slightly dark.
4	ECR-B-466	C	9/5/21	8:59:01	-42.4	13.5	5.0	0.8	Y	Flash power was at 100% --> reset to 45%, 1/125, ISO 1250; focal 10.7m+5
4	ECR-A-467	A	9/5/21	13:45:30	-47.0	13.5	5.0	0.8	Y	SPI underpenetrated compact sand
4	ECR-A-467	B	9/5/21	13:50:12	-47.4	13.5	5.0	0.8	Y	PV acceptable
4	ECR-A-467	C	9/5/21	13:56:18	-47.2	13.5	5.0	0.8	Y	
4	ECR-B-468	A	9/5/21	16:09:39	-40.1	13.5	5.0	0.8	Y	SPI underpenetrated compact sand
4	ECR-B-468	B	9/5/21	16:16:14	-41.3	13.5	5.0	0.8	Y	PV acceptable
4	ECR-B-468	C	9/5/21	16:21:30	-39.7	13.5	5.0	0.8	Y	
4	ECR-C-1302	A	9/1/21	19:09:36	-33.6	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-C-1302	B	9/1/21	19:16:01	-33.5	13.5	5	1.3	Y	A, All SPI and PV ok
4	ECR-C-1302	C	9/1/21	19:23:25	-34.4	13.5	5	1.3	Y	A, All SPI and PV ok
5	ECR-A-469	A	9/10/21	15:00:01	-42.65	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-A-469	B	9/10/21	15:08:11	-42.79	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-A-469	C	9/10/21	15:14:16	-42.51	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-470	A	9/10/21	16:46:32	-42.65	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-470	B	9/10/21	16:53:49	-42.68	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-470	C	9/10/21	17:00:41	-42.40	13.5	5	50	Y	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-471	A	9/10/21	18:49:39	-36.25	13.5	5	50	N	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-471	B	9/10/21	19:00:24	-36.31	13.5	5	50	N	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-471	C	9/10/21	19:07:13	-38.83	13.5	5	50	N	SPI low penetration due to sand/gravel and PV accepted.
5	ECR-B-472	A	9/10/21	20:36:45	-27.08	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-472	B	9/10/21	20:43:41	-27.41	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-472	C	9/10/21	20:47:47	-27.41	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-473	A	9/11/21	1:57:26	-24.23	13.5	5	50	Y	SPI accepted. No PV. faulty trigger.
5	ECR-A-473	B	9/11/21	2:03:51	-24.20	13.5	5	50	Y	SPI accepted. No PV. faulty trigger.
5	ECR-A-473	C	9/11/21	2:08:04	-24.42	13.5	5	50	Y	SPI accepted. No PV. faulty trigger.
5	ECR-A-473	D	9/11/21	3:00:17	-24.05	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-473	E	9/11/21	3:05:21	-24.24	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-473	F	9/11/21	3:10:36	-24.27	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-474	A	9/11/21	7:23:50	-15.04	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-474	B	9/11/21	7:26:35	-15.21	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-474	C	9/11/21	7:33:24	-15.20	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-475	A	11/10/21	10:15:53	-10.6	12.0	5	0.5	N	All SPI and PV ok
5	ECR-A-475	B	11/10/21	10:18:28	-10.6	12.0	5	0.5	N	All SPI and PV ok
5	ECR-A-475	C	11/10/21	10:23:18	-10.7	12.0	5	0.5	N	PV blurred; SPI pullout
5	ECR-B-476	A	11/10/21	7:48:41	-8.9	12.0	5	0.5	N	A, All SPI and PV ok softer sediments, good SPI penetration, PV is Blurred)
5	ECR-B-476	B	11/10/21	7:51:17	-9.0	12.0	5	0.5	N	A, All SPI and PV ok softer sediments, good SPI penetration, PV is Blurred)
5	ECR-B-476	C	11/10/21	7:53:28	-9.0	12.0	5	0.5	N	A, All SPI and PV ok softer sediments, good SPI penetration, PV is Blurred)

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
5	ECR-A-477	A	11/10/21	8:17:33	-7.3	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-A-477	B	11/10/21	8:19:17	-7.3	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-A-477	C	11/10/21	8:21:45	-7.3	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-B-478	A	11/10/21	9:46:37	-3.8	12.0	5	0.5	N	SPI underpenetrated, PV ok
5	ECR-B-478	B	11/10/21	9:49:00	-3.8	12.0	5	0.5	N	SPI no penetration - possibly shells or pebbles, PV ok
5	ECR-B-478	C	11/10/21	9:51:05	-4.0	12.0	5	0.5	N	PV disturbed, SPI ok
5	ECR-A-479	A	11/10/21	8:11:35	-7.3	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-A-479	B	11/10/21	8:13:26	-7.3	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-A-479	C	11/10/21	8:15:14	-7.4	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-B-480-A	A	11/10/21	9:03:58	0.0	12.0	5	0.5	N	SPI ok, PV disturbed
5	ECR-B-480-A	B	11/10/21	9:06:08	-5.7	12.0	5	0.5	N	All SPI and PV ok
5	ECR-B-480-A	C	11/10/21	9:08:10	-5.8	12.0	5	0.5	N	All SPI and PV ok
5	ECR-A-481	B	9/10/21	21:23:32	-26.92	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-481	C	9/10/21	21:30:34	-26.96	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-481	A	9/10/21	21:17:56	-26.75	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-482	A	9/11/21	1:04:50	-21.81	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-482	B	9/11/21	1:10:52	-21.72	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-482	C	9/11/21	1:16:00	-21.55	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-483	A	9/11/21	5:19:58	-15.73	13.5	5	50	Y	SPI low penetration due to fine compact sand and PV accepted.
5	ECR-A-483	B	9/11/21	5:26:15	-15.87	13.5	5	50	Y	SPI low penetration due to fine compact sand and PV accepted.
5	ECR-A-483	C	9/11/21	5:31:15	-15.55	13.5	5	50	Y	SPI low penetration due to fine compact sand and PV accepted.
5	ECR-B-484	A	9/11/21	9:33:06	-10.52	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-484	B	9/11/21	9:39:26	-10.37	13.5	5	50	Y	SPI and PV accepted.
5	ECR-B-484	C	9/11/21	9:45:56	-10.47	13.5	5	50	Y	SPI and PV accepted.
5	ECR-A-485	A	11/10/21	7:24:24	-9.7	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-A-485	B	11/10/21	7:27:58	-9.7	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-A-485	C	11/10/21	7:31:11	-9.7	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-B-486	A	11/10/21	7:00:23	-15.0	12.0	5	0.5	N	A, All SPI and PV ok. PV camera: ISO 1250, f5.6, 1/125, focal length 0.5m
5	ECR-B-486	B	11/10/21	7:02:08	-15.0	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-B-486	C	11/10/21	7:04:23	-15.0	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-B-486	D	11/10/21	7:06:47	0.0	12.0	5	0.5	N	A, All SPI and PV ok (underpenetration for all SPI but aRPD are visible)
5	ECR-A-487	A	11/10/21	10:55:41	-7.3	12.0	5	0.5	N	All SPI and PV ok
5	ECR-A-487	B	11/10/21	10:57:40	-7.3	12.0	5	0.5	N	All SPI and PV ok
5	ECR-A-487	C	11/10/21	11:00:02	-7.4	12.0	5	0.5	N	SPI ok; No PV
5	ECR-B-488	A	11/9/21	14:37:46	-4.5	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-B-488	B	11/9/21	14:42:00	-4.7	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-B-488	C	11/9/21	14:43:11	-4.5	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-C-1437	A	11/10/21	9:21:56	-7.1	12.0	5	0.5	N	A, All SPI and PV ok
5	ECR-C-1437	B	11/10/21	9:24:00	-7.1	12.0	5	0.5	N	SPI underpenetrated, PV ok
5	ECR-C-1437	C	11/10/21	9:26:40	-7.0	12.0	5	0.5	N	A, All SPI and PV ok
6	ECR-B-422	A	9/6/21	9:28:22	-25.47	13.5	5.0	0.8	Y	All SPI aRPDs are visible
6	ECR-B-422	B	9/6/21	9:34:24	-23.58	13.5	5.0	0.8	Y	All PV ok and GoPro
6	ECR-B-422	C	9/6/21	9:39:05	-24.03	13.5	5.0	0.8	Y	medium to fine sand
6	ECR-A-423	A	9/6/21	10:19:23	-22.51	13.5	5.0	0.8	Y	SPI ok, PV missing (short cable may have hung on a depression)
6	ECR-A-423	B	9/6/21	10:25:49	-22.64	13.5	5.0	0.8	Y	SPI and PV ok.
6	ECR-A-423	C	9/6/21	10:30:14	-24.77	13.5	5.0	0.8	Y	SPI and PV ok.
6	ECR-B-424	A	9/6/21	15:15:44	-21.85	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-424	B	9/6/21	15:21:24	-21.98	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-424	C	9/6/21	15:28:34	-21.93	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-425	A	9/6/21	16:02:19	-21.34	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-425	B	9/6/21	16:08:53	-21.27	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-425	C	9/6/21	16:14:42	-21.20	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-426	A	9/6/21	17:26:46	-22.13	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-426	B	9/6/21	17:32:14	-22.01	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-426	C	9/6/21	17:36:22	-21.89	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-427	A	9/6/21	18:42:06	-26.08	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-427	B	9/6/21	18:57:32	-25.92	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-427	C	9/6/21	19:03:35	-26.28	13.5	5.0	0.8	Y	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
6	ECR-B-428	A	9/6/21	20:24:20	-25.56	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-428	B	9/6/21	20:29:14	-26.17	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-428	C	9/6/21	20:33:35	-26.26	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-429	A	9/6/21	21:08:57	-22.51	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-429	B	9/6/21	21:15:02	-22.26	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-429	C	9/6/21	21:20:08	-21.89	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-430	A	9/6/21	22:55:04	-23.78	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-430	B	9/6/21	23:01:02	-23.17	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-430	C	9/6/21	23:06:54	-23.70	13.5	5.0	0.8	Y	SPI underpenetrated compact sand
6	ECR-A-431	A	9/7/21	0:32:53	-26.64	13.5	5.0	0.8	Y	SPI and PV ok
6	ECR-A-431	B	9/7/21	0:38:39	-26.25	13.5	5.0	0.8	Y	underpenetrated - compact sand ripples
6	ECR-A-431	C	9/7/21	0:44:21	-26.70	13.5	5.0	0.8	Y	A
6	ECR-B-432	A	9/7/21	2:38:37	-29.74	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-432	B	9/7/21	2:44:02	-29.71	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-432	C	9/7/21	2:49:49	-29.65	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-433	A	9/7/21	4:03:34	-25.38	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-433	B	9/7/21	4:08:34	-25.69	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-433	C	9/7/21	4:14:12	-25.95	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-434	A	9/7/21	6:46:53	-25.06	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-434	B	9/7/21	6:52:46	-25.86	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-435	A	9/7/21	7:38:14	-26.46	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-435	B	9/7/21	7:45:48	-26.48	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-435	C	9/7/21	7:45:48	-26.62	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-436	A	9/7/21	9:55:06	-27.64	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-436	B	9/7/21	10:02:23	-27.84	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-B-436	C	9/7/21	10:06:55	-27.76	13.5	5.0	0.8	Y	A, All SPI and PV ok
6	ECR-A-437	A	9/7/21	12:19:48	-33.68	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-437	B	9/7/21	12:25:42	-33.40	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-437	C	9/7/21	12:30:43	-33.30	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-438	A	9/7/21	14:05:41	-29.12	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-438	B	9/7/21	14:10:39	-29.12	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-438	C	9/7/21	14:16:13	-29.23	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-439	A	9/7/21	15:59:48	-30.36	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-439	B	9/7/21	16:05:29	-30.36	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-439	C	9/7/21	16:11:33	-30.56	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-440	A	9/7/21	23:17:29	-22.66	13.5	5	50	Y	SPI underpenetrated due to sand. Reduced-vis PV accepted.
6	ECR-B-440	B	9/7/21	23:23:05	-23.06	13.5	5	50	Y	SPI underpenetrated due to sand. Reduced-vis PV accepted.
6	ECR-B-440	C	9/7/21	23:28:05	-23.16	13.5	5	50	Y	SPI underpenetrated due to sand. Reduced-vis PV accepted.
6	ECR-A-441	A	9/7/21	21:59:08	-23.16	13.5	5	50	Y	SPI underpenetrated due to sand. GPro light intermittent.
6	ECR-A-441	B	9/7/21	22:05:22	-23.66	13.5	5	50	Y	SPI underpenetrated due to sand. GPro light intermittent.
6	ECR-A-441	C	9/7/21	22:09:39	-23.76	13.5	5	50	Y	SPI underpenetrated due to sand. GPro light intermittent.
6	ECR-B-442	A	9/7/21	19:08:43	-23.26	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-442	B	9/7/21	19:13:24	-23.16	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-B-442	C	9/7/21	19:17:35	-22.96	13.5	5	50	Y	SPI underpenetrated due to sand. PV acceptable
6	ECR-A-443	A	9/8/21	1:26:50	-14.06	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-A-443	B	9/8/21	1:33:34	-13.91	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed.White coral on PV. PV accepted.
6	ECR-A-443	C	9/8/21	1:39:26	-13.68	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed.White coralon SPI. PV accepted.
6	ECR-B-444	A	9/8/21	2:54:15	-18.15	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-B-444	B	9/8/21	3:00:43	-18.19	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-B-444	C	9/8/21	3:06:04	-15.82	13.5	5	50	Y	SPI underpenetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-A-445	A	9/8/21	3:37:43	-21.66	13.5	5	50	Y	SPI underpenetrated due to sand and Crepidula bed. PV accepted.
6	ECR-A-445	B	9/8/21	3:43:23	-19.63	13.5	5	50	Y	SPI underpenetrated due to gravel and sand. PV accepted.
6	ECR-A-445	C	9/8/21	3:49:27	-19.62	13.5	5	50	Y	SPI underpenetrated due to gravel and sand. PV accepted.
6	ECR-B-446	A	9/8/21	6:26:34	-18.03	13.5	5	50	Y	SPI no penetrated due to cobble and Crepidula bed. White coral on PV. PV accepted.
6	ECR-B-446	B	9/8/21	6:31:09	-18.26	13.5	5	50	Y	SPI no penetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-B-446	C	9/8/21	6:37:00	-18.24	13.5	5	50	Y	SPI no penetrated due to cobble and Crepidula bed. PV accepted.
6	ECR-A-447	A	9/11/21	15:18:49	-17.91	13.5	5	50	N	SPI low penetration due to gravel/sand. Low vis - PV not accepted.
6	ECR-A-447	B	9/11/21	15:26:53	-17.98	13.5	5	50	N	SPI low penetration due to gravel/sand. Low vis - PV marginal.

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6	ECR-A-447	C	9/11/21	15:35:36	-17.88	13.5	5	50	N	SPI low penetration due to gravel/sand. Low Vis - PV marginal. plan to re-attempt if schedule allows.
6	ECR-A-447	D	9/14/21	20:30:00	-17.11	13.5	3	50	N	SPI and PV ok.
6	ECR-A-447	E	9/14/21	20:34:46	-18.26	13.5	3	50	N	SPI O.P. and PV ok
6	ECR-A-447	F	9/14/21	20:38:41	-17.86	13.5	3	50	N	SPI and PV ok.
7	ECR-B-448	A	9/11/21	18:51:00	-17.30	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV poor.
7	ECR-B-448	B	9/11/21	18:57:00	-17.38	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low vis - PV poor.
7	ECR-B-448	C	9/11/21	19:03:00	-20.37	13.5	5	50	Y	SPI low penetration due to gravel/sand. Low Vis - PV poor. Re-attempt station.
7	ECR-B-448	D	9/11/21	19:31:00	-17.24	13.5	5	50	Y	SPI low penetration due to gravel/sand. Reduced vis - PV accepted.
7	ECR-B-448	E	9/11/21	19:41:00	-17.41	13.5	5	50	Y	SPI low penetration due to gravel/sand. Reduced vis - PV accepted.
7	ECR-B-448	F	9/11/21	19:44:00	-17.50	13.5	5	50	Y	SPI low penetration due to gravel/sand. Reduced Vis - PV accepted.
7	ECR-A-449	A	9/11/21	20:24:00	-16.53	13.5	5	50	Y	SPI low penetration due to Crepidula/gravel/sand. PV accepted.
7	ECR-A-449	B	9/11/21	20:31:00	-16.23	13.5	5	50	Y	SPI low penetration due to Crepidula/gravel/sand. PV accepted.
7	ECR-A-449	C	9/11/21	20:34:00	-16.26	13.5	5	50	Y	SPI low penetration due to Crepidula/gravel/sand. Pv accepted.
7	ECR-B-450	A	9/14/21	19:06:02	-16.41	13.5	5	50	N	SPI and PV ok. Re-attempting for acceptable PV..
7	ECR-B-450	B	9/14/21	19:06:06	-16.32	13.5	5	50	N	SPI and PV ok.
7	ECR-B-450	C	9/14/21	19:10:15	-16.22	13.5	5	50	N	SPI and PV ok.
7	ECR-A-451	A	9/14/21	17:39:20	-16.35	13.5	5	50	N	SPI and PV ok.
7	ECR-A-451	B	9/14/21	17:44:33	-16.25	13.5	5	50	N	SPI and PV ok.
7	ECR-A-451	C	9/14/21	17:49:38	-16.30	13.5	5	50	N	SPI and PV ok.
7	ECR-B-452	A	9/14/21	16:50:29	-14.36	13.5	5	50	N	SPI and PV ok.
7	ECR-B-452	B	9/14/21	16:57:12	-14.23	13.5	5	50	N	SPI and PV ok.
7	ECR-B-452	C	9/14/21	17:02:57	-14.09	13.5	5	50	N	SPI and PV ok.
7	ECR-A-453	A	9/14/21	14:48:00	-29.59	13.5	5	50	N	SPI and PV ok.
7	ECR-A-453	B	9/14/21	14:52:54	-29.65	13.5	5	50	N	SPI and PV ok.
7	ECR-A-453	C	9/14/21	14:56:41	-29.78	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	A	9/14/21	13:26:03	-35.18	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	B	9/14/21	13:32:31	-35.36	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	C	9/14/21	13:37:57	-35.34	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	D	9/14/21	14:09:58	-35.31	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	E	9/14/21	14:14:11	-35.20	13.5	5	50	N	SPI and PV ok.
7	ECR-B-454	F	9/14/21	14:18:50	-35.13	13.5	5	50	N	SPI and PV ok.
7	ECR-A-455	A	9/14/21	9:53:45	-36.59	13.5	5	50	N	SPI and PV ok.
7	ECR-A-455	B	9/14/21	9:58:45	-36.70	13.5	5	50	N	SPI and PV ok.
7	ECR-A-455	C	9/14/21	10:03:29	-36.70	13.5	5	50	N	SPI and PV ok.
7	ECR-A-501	A	9/14/21	8:25:21	-35.65	13.5	5	50	N	SPI and PV ok.
7	ECR-A-501	B	9/14/21	8:30:12	-35.67	13.5	5	50	N	SPI and PV ok.
7	ECR-A-501	C	9/14/21	8:34:58	-35.85	13.5	5	50	N	SPI and PV ok.
7	ECR-B-502	A	9/14/21	7:40:02	-39.41	13.5	5	50	N	SPI and PV ok.
7	ECR-B-502	B	9/14/21	7:46:03	-39.39	13.5	5	50	N	SPI missing - did not fire - and PV ok
7	ECR-B-502	C	9/14/21	7:51:28	-39.34	13.5	5	50	N	SPI missing - did not fire - and PV ok
7	ECR-B-502	D	9/14/21	10:41:17	-39.66	13.5	5	50	N	SPI ok. PV no visibility.
7	ECR-B-502	E	9/14/21	10:47:58	-39.67	13.5	5	50	N	SPI ok. PV no visibility.
7	ECR-B-502	F	9/14/21	10:52:58	-39.80	13.5	5	50	N	SPI ok. PV no visibility - reattempt station..
7	ECR-A-503	A	9/14/21	6:46:26	-40.46	13.5	5	50	N	SPI and PV ok.
7	ECR-A-503	B	9/14/21	6:53:05	-40.35	13.5	5	50	N	SPI and PV ok.
7	ECR-A-503	C	9/14/21	6:58:54	-40.40	13.5	5	50	N	SPI and PV ok.
7	ECR-B-504	A	9/14/21	5:00:52	-43.12	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-504	B	9/14/21	5:03:52	-43.06	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-504	C	9/14/21	5:08:15	-42.84	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-505	A	9/14/21	4:12:18	-43.03	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-505	B	9/14/21	4:17:27	-43.01	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-505	C	9/14/21	4:21:11	-42.91	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-506	A	9/14/21	3:08:45	-43.00	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-506	B	9/14/21	3:11:49	-43.85	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-506	C	9/14/21	3:16:49	-43.69	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-507	A	9/14/21	2:20:09	-44.10	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-507	B	9/14/21	2:24:52	-43.94	13.5	5	50	Y	SPI and PV ok.

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
7	ECR-A-507	C	9/14/21	2:30:12	-43.83	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-508	A	9/14/21	1:29:55	-44.09	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-508	B	9/14/21	1:36:33	-44.22	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-508	c	9/14/21	1:41:17	-44.15	13.5	5	50	Y	SPI and PV ok.GoPro light came up flickering - service contact surfaces..
7	ECR-B-509	A	9/13/21	22:35:36	-42.05	13.5	5	50	N	SPI and PV ok.
7	ECR-B-509	B	9/13/21	22:40:06	-41.98	13.5	5	50	N	SPI and PV ok.
7	ECR-B-509	C	9/13/21	22:46:14	-42.22	13.5	5	50	N	SPI and PV ok.
7	ECR-B-510	A	9/13/21	21:33:08	-40.99	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-510	B	9/13/21	21:38:56	-41.22	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-510	C	9/13/21	21:43:34	-41.07	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-511	A	9/13/21	18:59:42	-40.15	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-511	B	9/13/21	19:06:04	-40.25	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-511	C	9/13/21	19:11:03	-40.18	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-512	A	9/13/21	17:41:04	-40.03	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-512	B	9/13/21	17:50:09	-39.54	13.5	5	50	Y	SPI and PV ok.
7	ECR-B-512	C	9/13/21	18:00:09	-39.55	13.5	5	50	Y	SPI and PV ok.
7	ECR-A-513	A	9/13/21	15:55:26	-39.61	13.5	5	50	N	SPI and PV ok.Possible pullout add D rep..
7	ECR-A-513	B	9/13/21	16:02:10	-39.43	13.5	5	50	N	SPI and PV ok.
7	ECR-A-513	C	9/13/21	16:08:37	-39.27	13.5	5	50	N	SPI and PV ok.
7	ECR-A-513	D	9/13/21	16:15:17	-39.21	13.5	5	50	N	SPI and PV ok.
7	ECR-B-514	A	9/13/21	14:23:47	-41.14	13.5	5	50	N	SPI ok. PV out of focus
7	ECR-B-514	B	9/13/21	14:31:29	-41.66	13.5	5	50	N	SPI ok. PV out of focus
7	ECR-B-514	C	9/13/21	14:38:24	-41.49	13.5	5	50	N	SPI ok. PV out of focus.Rep-attempt with a softer touch-down..
7	ECR-B-514	D	9/13/21	15:06:03	-40.80	13.5	5	50	N	SPI and PV ok.
7	ECR-B-514	E	9/13/21	15:11:23	-41.00	13.5	5	50	N	SPI and PV ok.
7	ECR-B-514	F	9/13/21	15:18:35	-41.41	13.5	5	50	N	SPI and PV ok.
7	ECR-C-1429	A	9/12/21	1:57:01	-16.06	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
7	ECR-C-1429	B	9/12/21	2:04:58	-16.08	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
7	ECR-C-1429	C	9/12/21	2:05:02	-16.02	13.5	5	50	Y	SPI low penetration due to gravel/sand. Pv accepted.
7	ECR-C-1430	A	9/12/21	1:01:48	-19.22	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
7	ECR-C-1430	B	9/12/21	1:07:00	-18.90	13.5	5	50	Y	SPI low penetration due to gravel/sand. PV accepted.
7	ECR-C-1430	C	9/12/21	1:14:21	-18.74	13.5	5	50	Y	SPI low penetration due to gravel/sand. Pv accepted.
7	ECR-C-1431	A	9/12/21	3:51:24	-10.31	13.5	5	50	Y	No SPI was taken at ECR-1431.A decision was made to leave the SPI pins on and only take PV images based on observing rocky bottom from video tow.. PV accepted.
7	ECR-C-1431	B	9/12/21	3:53:27	-13.82	13.5	5	50	Y	No SPI was taken at ECR-1431.A decision was made to leave the SPI pins on and only take PV images based on observing rocky bottom from video tow.. PV accepted.
7	ECR-C-1431	C	9/12/21	3:57:00	-13.82	13.5	5	50	Y	No SPI was taken at ECR-1431.A decision was made to leave the SPI pins on and only take PV images based on observing rocky bottom from video tow.. PV accepted.
8	ECR-A-515	A	9/13/21	13:23:23	-44.99	13.5	5	50	N	SPI low penetration due to compact f.sand. PV accepted.
8	ECR-A-515	B	9/13/21	13:30:22	-44.93	13.5	5	50	N	SPI low penetration due to compact f.sand. PV accepted.
8	ECR-A-515	C	9/13/21	13:36:11	-45.01	13.5	5	50	N	SPI low penetration due to compact f.sand. Pv accepted.
8	ECR-B-516	A	8/21/21	7:51:49	-46.5	13.0	5	1	Y	A, All SPI and PV ok (Underpenetrated)
8	ECR-B-516	B	8/21/21	7:55:46	-46.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-516	C	8/21/21	8:02:36	-46.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-517	A	8/21/21	5:19:21	-48.8	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-517	B	8/21/21	5:25:46	-48.7	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-517	C	8/21/21	5:29:29	-48.8	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-518	A	8/21/21	1:20:11	-48.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-518	B	8/21/21	1:25:43	-48.7	13.0	5	1	N	A, All SPI and PV ok (2 PV water shots)
8	ECR-B-518	C	8/21/21	1:30:52	-48.5	13.0	5	1	N	A, All SPI and PV ok (sprayed battery contact w/)
8	ECR-A-519	A	8/20/21	23:01:38	-49.9	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-519	B	8/20/21	23:08:58	-50.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-519	C	8/20/21	23:13:30	-50.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-520	A	8/20/21	21:25:43	-50.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-520	B	8/20/21	21:30:55	-50.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-520	C	8/20/21	21:37:21	-50.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-521	A	8/20/21	19:55:25	-51.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-521	B	8/20/21	19:59:52	-51.7	13.0	5	1	N	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
8	ECR-A-521	C	8/20/21	20:04:18	-51.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-522	A	8/20/21	18:53:06	-52.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-522	B	8/20/21	19:00:13	-51.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-522	C	8/20/21	19:09:19	-51.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-523	A	8/20/21	16:38:03	-52.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-523	B	8/20/21	16:44:18	-52.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-523	C	8/20/21	16:49:28	-52.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-524	A	8/20/21	15:43:00	-52.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-524	B	8/20/21	15:47:41	-52.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-524	C	8/20/21	15:51:56	-52.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-525	A	8/20/21	13:36:29	-52.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-525	B	8/20/21	13:41:42	-52.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-525	C	8/20/21	13:47:16	-52.2	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-526	A	8/20/21	12:54:17	-52.2	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-526	B	8/20/21	12:58:57	-52.3	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-526	C	8/20/21	13:03:57	-52.5	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-527	A	8/20/21	10:26:17	-54.6	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-527	B	8/20/21	10:31:36	-54.5	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-527	C	8/20/21	10:36:18	-54.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-528	A	8/20/21	9:37:00	-54.6	13.0	5	1	N	A, Reconnect Ti batt @27.5V: Strobe 45%, shut sp 1/60 , aper f8.0, ISO 1250, foc lngth 1 m+1
8	ECR-B-528	B	8/20/21	9:41:41	-54.5	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-528	C	8/20/21	9:45:47	-54.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-529	A	8/19/21	13:21:34	-54.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-529	B	8/19/21	13:26:16	-56.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-529	C	8/19/21	13:32:14	-56.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-530	A	8/19/21	12:29:51	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-530	B	8/19/21	12:35:21	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-530	C	8/19/21	12:39:38	-57.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-531	A	8/19/21	10:31:12	-57.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-531	B	8/19/21	10:36:16	-57.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-531	C	8/19/21	10:42:27	-57.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-532	A	8/19/21	9:40:44	-57.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-532	B	8/19/21	9:45:30	-57.1	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-532	C	8/19/21	9:49:39	-57.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-533	A	8/19/21	5:10:48	-57.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-533	B	8/19/21	5:16:42	-57.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-533	C	8/19/21	5:21:50	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-534	A	8/19/21	4:24:00	-58.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-534	B	8/19/21	4:30:14	-58.1	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-534	C	8/19/21	4:34:58	-58.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-535	A	8/19/21	2:38:06	-57.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-535	B	8/19/21	2:43:44	-57.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-535	C	8/19/21	2:48:46	-57.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-536	A	8/19/21	1:52:03	-55.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-536	B	8/19/21	1:58:19	-55.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-536	C	8/19/21	2:03:59	-55.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-537	A	8/18/21	23:34:19	-54.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-537	B	8/18/21	23:39:19	-54.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-537	C	8/18/21	23:43:38	-54.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-538	A	8/18/21	22:05:58	-54.8	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-538	B	8/18/21	22:11:39	-54.8	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-538	C	8/18/21	22:16:37	-54.8	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-539	A	8/18/21	20:30:59	-56.7	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-539	B	8/18/21	20:35:37	-56.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-539	C	8/18/21	20:41:14	-56.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-540	A	8/18/21	18:56:12	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-540	B	8/18/21	19:01:46	-57.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-540	C	8/18/21	19:09:23	-57.4	13.0	5	1	Y	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
8	ECR-A-541	A	8/18/21	16:42:55	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-541	B	8/18/21	16:51:14	-57.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-541	C	8/18/21	16:57:09	-57.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-542	A	8/18/21	15:52:30	-58.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-542	B	8/18/21	15:56:21	-58.5	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-542	C	8/18/21	16:01:23	-58.6	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-543	A	8/18/21	13:59:15	-59.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-543	B	8/18/21	14:04:22	-59.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-543	C	8/18/21	14:10:43	-58.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-544	A	8/18/21	13:10:44	-59.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-544	B	8/18/21	13:15:47	-59.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-544	C	8/18/21	13:22:13	-59.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-545	A	8/18/21	11:31:28	-58.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-545	B	8/18/21	11:38:50	-57.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-545	C	8/18/21	11:42:56	-59.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-546	A	8/18/21	10:52:13	-58.1	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-546	B	8/18/21	10:56:16	-58.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-546	C	8/18/21	11:01:20	-58.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-547	A	8/18/21	9:12:30	-57.0	13.0	5	1	Y	A, (changed Ti for SS battery): Strobe 35%, shutter speed 1/60 , aper f8.0, ISO 1250, foc lngth 1 m + 1 step
8	ECR-A-547	B	8/18/21	9:17:42	-57.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-547	C	8/18/21	9:22:35	-56.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-548	A	8/18/21	7:46:29	-57.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-548	B	8/18/21	7:52:18	-57.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-548	C	8/18/21	7:56:43	-57.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-601	A	8/18/21	5:39:51	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-601	B	8/18/21	5:46:08	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-601	C	8/18/21	5:50:49	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-602	A	8/18/21	4:51:14	-58.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-602	B	8/18/21	4:57:06	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-602	C	8/18/21	5:01:41	-58.2	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-603	A	8/18/21	2:16:09	-58.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-603	B	8/18/21	2:21:00	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-603	C	8/18/21	2:26:29	-58.3	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-A-603	D	8/18/21	2:32:03	-58.4	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-604	A	8/18/21	1:25:17	-57.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-604	B	8/18/21	1:31:39	-57.9	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-604	C	8/18/21	1:37:56	-58.0	13.0	5	1	Y	This drop was too fast so took extra shot to be sure.
8	ECR-A-605	A	8/17/21	23:23:29	-57.9	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-605	B	8/17/21	23:28:29	-58.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-605	C	8/17/21	23:33:21	-58.3	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-606	A	8/17/21	21:59:24	-57.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-606	B	8/17/21	22:04:29	-57.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-606	C	8/17/21	22:10:12	-57.3	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-607	A	8/17/21	19:33:08	-57.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-607	B	8/17/21	19:38:38	-56.9	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-607	C	8/17/21	19:44:00	-56.9	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-608	A	8/17/21	17:01:54	-57.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-608	B	8/17/21	17:07:14	-57.3	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-608	C	8/17/21	17:13:21	-57.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-609	A	8/17/21	15:18:33	-56.8	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-609	B	8/17/21	15:23:36	-57.1	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-609	C	8/17/21	15:29:26	-57.2	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-610	A	8/17/21	14:20:32	-56.5	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-610	B	8/17/21	14:25:58	-56.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-610	C	8/17/21	14:32:55	-56.4	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-611	A	8/17/21	12:30:21	-58.7	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-611	B	8/17/21	12:35:42	-58.8	13.0	5	1	N	A, All SPI and PV ok

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
8	ECR-A-611	C	8/17/21	12:43:25	-58.9	13.0	5	1	N	A, All SPI and PV ok
8	ECR-B-612	A	8/17/21	11:01:14	-58.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-612	B	8/17/21	11:06:58	-58.0	13.0	5	1	Y	A, All SPI and PV ok
8	ECR-B-612	C	8/17/21	11:12:55	-58.0	13.0	5	1	N	A, All SPI and PV ok
8	ECR-A-613	A	8/17/21	9:22:42	-57.1	13.0	5	1	Y	A, images are all good
8	ECR-A-613	B	8/17/21	9:27:59	-57.1	13.0	5	1	Y	A, images are all good
8	ECR-A-613	C	8/17/21	9:32:41	-57.2	13.0	5	1	Y	A, Couldn't connect w PV camera on deck. Rretrieved images taken at station. Replaced battery SS-> Ti (not fully charged); Strobe power 45%, 1/60, f 8.0, ISO 1250 focal length 1 m+1. Tested flash - ok, checked image - ok.
8	ECR-B-614	A	8/17/21	8:42:54	-56.7	13.0	5	1	Y	A, images are all good
8	ECR-B-614	B	8/17/21	8:48:30	-56.7	13.0	5	1	Y	A, images are all good
8	ECR-B-614	C	8/17/21	8:53:37	-56.8	13.0	5	1	Y	A, images are all good
8	ECR-A-615	A	8/17/21	7:21:45	-57.0	13.0	5	1	Y	A, images are all good
8	ECR-A-615	B	8/17/21	7:26:39	-57.2	13.0	5	1	Y	A, images are all good
8	ECR-A-615	C	8/17/21	7:31:55	-57.2	13.0	5	1	Y	A, images are all good
8	ECR-B-616	A	8/17/21	6:30:06	-56.3	13.0	5	1	Y	A, Change battery for PV camera: shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-B-616	B	8/17/21	6:35:06	-56.3	13.0	5	1	Y	A, images are all good
8	ECR-B-616	C	8/17/21	6:40:46	-56.3	13.0	5	1	Y	A, images are all good
8	ECR-A-617	A	8/17/21	4:43:20	-56.4	13.0	5	1	N	A, images are all good
8	ECR-A-617	B	8/17/21	4:49:20	-56.4	13.0	5	1	N	A, images are all good
8	ECR-A-617	C	8/17/21	4:54:55	-56.3	13.0	5	1	N	A, images are all good
8	ECR-B-618	A	8/17/21	3:59:13	-57.1	13.0	3	1	Y	A, images are all good
8	ECR-B-618	B	8/17/21	4:04:48	-57.3	13.0	3	1	Y	A, images are all good
8	ECR-B-618	C	8/17/21	4:10:52	-57.2	13.0	5	1	Y	A, images are all good. SPI slightly underpentrated - added all 5 weights to each side
8	ECR-A-619	A	8/17/21	1:57:35	-59.4	13.0	3	1	Y	A, images are all good
8	ECR-A-619	B	8/17/21	2:03:10	-59.2	13.0	3	1	Y	A, images are all good
8	ECR-A-619	C	8/17/21	2:07:56	-59.3	13.0	3	1	Y	A, images are all good
8	ECR-B-620	A	8/17/21	1:10:58	-60.7	13.0	3	1	Y	A, images are all good
8	ECR-B-620	B	8/17/21	1:16:08	-60.6	13.0	3	1	Y	A, images are all good
8	ECR-B-620	C	8/17/21	1:21:54	-60.6	13.0	3	1	Y	A, images are all good
8	ECR-A-621	A	8/16/21	22:51:28	-60.3	13.0	3	1	N	A, images are all good
8	ECR-A-621	B	8/16/21	22:56:31	-60.2	13.0	3	1	N	A, images are all good
8	ECR-A-621	C	8/16/21	23:03:29	-60.2	13.0	3	1	N	A, images are all good
8	ECR-B-622	A	8/16/21	21:52:16	-60.6	13.0	3	1	N	A, Grab sample had less penetration - sand mixed in. Added 1 weight to each side
8	ECR-B-622	B	8/16/21	21:56:54	-60.6	13.0	3	1	N	A, Grab sample had less penetration - sand mixed in. Added 1 weight to each side
8	ECR-B-622	C	8/16/21	22:03:42	-60.5	13.0	3	1	N	A, Grab sample had less penetration - sand mixed in. Added 1 weight to each side
8	ECR-A-623	A	8/16/21	19:53:52	-61.3	13.0	2	1	N	A, images are all good
8	ECR-A-623	B	8/16/21	19:59:14	-61.4	13.0	2	1	N	A, images are all good
8	ECR-A-623	C	8/16/21	20:04:24	-61.3	13.0	2	1	N	A, images are all good
8	ECR-B-624	A	8/16/21	19:06:13	-62.2	13.0	2	1	N	A, images are all good
8	ECR-B-624	B	8/16/21	19:11:54	-62.0	13.0	2	1	N	A, images are all good
8	ECR-B-624	C	8/16/21	19:17:55	-62.0	13.0	2	1	N	A, images are all good
8	ECR-A-625	A	8/16/21	17:05:33	-62.6	13.0	2	1	N	A, images are all good
8	ECR-A-625	B	8/16/21	17:10:39	-62.6	13.0	2	1	N	A, images are all good
8	ECR-A-625	C	8/16/21	17:14:37	-62.5	13.0	2	1	N	A, images are all good
8	ECR-B-626	A	8/16/21	16:16:34	-63.4	13.0	2	1	N	A, images are all good
8	ECR-B-626	B	8/16/21	16:25:32	-63.4	13.0	2	1	N	A, images are all good
8	ECR-B-626	C	8/16/21	16:31:09	-63.3	13.0	2	1	N	A, images are all good
8	ECR-A-627	A	8/16/21	13:59:17	-64.2	13.0	2	1	N	A, images are all good
8	ECR-A-627	B	8/16/21	14:04:29	-64.2	13.0	2	1	N	A, images are all good
8	ECR-A-627	C	8/16/21	14:09:53	-64.1	13.0	2	1	N	A, images are all good
8	ECR-B-628	A	8/16/21	13:16:41	-64.8	13.0	2	1	N	A, images are all good
8	ECR-B-628	B	8/16/21	13:23:19	-64.6	13.0	2	1	N	A, images are all good
8	ECR-B-628	C	8/16/21	13:28:05	-64.7	13.0	2	1	N	A, images are all good
8	ECR-A-629	A	8/16/21	11:28:40	-64.5	13.0	2	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-A-629	B	8/16/21	11:34:17	-64.6	13.0	2	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-A-629	C	8/16/21	11:39:14	-64.6	13.0	2	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-B-630	A	8/16/21	10:46:02	-64.6	13.0	2	1	N	A, images are all good

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
8	ECR-B-630	B	8/16/21	10:50:23	-64.5	13.0	2	1	N	A, images are all good
8	ECR-B-630	C	8/16/21	10:55:37	-64.6	13.0	2	1	N	A, images are all good
8	ECR-A-631	A	8/16/21	8:41:48	-64.6	13.0	2	1	Y	A, images are all good
8	ECR-A-631	B	8/16/21	8:47:05	-64.6	13.0	2	1	Y	A, images are all good
8	ECR-A-631	C	8/16/21	8:52:52	-64.7	13.0	2	1	Y	A, images are all good
8	ECR-B-632	A	8/16/21	7:58:11	-64.7	13.0	2	1	Y	A, images are all good
8	ECR-B-632	B	8/16/21	8:01:55	-64.6	13.0	2	1	Y	A, images are all good
8	ECR-B-632	C	8/16/21	8:07:26	-64.6	13.0	2	1	Y	A, images are all good
8	ECR-A-633	A	8/16/21	6:30:48	-64.9	13.0	2	1	Y	A, images are all good
8	ECR-A-633	B	8/16/21	6:37:32	-65.0	13.0	2	1	Y	A, images are all good
8	ECR-A-633	C	8/16/21	6:42:27	-65.0	13.0	2	1	Y	A, images are all good
8	ECR-B-634	A	8/16/21	5:14:30	-65.2	13.0	2	1	Y	A, images are all good
8	ECR-B-634	B	8/16/21	5:20:52	-65.3	13.0	2	1	Y	A, images are all good
8	ECR-B-634	C	8/16/21	5:27:12	-65.2	13.0	2	1	Y	A, images are all good
8	ECR-A-635	A	8/16/21	3:10:51	-65.9	13.0	2	1	Y	A, images are all good
8	ECR-A-635	B	8/16/21	3:17:39	-65.8	13.0	2	1	Y	A, images are all good
8	ECR-A-635	C	8/16/21	3:24:24	-65.9	13.0	2	1	Y	A, images are all good
8	ECR-B-636	A	8/16/21	2:20:50	-66.0	13.0	2	1	Y	A, images are all good
8	ECR-B-636	B	8/16/21	2:25:01	-66.0	13.0	2	1	Y	A, images are all good
8	ECR-B-636	C	8/16/21	2:31:52	-66.0	13.0	2	1	Y	A, images are all good
8	ECR-A-637	A	8/15/21	23:33:55	-65.9	13.0	2	1	Y	A, images are all good
8	ECR-A-637	B	8/15/21	23:38:42	-65.9	13.0	2	1	Y	A, images are all good
8	ECR-A-637	C	8/15/21	23:43:25	-65.9	13.0	2	1	Y	A, images are all good
8	ECR-B-638	A	8/15/21	21:59:11	-65.6	13.0	2	1	Y	A, images are all good
8	ECR-B-638	B	8/15/21	22:04:33	-65.7	13.0	2	1	Y	A, images are all good
8	ECR-B-638	C	8/15/21	22:09:31	-65.7	13.0	2	1	Y	A, images are all good
8	ECR-A-639	A	8/15/21	20:13:33	-65.5	13.0	3	1	Y	A, SPI almost OP, removed 1 weight @ side
8	ECR-A-639	B	8/15/21	20:19:47	-65.5	13.0	3	1	Y	A, SPI almost OP, removed 1 weight @ side
8	ECR-A-639	C	8/15/21	20:24:50	-65.4	13.0	3	1	Y	A, SPI almost OP, removed 1 weight @ side
8	ECR-B-640	A	8/15/21	19:06:56	-65.4	13.0	5	1	Y	A, SPI almost OP, removed 2 weights @ side
8	ECR-B-640	B	8/15/21	19:12:42	-65.4	13.0	5	1	Y	A, SPI almost OP, removed 2 weights @ side
8	ECR-B-640	C	8/15/21	19:19:51	-65.4	13.0	5	1	Y	A, SPI almost OP, removed 2 weights @ side
8	ECR-A-641	A	8/15/21	17:04:54	-65.5	13.0	5	1	Y	A, images are all good
8	ECR-A-641	B	8/15/21	17:09:49	-65.5	13.0	5	1	Y	A, images are all good
8	ECR-A-641	C	8/15/21	17:13:56	-65.5	13.0	5	1	Y	A, images are all good
8	ECR-B-642	A	8/15/21	16:12:58	-65.2	13.0	5	1	Y	A, images are all good
8	ECR-B-642	B	8/15/21	16:19:11	-65.3	13.0	5	1	Y	A, images are all good
8	ECR-B-642	C	8/15/21	16:24:38	-65.3	13.0	5	1	Y	A, images are all good
8	ECR-A-643	A	8/15/21	14:04:40	-65.4	13.0	5	1	Y	A, images are all good
8	ECR-A-643	B	8/15/21	14:15:05	-65.4	13.0	5	1	Y	A, images are all good
8	ECR-A-643	C	8/15/21	14:19:45	-65.4	13.0	5	1	Y	A, images are all good
8	ECR-B-644	A	8/15/21	13:12:08	-65.0	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-B-644	B	8/15/21	13:16:59	-65.0	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-B-644	C	8/15/21	13:22:26	-65.0	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-A-645	A	8/15/21	11:01:43	-63.8	13.0	5	1	Y	A, images are all good
8	ECR-A-645	B	8/15/21	11:06:15	-63.9	13.0	5	1	Y	A, images are all good
8	ECR-A-645	C	8/15/21	11:10:10	-63.9	13.0	5	1	Y	A, images are all good
8	ECR-B-646	A	8/15/21	10:14:48	-63.5	13.0	5	1	Y	A, images are all good
8	ECR-B-646	B	8/15/21	10:20:36	-63.5	13.0	5	1	Y	A, images are all good
8	ECR-B-646	C	8/15/21	10:25:48	-63.5	13.0	5	1	Y	A, images are all good
8	ECR-A-647	A	8/15/21	8:08:03	-62.8	13.0	5	1	Y	A, images are all good
8	ECR-A-647	B	8/15/21	8:13:58	-62.8	13.0	5	1	Y	A, images are all good
8	ECR-A-647	C	8/15/21	8:19:33	-62.8	13.0	5	1	Y	A, images are all good
8	ECR-B-648	A	8/15/21	7:13:18	-62.3	13.0	5	1	Y	A, images are all good
8	ECR-B-648	B	8/15/21	7:17:48	-62.3	13.0	5	1	Y	A, images are all good
8	ECR-B-648	C	8/15/21	7:23:00	-62.4	13.0	5	1	Y	A, images are all good
8	ECR-A-649	A	8/15/21	4:34:14	-62.3	13.0	5	1	N	A, images are all good
8	ECR-A-649	B	8/15/21	4:40:50	-62.2	13.0	5	1	N	A, images are all good

KP Segment	Station	Replicate (A,B,C)	Date (local)	Time (local)	Water Depth (m)	Stop Height (in.)	Lead Weight (#/side)	PV Trigger Length (m)	GoPro (Y/N)	Comments (A = Acceptable, D = Disturbed, OP = Over Penetration, NS = Not Sampled)
8	ECR-A-649	C	8/15/21	4:46:49	-62.3	13.0	5	1	N	A, images are all good
8	ECR-B-650	A	8/15/21	3:44:09	-62.1	13.0	5	1	Y	A, images are all good
8	ECR-B-650	B	8/15/21	3:50:26	-62.1	13.0	5	1	Y	A, images are all good
8	ECR-B-650	C	8/15/21	3:58:29	-62.0	13.0	5	1	Y	A, images are all good
8	ECR-A-651	A	8/15/21	1:38:31	-62.2	13.0	5	1	Y	A, images are all good
8	ECR-A-651	B	8/15/21	1:45:47	-62.2	13.0	5	1	Y	A, images are all good
8	ECR-A-651	C	8/15/21	1:53:13	-62.3	13.0	5	1	Y	A, images are all good
8	ECR-B-652	A	8/15/21	0:37:15	-61.9	13.0	5	1	N	A, images are all good
8	ECR-B-652	B	8/15/21	0:43:13	-61.9	13.0	5	1	N	A, images are all good
8	ECR-B-652	C	8/15/21	0:50:51	-62.0	13.0	5	1	N	A, images are all good
8	ECR-A-653	A	8/14/21	22:13:36	-61.3	13.0	5	1	Y	A, images are all good
8	ECR-A-653	B	8/14/21	22:18:57	-61.3	13.0	5	1	Y	A, images are all good
8	ECR-A-653	C	8/14/21	22:23:46	-61.3	13.0	5	1	Y	A, images are all good
8	ECR-B-654	A	8/14/21	21:14:19	-61.1	13.0	5	1	Y	A, images are all good
8	ECR-B-654	B	8/14/21	21:20:10	-61.2	13.0	5	1	Y	A, images are all good
8	ECR-B-654	C	8/14/21	21:26:29	-61.2	13.0	5	1	Y	A, images are all good
8	ECR-A-655	A	8/14/21	19:33:55	-60.5	13.0	5	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-A-655	B	8/14/21	19:39:24	-60.5	13.0	5	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-A-655	C	8/14/21	19:44:05	-60.5	13.0	5	1	Y	A, PV strobe power 45%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step; Batt. Change
8	ECR-B-656	A	8/14/21	17:34:29	-60.0	13.0	5	1	Y	A, images are all good
8	ECR-B-656	B	8/14/21	17:40:02	-60.2	13.0	5	1	Y	A, images are all good
8	ECR-B-656	C	8/14/21	17:46:31	-60.4	13.0	5	1	Y	A, images are all good
8	ECR-A-657	A	8/14/21	16:02:24	-60.2	13.0	5	1	Y	A, images are all good
8	ECR-A-657	B	8/14/21	16:07:14	-60.4	13.0	5	1	Y	A, images are all good
8	ECR-A-657	C	8/14/21	16:12:05	-60.3	13.0	5	1	Y	A, images are all good
8	ECR-B-658	A	8/14/21	15:05:01	-60.1	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-B-658	B	8/14/21	15:11:25	-60.1	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-B-658	C	8/14/21	15:18:06	-60.1	13.0	5	1	Y	A, PV strobe power 35%, shutter speed 1/60 , aperture f8.0, ISO 1250, focal length 1 m + 1 step
8	ECR-C-1516	A	8/21/21	3:20:36	-48.3	13.0	5	1	Y	A, SPI and PV ok
8	ECR-C-1516	B	8/21/21	3:26:22	-48.3	13.0	5	1	Y	D, SPI ok but PV was water shots
8	ECR-C-1516	C	8/21/21	3:32:58	-48.4	13.0	5	1	Y	D, SPI ok but PV was water shots
8	ECR-C-1516	D	8/21/21	4:18:56	-48.6	13.0	5	1	Y	D, SPI underpenetrated due to coarse sand but can observe a RPD. PV acceptable but close to bottom
8	ECR-C-1516	E	8/21/21	4:25:58	-48.6	13.0	5	1	Y	D, SPI underpenetrated due to coarse sand but can observe a RPD. PV acceptable but close to bottom
8	ECR-C-1516	F	8/21/21	4:30:14	-48.3	13.0	5	1	Y	D, SPI underpenetrated due to coarse sand but can observe a RPD. PV acceptable but close to bottom

ATTACHMENT F SPI IMAGE ANALYSES RESULTS

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
1	ECR-B-102	B	2021-11-12	16:31	-14.6	ECR-B-102-B-SPI.jpg	3.9	Physical	3.2	4.6	1.4	3.9	0 to -1 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. dk.tan/grey sand and f/vf.pebbles with trace silt/clay and biogenic carbonate shell fragments. Chunk of biogenic woody debris visible. Small surface tubes and larger shells visible in background.
1	ECR-B-102	C	2021-11-12	16:33	-14.3	ECR-B-102-C-SPI.jpg	2.6	Physical	0.7	3.9	3.2	2.6	1 to 0 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	7	underpen. dk.tan/grey sand and f/vf.pebbles with trace silt/clay and biogenic carbonate shell fragments. Surface bioaggregates and clam shells (17-20mm)
1	ECR-A-103	B	2021-11-12	16:59	-22.7	ECR-A-103-B-SPI.jpg	1	Physical	0.5	1.6	1.1	1	-1 to -2 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	underpen. c/m.pebbles over grey trace silt/clay. Surface bioaggregates and clam shells (11-20mm) visible.
1	ECR-A-103	C	2021-11-12	17:02	-22.2	ECR-A-103-C-SPI.jpg	2.6	Physical	1.5	3.5	2	2.6	-2 to -3 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Stage II	loose biogenic aggregates	none	0	No	3	0.67	Oxidized	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Gravel	7	underpen. m/f.pebbles over grey silt/clay and trace biogenic carbonate shell fragments (7-10mm). Bioaggregates and soft epifaunal organism.
1	ECR-B-104	A	2021-11-13	18:11	-15.4	ECR-B-104-A-SPI.jpg	1.4	Physical	0.9	1.9	1	1.4	1 to 0 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Stage II	loose biogenic aggregates	none	0	No	4	0.12	Oxidized	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	5	underpen. m/f.pebbles over grey c.sand and trace silt/clay clasts. Bioaggregates and soft epifaunal organisms.
1	ECR-B-104	B	2021-11-13	18:13	-15.8	ECR-B-104-B-SPI.jpg	0.8	Physical	0.4	1.3	0.9	0.8	4 to 3 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	5	underpen. m/f.pebbles with grey silt/clay and trace biogenic carbonate shells (10-15mm). Surface tubes, bioaggregates, and shells in background (13-25mm).
1	ECR-A-105	A	2021-11-13	17:54	-10.1	ECR-A-105-A-SPI.jpg	4.5	Physical	3.7	5	1.3	1.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	5	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. dk.tan m/f.sand over tan/grey silt/clay and trace biogenic carbonate shell fragments. Surface mudclasts/bioaggregates and shell fragments.
1	ECR-A-105	B	2021-11-13	17:56	-9.9	ECR-A-105-B-SPI.jpg	5	Physical	4.3	5.6	1.3	1.9	2 to 1 phi	>4 phi	1 to 0 phi	Pebbles/Granule	Stage III	none	none	0	No	4	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. dk.tan m/f.sand over tan/grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts, shells, and trace pebbles.
1	ECR-B-106	B	2021-11-13	17:28	-19.7	ECR-B-106-B-SPI.jpg	6.9	Physical	4.8	8.5	3.7	6.9	1 to 0 phi	3 to 2 phi	0 to -1 phi	none	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan c/m.sand. Surface tube/fecal clasts.
1	ECR-B-106	C	2021-11-13	17:30	-20.2	ECR-B-106-C-SPI.jpg	2.1	Physical	1.3	2.7	1.4	2.1	-1 to -2 phi	>4 phi	-2 to -3 phi	none	Stage II	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	6	underpen. split habitat (f/vf.pebbles and shell fragments on left and tan/grey f.sand/silt on right). Fecal clasts and tubes on surface.
1	ECR-A-107	A	2021-11-13	16:58	-13	ECR-A-107-A-SPI.jpg	3.2	Biological	2.1	4.1	2	0	>4 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Stage II	loose biogenic aggregates	none	0	No	2	0.27	Oxidized	Shell Substrate	Shell Hash	--	--	--	underpen. biogenic carbonate shell fragments (10-50mm) over grey silt/clay. Surface shells, tubes, bioaggregates, and filamentous algae. Trace pebbles on surface.
1	ECR-A-107	B	2021-11-13	17:00	-13.5	ECR-A-107-B-SPI.jpg	2.3	Biological	1.4	3.2	1.8	0	>4 phi	>4 phi	0 to -1 phi	none	Stage II	loose biogenic aggregates	Yes	1	No	3	0.33	Oxidized	Shell Substrate	Shell Hash	--	--	--	underpen. biogenic carbonate shells (10-40mm) over grey silt/clay. Surface shells (scallop and clam), tubes, and bioaggregates.
1	ECR-B-108	A	2021-11-13	16:35	-9.2	ECR-B-108-A-SPI.jpg	8.2	Biological	1.5	9.7	8.2	0.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	0	No	3	0.18	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	6	underpen. tan silt with trace biogenic carbonate shell fragments over dk.grey silt/clay. Surface tubes, mudclasts, fecal pellets, green and brown algae, and shells. Large surface pits.
1	ECR-B-108	B	2021-11-13	16:38	-9.6	ECR-B-108-B-SPI.jpg	10.1	Biological	8.1	11.4	3.3	0.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	underpen. tan silt with trace biogenic carbonate shell fragments over dk.grey silt/clay. Surface tubes, mudclasts, fecal pellets, green and brown algae, and shells. Large surface pits.
1	ECR-A-109	B	2021-09-18	11:54	-19.1	ECR-A-109-B-SPI.jpg	5.6	Biological	5.3	6.4	1.1	2.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	1	No	1	0.86	Oxidized	Shell Substrate	Shell Hash	--	--	7	Underpen. tan/grey m/f.sand and clusters of grey silt/clay with biogenic carbonate shell fragments. Surface covered in shells. Unknown infaunal organism.
1	ECR-A-109	C	2021-09-18	11:58	-18.9	ECR-A-109-C-SPI.jpg	4.5	Biological	2.8	5.5	2.7	2.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	6	Underpen. tan/grey f.sand and clusters of tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface burrows, tubes, and covered with shells.
1	ECR-B-110	A	2021-09-18	10:34	-10.6	ECR-B-110-A-SPI.jpg	13.2	Physical	13	13.6	0.6	2.9	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey/black silt/clay with biogenic carbonate shell fragments. Surface tubes. Feeding voids visible at depth.
1	ECR-B-110	C	2021-09-18	10:48	-11	ECR-B-110-C-SPI.jpg	12.3	Physical	12.1	12.5	0.4	2.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey/black silt/clay with biogenic carbonate shell fragments. Deep oxidized burrow associated with large surface tube structure. Surface tubes. Feeding voids at depth.
1	ECR-A-111	A	2021-09-18	9:07	-16.4	ECR-A-111-A-SPI.jpg	8.5	Physical	8	9	1	0.1	>4 phi	>4 phi	2 to 1 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	2	Underpen. Shallow RPD. grey f.sand/silt/clay with biogenic carbonate shell fragments.
1	ECR-A-111	B	2021-09-18	9:13	-16.6	ECR-A-111-B-SPI.jpg	10.6	Physical	9.9	11	1.1	0.6	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	6	tan f.sand and grey/dk.grey silt/clay with biogenic carbonate shell fragments. Surface tubes and small shells (4mm). Burrow and feeding voids visible at depth
1	ECR-B-1150	A	2021-11-12	15:26	-10.3	ECR-B-1150-A-SPI.jpg	3.5	Physical	2.9	3.8	0.9	3.5	1 to 0 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. c/m.sand with cluster of silt/clay and surface pebbles. Trace biogenic carbonate shell fragments. Possible burrow.
1	ECR-B-1150	C	2021-11-12	15:35	-10.2	ECR-B-1150-C-SPI.jpg	2.5	Physical	1.2	3.6	2.4	2.4	1 to 0 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	--	underpen. vc/c.sand with clusters of silt/clay and surface pebbles. Trace biogenic carbonate shell fragments. Large clam shell (43mm) on surface.
1	ECR-B-1152	A	2021-11-12	14:26	-8.6	ECR-B-1152-A-SPI.jpg	2.2	Physical	1.2	2.8	1.6	2.2	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. vc/c.sand and surface pebbles. Trace biogenic carbonate shell fragments. Fecal clasts and macroalgae.
1	ECR-B-1152	C	2021-11-12	14:37	-8.4	ECR-B-1152-C-SPI.jpg	1.5	Physical	1.1	1.9	0.8	1.5	1 to 0 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	7	underpen. vc/c.sand and vf.pebbles. Trace biogenic carbonate shell fragments. Polychaete visible in burrow. Large shell (46mm) on surface.
1	ECR-B-1153	B	2021-11-12	13:52	-8.9	ECR-B-1153-B-SPI.jpg	3.3	Physical	2.8	4	1.2	3.3	1 to 0 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. vc/c.sand and biogenic carbonate shell fragments with trace surface pebbles.
1	ECR-B-1153	C	2021-11-12	13:55	-9.2	ECR-B-1153-C-SPI.jpg	3.3	Physical	2.3	3.8	1.5	3.3	1 to 0 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. vc/c.sand with clusters of silt/clay and surface pebbles. Trace biogenic carbonate shell fragments. Surface macro algae.
1	ECR-B-1154	A	2021-11-12	13:21	-11.2	ECR-B-1154-A-SPI.jpg	6.2	Physical	4.9	6.7	1.8	3.5	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. dk.tan c/m.sand over grey m/f.sand with trace biogenic carbonate shell fragments. Surface mudclasts.
1	ECR-B-1154	C	2021-11-12	13:27	-10.8	ECR-B-1154-C-SPI.jpg	6.7	Biological	6.1	7.4	1.3	1.8	2 to 1 phi	>4 phi	-1 to -2 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	1	No	1	0.14	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan c/m.sand with grey f/vf.sand with biogenic carbonate shell fragments. Clusters of grey silt/clay. Algal dragdown. Surface tubes and organism visible at depth.
1	ECR-B-1155	C	2021-11-12	11:55	-13.5	ECR-B-1155-C-SPI.jpg	20.2	Physical	19.6	20.7	1.1	1.2	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	1	No	1	1.05	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	lt.tan f/vf.sand and grey/dk.grey silt/clay with biogenic carbonate shell fragments. Surface mudclast and bioaggregates. Polychaete and filled feeding voids at depth. Shadow artifacts on surface.
1	ECR-B-1155	F	2021-11-12	12:22	-13.4	ECR-B-1155-F-SPI.jpg	19	Biological	16.4	20.1	3.7	1.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	0	No	1	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	lt.tan f/vf.sand and grey/dk.grey silt/clay with biogenic carbonate shell fragments. Mudclasts and bioaggregates in profile. Surface tubes, pit, and filled feeding voids at depth. Shadow artifacts on surface.
1	ECR-B-1156	H	2021-11-12	11:03	-6.3	ECR-B-1156-H-SPI.jpg	8.5	Biological	8.1	8.8	0.7	2.5	>4 phi	>4 phi	3 to 2 phi	none	Stage II	cluster(s) of rounded pellets	none	0	No	4	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	underpen. tan vf.sand/silt over grey/dk.grey silt/clay. Surface mudclasts and fecal pellets.
1	ECR-B-1156	I	2021-11-12	11:06	-5.8	ECR-B-1156-I-SPI.jpg	9.1	Physical	8.4	9.5	1.1	1.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	underpen. lt.tan vf.sand/silt over grey/dk.grey silt/clay. Surface bioaggregates. Polychaete and filled void visible at depth.
1	ECR-B-1157	A	2021-11-12	12:56	-8	ECR-B-1157-A-SPI.jpg	2.5	Physical	1.9	3.5	1.6	1.6	4 to 3 phi	>4 phi	1 to 0 phi	none	Indet	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan/grey m/f.sand with streaks of tan/grey silt/clay and trace biogenic carbonate shell fragments. Appearance of surface pit and unknown biogenic debris at depth.
1	ECR-B-1157	C	2021-11-12	13:01	-7.7	ECR-B-1157-C-SPI.jpg	2.2	Physical	1.9	2.8	0.9	1.4	3 to 2 phi	>4 phi	1 to 0 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	5	0.25	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan/grey m/f.sand with streaks of tan/grey silt/clay and trace biogenic carbonate shell fragments. Surface mudclasts and bioaggregates.
1	ECR-B-1158	B	2021-11-12	15:56	-9.5	ECR-B-1158-B-SPI.jpg	6.8	Physical	6.3	7.2	0.9	6.8	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. dk.tan/grey c/m.sand with trace pebbles on surface.
1	ECR-B-1158	C	2021-11-12	15:58	-8.4	ECR-B-1158-C-SPI.jpg	4.7	Physical	4.2	5.4	1.2	1.7	2 to 1 phi	4 to 3 phi	0 to -1 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. dk.tan/grey c/m.sand with small cluster of grey silt/clay and trace pebbles on surface.
2	ECR-B-112	A	2021-09-18	8:14	-33	ECR-B-112-A-SPI.jpg	7.9	Physical	7.3	8.3	1	2.8	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and dk.grey silt/clay with trace biogenic carbonate shells (3mm) and fragments. Surface burrows.
2	ECR-B-112	C	2021-09-18	8:26	-33.1	ECR-B-112-C-SPI.jpg	9.9	Biological	9.3	10.3	1	3.4	>4 phi	>4 phi	-1 to -2 phi	none	Stage III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	Large structure dragdown disturbing RPD. tan/grey silt/clay with biogenic carbonate shell fragments. Infauna due to structure dragdown.
2	ECR-A-113	B	2021-09-18	5:47	-15.9	ECR-A-113-B-SPI.jpg	5.8	Physical	5.3	5.9	0.6	0.8	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	7	Underpen. tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell (9mm) and fragments. Possible infauna and feeding void visible at depth.
2	ECR-A-113	C	2021-09-18	5:51	-16	ECR-A-113-C-SPI.jpg	5.2	Physical	3.6	6.3	2.7	1.6	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	8	tan/grey f.sand and grey silt/clay with biogenic carbonate shell (3mm) and fragments. Epifuana in background. Samll surface tubes. Feeding voids visible at depth.
2	ECR-B-114	A	2021-09-18	4:56	-10.6	ECR-B-114-A-SPI.jpg	13.2	Physical	12.9	13.4	0.5	2.9	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and tan/grey silt/clay with biogenic carbonate shells (2-4mm) and fragments. Surface tubes. Feeding voids visible at depth.
2	ECR-B-114	B	2021-09-18	5:00	-10.3	ECR-B-114-B-SPI.jpg	13.7	Physical	12.9	14.9	2	3	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and tan/dk.grey silt/clay with trace biogenic carbonate shell fragments. Anomalous black sediment on surface. Feeding voids visible at depth.
2	ECR-A-115	B	2021-09-18	3:09	-19	ECR-A-115-B-SPI.jpg	12.5	Physical	11.9	13.1	1.2	3.5	>4 phi	>4 phi	2 to 1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and tan/grey/dk.grey silt/clay with trave biogenic carbonate shell fragments. Epifaunal shells (5-6mm). Feeding voids visible at depth.
2	ECR-A-115	C	2021-09-18	3:13	-19	ECR-A-115-C-SPI.jpg	12.6	Physical	11.9	13.3	1.4	3.9	>4 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/dk.grey silt/clay with trace biogenic carbonate shell fragments. Bioturbation/aggregates and foaram tubes on surface. Possible filled feeding voids at depth.
2	ECR-B-116	B	2021-09-18	1:08	-14.7	ECR-B-116-B-SPI.jpg	14.3	Physical	13.9	15.1	1.2	1.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan f.sand and tan/dk.grey silt/clay with trace biogenic carbonate shell fragments. Small surface tubes. Feeding voids visible at depth.
2	ECR-B-116	C	2021-09-18	1:12	-20.6	ECR-B-116-C-SPI.jpg	14.5	Physical	13.4	15.4	2	1.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand/silt and dk.grey silt/clay with biogenic carbonate shells (4-11mm) and fragments. Filled burrow leading to feeding void at depth. Minor surface tubes.
2	ECR-A-117	A	2021-09-18	23:20	-16.3	ECR-A-117-A-SPI.jpg	12.2	Physical	11.1	13.7	2.6	0.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan vf.sand and dk grey silt/clay. Shallow RPD. Surface tubes present in the background. Feeding voids visible at depth.
2	ECR-A-117	B	2021-09-18	23:25	-16.5	ECR-A-117-B-SPI.jpg	13	Physical	11.1	15.2	4.1	1.2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	1	No	1	0.54	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan f.sand/silt and dk grey silt/clay with trace biogenic carbonate grains. Shallow RPD. Polychaete and feeding void visible at depth.
2	ECR-B-118	A	2021-09-17	22:03	-19	ECR-B-118-A-SPI.jpg	17.7	Physical	17.2	18	0.8	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand/silt and grey/dk grey silt/clay. Surface tubes present. Feeding voids at depth and possible polychaete.
2	ECR-B-118	C	2021-09-17	22:16	-19.2	ECR-B-118-C-SPI.jpg	16.9	Physical	16.1	18.2	2.1	2.4	>4 phi	>4 phi	3 to 2 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan f.sand/silt and grey/dk grey silt/clay with trace biogenic carbonate grains. Surface tubes present.
2	ECR-A-119	A	2021-09-17	19:43	-15.5	ECR-A-119-A-SPI.jpg	19.1	Physical	18.3	19.4	1.1	4.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand/silt and grey/dk grey silt/clay. Surface pit leading to multiple voids at depth.
2	ECR-A-119	C	2021-09-17	20:02	-15.1	ECR-A-119-C-SPI.jpg	16.1	Physical	15.7	16.5	0.8	4.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand/silt and grey/dk grey silt/clay with trace biogenic carbonate grains. Filled feeding void and visible polychaetes at depth. Surface bioaggregates/floc and tubes present in background.
2	ECR-B-120	B	2021-09-17	17:20	-17	ECR-B-120-B-SPI.jpg	18.5	Physical	18.3	18.6	0.3	4.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	Yes	2	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand/silt and grey/dk grey silt/clay. Methane bubbles present. Shallow feeding void in aRPD. Surface floc
2	ECR-B-120	C	2021-09-17	17:25	-16.9	ECR-B-120-C-SPI.jpg	19.7	Physical	19.2	20.1	0.9	6	>4 phi	>4 phi	4 to 3 phi	none	Stage II	none	none	0	No	2	0.66	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand/silt and grey/dk grey silt/clay with trace biogenic carbonate grains. Surface mudclasts and floc.
2	ECR-A-121	A	2021-09-17	15:32	-25.8	ECR-A-121-A-SPI.jpg	12.3	Physical	11.8	13.3	1.5	1.6	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	grey/dk grey silt/clay with biogenic carbonate shells. Shallow/nonexistent RPD. Surface floc. Feeding void at depth
2	ECR-A-121	C	2021-09-17	15:42	-25.8	ECR-A-121-C-SPI.jpg	10.9	Physical	10.5	11.4	0.9	2.7	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	dk.tan f.sand/silt and grey/dk.grey silt/clay. Shells (1-5mm) and fragments present in the upper 5cm. Feeding void at depth.
2	ECR-B-122	A	2021-09-17	13:43	-32.6	ECR-B-122-A-SPI.jpg	10.9	Physical	10.3	11.5	1.2	1.5	>4 phi	>4 phi	0 to -1 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	dk.tan f.sand and grey/dk.grey silt/clay. Shells (1-7mm) and fragments. Surface pit leading to feeding void. Surface fecal pellets and floc.
2	ECR-B-122	C	2021-09-17	13:55	-31.8	ECR-B-122-C-SPI.jpg	15.8	Physical	14.8	16.8	2	1.7	>4 phi	>4 phi	0 to -1 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	4	grey/dk.grey silt/clay with shells (1mm-8mm) and shell fragments.
2	ECR-A-123	E	2021-09-17	11:42	-21.8	ECR-A-123-E-SPI.jpg	16.9	Physical	16.6	17.2	0.6	2.6	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	1	0.58	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	grey/dk.grey silt/clay with trace biogenic carbonate grains. Feeding void visible at depth.
2	ECR-A-123	F	2021-09-17	11:46	-21.7	ECR-A-123-F-SPI.jpg	17.9	Physical	17.6	18.5	0.9	2.5	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	1	No	2	0.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey/dk.grey silt/clay with trace biogenic carbonate grains. Feeding void and possible infauna at depth. Surface mudclasts and tube present in the background.
2	ECR-B-124	A	2021-09-17	10:03	-15.2	ECR-B-124-A-SPI.jpg	18.9	Physical	18.1	19.5	1.4	3.2	>4 phi	>4 phi	4 to 3 phi	none	Stage II	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey/dk.grey silt/clay with trace amount of biogenic carbonate shells. Surface burrows associated with tunnels at depth. Deeper oxidized burrow associated with a shell.
2	ECR-B-124	B	2021-09-17	10:08	-14.9	ECR-B-124-B-SPI.jpg	15.9	Physical	15.4	16.8	1.4	2.3	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	1	No	7	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey/dk.grey silt/clay with trace biogenic carbonate shells. Surface mudclasts. Unknown infauna organisms. Feeding void at depth.
2	ECR-A-125	A	2021-09-17	8:46	-12.8	ECR-A-125-A-SPI.jpg	13.4	Physical	12.8	14.4	1.6	2.5	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	2	0.56	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	grey/dk.grey silt/clay with shells (1-7mm) and shell fragments. Surface tube visible in background. Possible filled feeding voids at depth.
2	ECR-A-125	C	2021-09-17	8:57	-12.5	ECR-A-125-C-SPI.jpg	14.7	Biological	14.1	15.4	1.3	5.4	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	12	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	dk.tan/grey/dk.grey silt/clay. Shells (1-4) and fragments. Surface mudclasts. Possible filled feeding void at depth.
2	ECR-B-126	A	2021-09-17	7:56	-12.2	ECR-B-126-A-SPI.jpg	13.6	Physical	13	13.9	0.9	4.4	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	dk.tan f.sand/silt and grey/dk.grey silt/clay. Shells (1-9mm) and fragments present. Polychaete and filled feeding void at depth. Surface tube in background.
2	ECR-B-126	C	2021-09-17	8:08	-12.3	ECR-B-126-C-SPI.jpg	14.6	Physical	13.1	15.3	2.2	2.7	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	dk.tan f.sand/silt and grey/dk.grey silt/clay. Shells (1-6mm) and fragments present. Feeding voids at depth, possible polychaete.
2	ECR-A-127	A	2021-09-17	6:28	-11.8	ECR-A-127-A-SPI.jpg	14.1	Physical	12.9	15	2.1	2.3	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	2	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	dk.tan f.sand/silt and grey/dk.grey silt/clay. Shells (1-5mm) and fragments present, along with streak of orange sediment (iron?). Mudclasts present and possible filled feeding voids.
2	ECR-A-127	B	2021-09-17	6:33	-12.1	ECR-A-127-B-SPI.jpg	14	Physical	13.5	14.9	1.4	2.1	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	dk.tan f.sand/silt and grey/dk.grey silt/clay. Shells (2-7mm) and fragments present. Polychaetes visible and large voids at depth.
2	ECR-B-128	A	2021-09-17	5:17	-12.5	ECR-B-128-A-SPI.jpg	14.3	Physical	13.8	14.7	0.9	4.1	>4 phi	>4 phi	-1 to -2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	grey/dk.grey silt/clay. Shells (2-9mm) and fragments present. Voids visible at depth. Large clam shell on surface in background.
2	ECR-B-128	C	2021-09-17	5:25	-12.5	ECR-B-128-C-SPI.jpg	13.8	Physical	12.5	14.5	2	3.6	>4 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	1	0.73	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	grey/dk.grey silt/clay. Shells (1-5mm) and fragments present. Feeding void visible at depth.
2	ECR-A-129	B	2021-09-17	3:52	-12.8	ECR-A-129-B-SPI.jpg	12.4	Physical	11	13.2	2.2	2.6	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	dk tan f.sand and grey silt/clay with trace biogenic carbonate shells. Surface pit leading to a feeding void at depth. Polychaete visible.
2	ECR-A-129	C	2021-09-17	3:56	-12.7	ECR-A-129-C-SPI.jpg	10.3	Physical	7.2	12	4.8	2.4	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	dk tan f.sand and grey silt/clay with trace biogenic carbonate shells. Surface pits leading to voids.
2	ECR-B-130	A	2021-09-17	3:01	-14.6	ECR-B-130-A-SPI.jpg	11.9	Physical	9.8	14.4	4.6	1.4	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	dk tan f.sand and grey silt/clay with trace biogenic carbonate shells. Surface pit and feeding voids at depth.
2	ECR-B-130	B	2021-09-17	3:06	-14.5	ECR-B-130-B-SPI.jpg	13.5	Physical	12.8	14.1	1.3	3.3	>4 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	dk tan f.sand and grey silt/clay with trace biogenic carbonate shells. Larger shells presenton surface and at depth (6-8mm). Feeding voids visible.
2	ECR-A-131	A	2021-09-17	1:45	-15.3	ECR-A-131-A-SPI.jpg	12.6	Physical	12	13	1	4.2	>4 phi	>4 phi	1 to 0 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and grey silt/clay with shell fragments. Unknown surface tube/organism in the background. Feeding voids at depth.
2	ECR-A-131	C	2021-09-17	1:55	-15.3	ECR-A-131-C-SPI.jpg	11.5	Physical	10.5	12.5	2	2.9	>4 phi	>4 phi	1 to 0 phi	none	Stage I on III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with shell fragments. Surface tubes. Polychaetes and feeding voids at depth.
2	ECR-B-132	A	2021-09-17	0:53	-15.2	ECR-B-132-A-SPI.jpg	16.8	Physical	16.5	17	0.5	0	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	1	No	6	0.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	--	aRPD indet. dk grey silt/clay with shells (6-8mm) and shell fragments. Polychaete visible, possible filled feeding void.
2	ECR-B-132	B	2021-09-17	0:58	-15.1	ECR-B-132-B-SPI.jpg	14.7	Physical	14.5	15.9	1.4	2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay with shells (4-8mm) and shell fragments. Surface tubes, unknown white organism/shell, floc. Feeding void at depth.
2	ECR-A-133	A	2021-09-16	21:57	-15.4	ECR-A-133-A-SPI.jpg	15.1	Physical	14.7	15.5	0.8	1.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	1	0.44	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	dk tan f.sand and grey silt/clay with trace biogenic carbonate shells. Small surface pit leading to void. Feeding voids at depth.
2	ECR-A-133	C	2021-09-16	22:09	-15.2	ECR-A-133-C-SPI.jpg	16.6	Physical	16.5	16.8	0.3	2.6	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	none	none	0	No	1	0.67	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan vf.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes in the background. Filled feeding voids.
2	ECR-B-134	A	2021-09-16	21:15	-14.7	ECR-B-134-A-SPI.jpg	13.3	Physical	12.6	13.8	1.2	1.7	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	Yes	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan vf.sand and dk.grey silt/clay with trace shell fragments. Surface pit leading to a burrow. Polychaetes and feeding voids visible at depth.
2	ECR-B-134	C	2021-09-16	21:27	-14.7	ECR-B-134-C-SPI.jpg	15.2	Physical	15	15.6	0.6	2.2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	dk.tan/grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids at depth.
2	ECR-A-135	A	2021-09-16	19:38	-13.9	ECR-A-135-A-SPI.jpg	12.8	Physical	12.5	13.2	0.7	2.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth.
2	ECR-A-135	B	2021-09-16	19:44	-13.9	ECR-A-135-B-SPI.jpg	12.7	Physical	12.3	13.2	0.9	1.2	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	1.06	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	dk.tan vf.sand and grey silt/clay with trace biogenic carbonate shells (2-6mm). Feeding voids visible
2	ECR-B-136	A	2021-09-16	18:58	-13.3	ECR-B-136-A-SPI.jpg	12.1	Physical	11.3	12.4	1.1	2.1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay with trace biogenic carbonate shells. Polychaete and feeding void visible.
2	ECR-B-136	B	2021-09-16	19:03	-13.5	ECR-B-136-B-SPI.jpg	12.7	Physical	11.9	14.4	2.5	2.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	4	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with trace biogenic carbonate shells. Feeding void visible at depth.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
2	ECR-A-137	A	2021-09-16	16:24	-11.9	ECR-A-137-A-SPI.jpg	14.4	Physical	13.9	14.7	0.8	2.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan vf.sand and grey silt/clay with trace biogenic carbonate shells. Surface tubes. Feeding voids at depth.
2	ECR-A-137	E	2021-09-16	17:04	-12	ECR-A-137-E-SPI.jpg	15.5	Physical	14.5	16.3	1.8	1.7	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan vf.sand and grey silt/clay with trace biogenic carbonate shells. Feeding voids at depth.
2	ECR-B-138	B	2021-09-16	15:12	-11.6	ECR-B-138-B-SPI.jpg	14.9	Physical	14.6	15.2	0.6	3	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	3	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids at depth
2	ECR-B-138	C	2021-09-16	15:19	-11.7	ECR-B-138-C-SPI.jpg	15.5	Physical	14.3	16.1	1.8	3.3	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan vf.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids visible at depth.
2	ECR-A-139	A	2021-09-16	13:39	-13.7	ECR-A-139-A-SPI.jpg	16.7	Physical	16.2	16.9	0.7	2.1	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	2	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan vf.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Feeding voids at depth.
2	ECR-A-139	B	2021-09-16	13:41	-13.6	ECR-A-139-B-SPI.jpg	16.6	Physical	15.4	17.3	1.9	2.1	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.35	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan vf.sand/silt and grey silt/clay and trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Surface pits leading to feeding voids.
2	ECR-B-140	B	2021-09-16	12:56	-17.4	ECR-B-140-B-SPI.jpg	18.4	Physical	17.2	19.3	2.1	3.2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan vf.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids at depth
2	ECR-B-140	C	2021-09-16	13:02	-17.4	ECR-B-140-C-SPI.jpg	18.5	Physical	18	19	1	2.8	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	7	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Feeding voids at depth.
2	ECR-A-141	A	2021-09-16	11:20	-18.8	ECR-A-141-A-SPI.jpg	11.7	Physical	10.9	12.7	1.8	2.5	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids and burrows at depth.
2	ECR-A-141	B	2021-09-16	11:25	-18.9	ECR-A-141-B-SPI.jpg	11.8	Physical	11.3	12.2	0.9	2.6	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	2	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan vf.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Feeding voids visible at depth.
2	ECR-B-142	B	2021-09-16	10:07	-17.4	ECR-B-142-B-SPI.jpg	3.9	Biological	3.1	4.5	1.4	2.5	1 to 0 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage II	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	7	Underpen. tan pebbles/granules and sand with a cluster of grey silt/clay. Fecal clusters.
2	ECR-B-142	C	2021-09-16	10:13	-17	ECR-B-142-C-SPI.jpg	3.9	Physical	2.7	4.6	1.9	2.1	0 to -1 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	8	Underpen. tan pebbles/granules and sand with streaks of grey silt/clay. Surface pit. Fecal cluster.
2	ECR-A-143	A	2021-09-16	8:31	-22.4	ECR-A-143-A-SPI.jpg	18.1	Physical	16.8	18.5	1.7	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids at depth.
2	ECR-A-143	B	2021-09-16	8:37	-22.5	ECR-A-143-B-SPI.jpg	18.7	Physical	17.6	19.5	1.9	4.2	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Large feeding voids at depth.
2	ECR-B-144	B	2021-09-16	7:14	-21.4	ECR-B-144-B-SPI.jpg	11.2	Physical	8.6	12	3.4	2.5	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Deep oxidized burrow. Feeding voids at depth.
2	ECR-B-144	C	2021-09-16	7:19	-21.7	ECR-B-144-C-SPI.jpg	11.8	Physical	11.1	12.2	1.1	3.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	2	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and grey silt/clay with trace biogenic carbonate shells (3-11mm) and fragments. Surface tubes. Feeding voids visible at depth.
2	ECR-A-145	A	2021-09-16	5:00	-21	ECR-A-145-A-SPI.jpg	10.3	Physical	9.6	10.9	1.3	2.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/grey f.sand and grey silt/clay and trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth.
2	ECR-A-145	B	2021-09-16	5:04	-21.1	ECR-A-145-B-SPI.jpg	10.6	Physical	9.9	11.1	1.2	2.1	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	8	tan/grey f.sand and grey silt/clay. Feeding voids and polychaete visible at depth. Epifaunal bivalve shell burial and surface tubes.
2	ECR-B-146	A	2021-09-16	4:18	-19.3	ECR-B-146-A-SPI.jpg	9.7	Physical	9.4	10.1	0.7	2.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and tan/grey silt/clay. Surface tubes. Feeding voids and polychaete visible at depth.
2	ECR-B-146	C	2021-09-16	4:26	-19.6	ECR-B-146-C-SPI.jpg	9.1	Physical	8.5	9.6	1.1	2.2	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth.
2	ECR-A-147	A	2021-09-16	2:10	-19.3	ECR-A-147-A-SPI.jpg	12.1	Physical	11	12.8	1.8	2.9	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Chunk of black silt/clay in bottom left corner of profile. Feeding voids at depth.
2	ECR-A-147	B	2021-09-16	2:13	-19.6	ECR-A-147-B-SPI.jpg	11.8	Physical	10.8	12.8	2	3.2	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	1	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan/grey f.sand and grey silt/clay. Surface tubes. Feeding voids at depth
2	ECR-B-148	B	2021-09-16	1:23	-18.9	ECR-B-148-B-SPI.jpg	17.6	Physical	17.2	17.7	0.5	2.5	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	3	0.32	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan vf.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids visible at depth. Surface mudclasts and floc.
2	ECR-B-148	C	2021-09-16	1:28	-19.1	ECR-B-148-C-SPI.jpg	16.6	Physical	16.1	17.3	1.2	3.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan vf.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids visible at depth.
2	ECR-A-149	A	2021-09-15	22:37	-18.2	ECR-A-149-A-SPI.jpg	16.8	Physical	16.4	17.7	1.3	1.9	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	none	none	0	No	1	0.79	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace biogenic carbonate shell fragments. Black silt/clay in bottom right corner. Surface pit leading to feeding void. Surface tubes.
2	ECR-A-149	B	2021-09-15	22:44	-18.1	ECR-A-149-B-SPI.jpg	17.3	Physical	15.9	18.6	2.7	3.4	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Surface pits leading to a feeding void at depth.
2	ECR-B-150	A	2021-09-15	21:44	-18.4	ECR-B-150-A-SPI.jpg	17	Physical	16.7	17.5	0.8	1.4	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids visible at depth.
2	ECR-B-150	C	2021-09-15	21:56	-18.3	ECR-B-150-C-SPI.jpg	20	Physical	19.3	20.3	1	3	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids visible at depth.
2	ECR-A-151	A	2021-09-15	20:00	-18.4	ECR-A-151-A-SPI.jpg	14.7	Biological	14.5	15	0.5	4.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Possible filled feeding voids
2	ECR-A-151	B	2021-09-15	20:05	-18.2	ECR-A-151-B-SPI.jpg	14.2	Physical	13.9	14.7	0.8	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments.
2	ECR-B-152	A	2021-09-15	19:17	-21.6	ECR-B-152-A-SPI.jpg	8.6	Physical	8	9.1	1.1	3.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	underpen. tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth.
2	ECR-B-152	C	2021-09-15	19:27	-21.6	ECR-B-152-C-SPI.jpg	7.5	Physical	7	8.2	1.2	3.3	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	Underpen. tan/grey f.sand and grey silt/clay. Polychaete and feeding voids at depth.
2	ECR-A-153	A	2021-09-15	16:52	-16.1	ECR-A-153-A-SPI.jpg	3.6	Physical	3.5	3.8	0.3	2.4	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage II	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	Underpen. dk.tan/grey m/f.sand and clusters of grey silt/clay. Many epifaunal molluscs/crustaceans.
2	ECR-A-153	B	2021-09-15	16:58	-16.2	ECR-A-153-B-SPI.jpg	4.4	Physical	3.7	4.6	0.9	3.5	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	Underpen. dk.tan/grey m/f.sand and cluster of grey silt/clay. Many epifaunal molluscs/crustaceans.
2	ECR-B-154	B	2021-09-15	14:41	-9.6	ECR-B-154-B-SPI.jpg	2.7	Biological	1.4	3.9	2.5	1.5	1 to 0 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	Underpen. Shell hash over c/m.sand. Burrow visible. RPD indet.
2	ECR-B-154	C	2021-09-15	14:46	-9.6	ECR-B-154-C-SPI.jpg	3.4	Physical	2.4	4.4	2	3.4	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	10	Underpen. Pebbles and granules over sand with many epifaunal bivalve shells in background.
2	ECR-A-155	D	2021-09-15	12:47	-15.5	ECR-A-155-D-SPI.jpg	4.6	Biological	3.2	5.3	2.1	4.2	2 to 1 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	Underpen. Pebbles and shells over dk.tan/grey m.sand and clusters of grey silt/clay.
2	ECR-A-155	F	2021-09-15	12:59	-15.2	ECR-A-155-F-SPI.jpg	4	Physical	3.4	4.9	1.5	2.1	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	8	Underpen. Pebbles over dk.tan/grey m/f.sand. Epifaunal organisms.
2	ECR-A-1130	D	2021-11-13	8:38	-18.5	ECR-A-1130-D-SPI.jpg	19.2	Physical	18.4	19.6	1.2	3.1	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	12	0.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	10	tan/dk.grey silt/clay with biogenic carbonate shell fragments (0.5-4mm). Mudclasts, surface burrows leading to voids. Larger voids visible at depth.
2	ECR-A-1130	F	2021-11-13	8:42	-18.4	ECR-A-1130-F-SPI.jpg	18.1	Physical	17.2	19.2	2	0.9	>4 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	tan/dk.grey silt/clay with biogenic carbonate shell fragments (0.5-3mm). Possible polychaete and large voids visible at depth.
2	ECR-B-1131	C	2021-11-13	9:04	-26.7	ECR-B-1131-C-SPI.jpg	13.9	Physical	13.1	14.8	1.7	0.9	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	1	No	3	0.18	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	tan/dk.grey silt/clay with biogenic carbonate shell fragments (0.5-3mm). Surface mudclasts. Possible polychaete and large void visible at depth.
2	ECR-B-1131	H	2021-11-13	10:15	-26.1	ECR-B-1131-H-SPI.jpg	10.6	Physical	10	11.7	1.7	0.8	>4 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	8	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	tan/dk.grey silt/clay with biogenic carbonate shell fragments (0.5-3mm). Surface mudclasts, bioaggregates, and pit leading to void visible at depth.
2	ECR-A-1132	A	2021-11-13	10:40	-27.5	ECR-A-1132-A-SPI.jpg	15.6	Physical	15.4	15.9	0.5	0.9	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	6	0.13	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	tan/black silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Large feeding voids visible at depth.
2	ECR-A-1132	C	2021-11-13	10:44	-28	ECR-A-1132-C-SPI.jpg	16.8	Physical	16.4	17	0.6	1.2	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	4	0.13	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	7	tan/black silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Small feeding void at depth.
2	ECR-B-1133	B	2021-11-13	11:18	-32.9	ECR-B-1133-B-SPI.jpg	5.1	Physical	3.1	6	2.9	1.4	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	2	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	underpen. tan f.sand over grey silt/clay with biogenic carbonate shell fragments. Surface pit. Mudclasts within profile and feeding voids at depth.
2	ECR-B-1133	C	2021-11-13	11:19	-33	ECR-B-1133-C-SPI.jpg	9	Biological	3.5	10.3	6.8	0.9	>4 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	underpen. tan f.sand over grey silt/clay with biogenic carbonate shell fragments. Large surface pit. Other feeding voids at depth.
2	ECR-A-1134	A	2021-11-13	11:42	-15.9	ECR-A-1134-A-SPI.jpg	7.3	Biological	5.2	8	2.8	2.1	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	4	0.34	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	underpen. tan f.sand over grey silt/clay with biogenic carbonate shell fragments. Large surface pit, mudclasts, and bioaggregates. Other feeding voids at depth.
2	ECR-A-1134	C	2021-11-13	11:49	-15.6	ECR-A-1134-C-SPI.jpg	9.6	Physical	9.1	10.1	1	1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	6	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	underpen. tan f.sand over grey silt/clay with biogenic carbonate shell fragments. Surface tubes and mudclasts. Filled surface pit leading to void. Other feeding voids visible at depth.
2	ECR-B-1135	B	2021-11-13	12:12	-13.9	ECR-B-1135-B-SPI.jpg	11.8	Biological	10.9	12.5	1.6	2.7	>4 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	1	0.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts. Filled feeding voids visible.
2	ECR-B-1135	C	2021-11-13	12:13	-13.9	ECR-B-1135-C-SPI.jpg	11.7	Physical	11.1	12	0.9	0.7	>4 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	4	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	6	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts. Feeding voids visible.
2	ECR-A-1136	A	2021-11-13	12:34	-13.8	ECR-A-1136-A-SPI.jpg	10.4	Physical	10	10.7	0.7	0.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	6	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-4mm). Surface bioaggregates. Feeding voids visible.
2	ECR-A-1136	C	2021-11-13	12:43	-13.7	ECR-A-1136-C-SPI.jpg	12.5	Physical	11.9	12.9	1	0.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	4	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud	--	6	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-4mm). Surface bioaggregates. Feeding voids visible.
2	ECR-B-1137	A	2021-11-14	9:32	-15.6	ECR-B-1137-A-SPI.jpg	12.6	Physical	11.6	13.6	2	1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-4mm). Surface bioaggregates. Feeding voids visible.
2	ECR-B-1137	D	2021-11-14	9:38	-15.6	ECR-B-1137-D-SPI.jpg	11.4	Physical	10.9	11.9	1	1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	7	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	lt.tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-4mm). Surface mudclasts. Possible infauna and feeding voids visible.
2	ECR-A-1138	A	2021-11-14	9:58	-16.3	ECR-A-1138-A-SPI.jpg	12	Physical	11.2	12.6	1.4	1.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-9mm). Surface tube. Mudclasts and filled feeding voids visible.
2	ECR-A-1138	D	2021-11-14	10:05	-16.2	ECR-A-1138-D-SPI.jpg	10.5	Physical	10.2	10.8	0.6	1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	8	0.2	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey f.sand over grey silt/clay with biogenic carbonate shell fragments (1-9mm). Mudclasts and filled feeding voids visible.
3	ECR-B-201	A	2021-08-29	17:11	-24.5	ECR-B-201-A-SPI.jpg	11.9	Physical	11.7	12.5	0.8	3.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	5	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and grey silt/clay. Minor surface tubes. Feeding voids visible at depth.
3	ECR-B-201	B	2021-08-29	17:18	-24.3	ECR-B-201-B-SPI.jpg	13.9	Physical	13.8	14.1	0.3	1.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.64	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay. Minor surface tubes and mudclasts. Feeding voids visible at depth.
3	ECR-A-202	B	2021-08-29	15:28	-24.4	ECR-A-202-B-SPI.jpg	14.4	Physical	13.8	14.8	1	1.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Feeding voids visible at depth.
3	ECR-A-202	C	2021-08-29	15:33	-24.7	ECR-A-202-C-SPI.jpg	14.3	Physical	13.9	14.7	0.8	2.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes and burrows. Instrument artifacts. Feeding voids visible at depth.
3	ECR-B-203	A	2021-08-29	13:30	-23.4	ECR-B-203-A-SPI.jpg	16.2	Physical	15.8	16.9	1.1	1.8	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Feeding voids visible at depth.
3	ECR-B-203	B	2021-08-29	13:36	-23.4	ECR-B-203-B-SPI.jpg	15.6	Physical	14.8	16	1.2	2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay. Surface mudclasts, loose bioaggregates, minor surface tubes. Feeding voids visible at depth.
3	ECR-A-204	A	2021-08-29	10:57	-22.1	ECR-A-204-A-SPI.jpg	15.6	Physical	14.8	16.3	1.5	1.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	3	0.24	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey/black silt/clay with trace biogenic carbonate shells. Thin layer of dk.grey silt/clay on surface. Surface mudclasts, pits leading to burrows, and tubes. Feeding voids visible at depth.
3	ECR-A-204	C	2021-08-29	11:08	-22	ECR-A-204-C-SPI.jpg	18.2	Physical	17.6	18.5	0.9	2.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	3	1.25	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay with biogenic carbonate shell fragments. Surface tubes and artifact mudshavings. Feeding voids visible at depth.
3	ECR-B-205	A	2021-08-29	10:09	-21.8	ECR-B-205-A-SPI.jpg	18	Physical	17.2	18.2	1	3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay. Surface tubes. Feeding voids visible at depth.
3	ECR-B-205	C	2021-08-29	10:21	-21.8	ECR-B-205-C-SPI.jpg	18.9	Physical	18.3	19.3	1	2.9	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	4	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	grey f.sand and tan/grey silt/clay with a few biogenic carbonate shell fragments. Feeding voids visible at depth.
3	ECR-A-206	A	2021-08-29	7:52	-22.5	ECR-A-206-A-SPI.jpg	18.1	Physical	17.4	18.4	1	2.2	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay and trace biogenic carbonate shell fragments. Small surface tubes and epifaunal tube dwelling organism. Feeding voids present at depth.
3	ECR-A-206	C	2021-08-29	8:03	-22.5	ECR-A-206-C-SPI.jpg	16.7	Physical	16.5	16.9	0.4	2.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	1	0.13	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Feeding voids visible at depth.
3	ECR-B-207	A	2021-08-29	7:01	-24.3	ECR-B-207-A-SPI.jpg	17.9	Physical	17.5	18.1	0.6	1.9	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Large feeding void at depth.
3	ECR-B-207	B	2021-08-29	7:06	-24.1	ECR-B-207-B-SPI.jpg	18.8	Physical	18.2	19.2	1	2.5	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	7	0.28	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Large feeding voids visible at depth.
3	ECR-A-208	A	2021-08-29	4:48	-26.4	ECR-A-208-A-SPI.jpg	18.6	Physical	18.5	18.8	0.3	4.4	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	1	0.58	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Minor surface tubes. Large feeding voids at depth with bioaggregate deposits.
3	ECR-A-208	B	2021-08-29	4:54	-26.6	ECR-A-208-B-SPI.jpg	16.6	Biological	12.7	18.2	5.5	1.3	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	3	0.82	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	trace tan and grey silt/clay. Surface mudclasts and large surface pit. Large void at depth.
3	ECR-B-209	A	2021-08-29	4:00	-28.7	ECR-B-209-A-SPI.jpg	17.8	Physical	17.5	18.3	0.8	4	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	2	No	3	0.52	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and grey silt/clay with a handful of biogenic carbonate shell fragments. Polychaetes and feeding voids visible at depth.
3	ECR-B-209	C	2021-08-29	4:12	-28.6	ECR-B-209-C-SPI.jpg	18	Physical	17.7	18.2	0.5	4.6	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	5	0.51	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Feeding voids visible at depth.
3	ECR-A-210	A	2021-08-29	1:55	-27.1	ECR-A-210-A-SPI.jpg	19	Physical	18.7	19.3	0.6	3.6	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	2	0.3	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with few biogenic carbonate shell fragments. Surface mudclasts. Possible filled feeding void. Epifaunal hermit crab
3	ECR-A-210	C	2021-08-29	2:06	-27.2	ECR-A-210-C-SPI.jpg	18.3	Physical	18.2	18.5	0.3	2.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay. Cluster of vf.sand and dk.grey streaks of clay at depth. Surface mudclast and tubes. Polychaetes and minor feeding voids visible at depth.
3	ECR-B-211	B	2021-08-29	1:04	-28.2	ECR-B-211-B-SPI.jpg	18.2	Physical	18	18.6	0.6	3.7	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	4	0.39	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with streaks of black clay at depth. Surface pit and burrow associated with a tube system structure. Feeding voids visible at depth.
3	ECR-B-211	C	2021-08-29	1:09	-28.2	ECR-B-211-C-SPI.jpg	17.4	Physical	17.2	17.7	0.5	3.8	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	4	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan vf.sand and tan/grey silt/clay. f.sand at base of feeding void. Filled in surface pit and burrow. Surface mudclasts.
3	ECR-A-212	E	2021-08-28	23:30	-30.4	ECR-A-212-E-SPI.jpg	16.7	Physical	16.6	17	0.4	2.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Artifact mud shaving. Surface tubes. Feeding voids at depth.
3	ECR-A-212	F	2021-08-28	23:36	-30.6	ECR-A-212-F-SPI.jpg	16.8	Physical	16.8	17	0.2	3.2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan vf.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids and polychaetes visible at depth.
3	ECR-B-213	C	2021-08-28	1:03	-34.2	ECR-B-213-C-SPI.jpg	18.9	Physical	18.7	19.2	0.5	3.4	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	3	No	6	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with biogenic carbonate shell fragments. tan vf.sand and bioaggregates at base of feeding voids. Surface mudclasts. Polychaetes visible.
3	ECR-B-213	F	2021-08-28	1:49	-34.5	ECR-B-213-F-SPI.jpg	19.8	Physical	19.4	20	0.6	2.8	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	5	0.46	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts and filled burrow. Feeding voids and polychaete visible at depth.
3	ECR-A-214	B	2021-08-27	22:51	-34.4	ECR-A-214-B-SPI.jpg	18.3	Physical	17.6	19.1	1.5	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	4	No	15	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Polychaetes and feeding voids visible at depth.
3	ECR-A-214	C	2021-08-27	22:57	-34.3	ECR-A-214-C-SPI.jpg	18.1	Physical	17.9	18.4	0.5	3.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	7	0.34	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Polychaete and feeding voids visible.
3	ECR-B-215	A	2021-08-27	21:12	-34.6	ECR-B-215-A-SPI.jpg	16.5	Physical	16.4	16.9	0.5	3.4	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	5	0.51	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Polychaete and feeding voids visible at depth.
3	ECR-B-215	C	2021-08-27	21:23	-34.6	ECR-B-215-C-SPI.jpg	16.2	Physical	15.3	16.8	1.5	2.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	1	No	4	0.32	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay and trace f.sand. A few biogenic carbonate shells present. Filled surface burrow. Filled feeding voids.
3	ECR-A-216	A	2021-08-27	19:43	-35.1	ECR-A-216-A-SPI.jpg	15.2	Physical	15	15.4	0.4	1.8	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	1	No	4	0.46	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay. Surface mudclast and tube/fecal clast. Polychaete and feeding voids visible at depth.
3	ECR-A-216	C	2021-08-27	19:52	-35.2	ECR-A-216-C-SPI.jpg	15.4	Physical	14.5	15.7	1.2	2.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	Yes	0	No	4	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f.sand and grey silt/clay. Surface mudclasts and pit. Filled feeding voids at depth.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
3	ECR-B-217	A	2021-08-27	18:50	-36.3	ECR-B-217-A-SPI.jpg	15.6	Physical	15.4	15.8	0.4	2.6	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay. Minor surface tubes in the background. Small feeding void visible.
3	ECR-B-217	C	2021-08-27	19:02	-36.4	ECR-B-217-C-SPI.jpg	13.8	Physical	12.7	14.4	1.7	2.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	2	0.48	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f.sand and grey silt/clay. Surface fecal pellets and mud shaving artifact. Polychaete and feeding void visible at depth.
3	ECR-A-218	A	2021-08-27	16:34	-35.6	ECR-A-218-A-SPI.jpg	12.9	Physical	12.7	13.4	0.7	2.7	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	2	No	3	0.98	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/grey m/f.sand with pockets of grey silt/clay. Surfacemudclasts andburrow. Feeding voids and polychaetes visible at depth.
3	ECR-A-218	C	2021-08-27	16:44	-35.5	ECR-A-218-C-SPI.jpg	10.8	Physical	10	11.3	1.3	2.8	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	5	0.31	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/grey m/f.sand and trace tan/grey silt/clay. Surface mudclasts and filled burrow. Feeding voids at depth.
3	ECR-B-219	A	2021-08-27	14:40	-36.7	ECR-B-219-A-SPI.jpg	14.3	Physical	13	14.9	1.9	1.5	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	4	0.55	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	7	tan/grey f.sand and grey silt/clay. Surface tubes, artifact mud shaving, mudclasts, and pit leading to feeding void. Polychaete visible.
3	ECR-B-219	B	2021-08-27	14:46	-36.8	ECR-B-219-B-SPI.jpg	14.9	Physical	14.7	15.2	0.5	2.1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	2	1.1	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay and grey silt/clay. Surface mudclasts. Feeding voids visible at depth.
3	ECR-A-220	B	2021-08-27	13:02	-32.9	ECR-A-220-B-SPI.jpg	15.2	Physical	14.3	15.8	1.5	1.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	1	0.79	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey f.sand andgrey silt/clay. Surface pit and tubes. Feeding voids and polychaete visible at depth.
3	ECR-A-220	C	2021-08-27	13:07	-33.1	ECR-A-220-C-SPI.jpg	15.2	Physical	15	15.4	0.4	1.2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan f.sand and grey silt/clay. Surface mudclasts and tubes. Filled feeding void and polychaete visible.
3	ECR-B-221	B	2021-08-27	11:00	-35.1	ECR-B-221-B-SPI.jpg	18.4	Physical	15.8	19.9	4.1	1.6	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	13	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	trace tan and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Large voids at depth.
3	ECR-B-221	C	2021-08-27	11:05	-34.9	ECR-B-221-C-SPI.jpg	16.7	Physical	14	18.6	4.6	0.5	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	4	No	4	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	6	Shallow RPD, disturbed profile. tan/grey silt/clay. Surface mudclasts and tubes. Deep oxidized burrows. Feeding voids at depth and polychaetes visible.
3	ECR-A-222	A	2021-08-27	6:35	-20.6	ECR-A-222-A-SPI.jpg	6.3	Physical	5.6	7	1.4	5.5	0 to -1 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. coarse sand and trace pebbles. Trace grey silt. Surface tubes, fecal pellets, shells.
3	ECR-A-222	B	2021-08-27	6:42	-20.8	ECR-A-222-B-SPI.jpg	6.2	Physical	5.9	6.6	0.7	5.5	0 to -1 phi	4 to 3 phi	-1 to -2 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. coarse sand and trace pebbles/granules. Surface fecal pellets and large bivalve shells. Feeding void visible at depth.
3	ECR-B-223	A	2021-08-25	16:37	-24.5	ECR-B-223-A-SPI.jpg	6.1	Physical	5	6.4	1.4	5.3	1 to 0 phi	4 to 3 phi	0 to -1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. tan coarse sand and trace silt/clay. Bivalve partially buried and epifaunal mulloscs.
3	ECR-B-223	C	2021-08-25	16:48	-24.2	ECR-B-223-C-SPI.jpg	5.7	Physical	5.1	6.2	1.1	4.9	1 to 0 phi	4 to 3 phi	-1 to -2 phi	none	Stage III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. dk.tan coarse sand and trace silt/clay. Various epifaunal biota. Infauna and minor feeding voids visible.
3	ECR-A-224	A	2021-08-25	15:03	-29.1	ECR-A-224-A-SPI.jpg	8.4	Physical	8.1	9.1	1	4	1 to 0 phi	>4 phi	0 to -1 phi	none	Stage II	loose biogenic aggregates	none	0	No	5	1.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	dk.tan coarse sand over grey vf.sand/silt. Large mudclast on surface. Filled burrow at depth.
3	ECR-A-224	B	2021-08-25	15:07	-29.1	ECR-A-224-B-SPI.jpg	6.5	Biological	4.7	7	2.3	5.3	1 to 0 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	7	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. dk.tan coarse sand and trace grey vf.sand/silt. Surface pit and associated burrow filled with mudclasts. Surface tubes and branching organism. Small feeding void.
3	ECR-B-225	A	2021-08-25	11:29	-33	ECR-B-225-A-SPI.jpg	13.5	Physical	13	13.9	0.9	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	4	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Feeding voids visible at depth.
3	ECR-B-225	C	2021-08-25	11:37	-33.1	ECR-B-225-C-SPI.jpg	11.2	Physical	10.5	11.5	1	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	8	0.41	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with vf.sand filled feeding voids. Deep oxidized burrows. Surface mudclasts. Polychaete visible at depth.
3	ECR-A-226	A	2021-08-25	10:29	-33.3	ECR-A-226-A-SPI.jpg	14.3	Physical	14.1	14.5	0.4	1.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	7	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay. Surface mudclasts and tubes. Polychaete and feeding void at depth.
3	ECR-A-226	C	2021-08-25	10:39	-33.4	ECR-A-226-C-SPI.jpg	13.8	Physical	12.6	14.3	1.7	1.9	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	1	No	3	0.91	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay. Surface mudclasts. Feeding voids and polychaete visible at depth.
3	ECR-B-227	A	2021-08-25	9:02	-33.5	ECR-B-227-A-SPI.jpg	14.4	Physical	13.6	15.2	1.6	2.4	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay. Surface burrow and tubes. Feeding void at depth.
3	ECR-B-227	C	2021-08-25	9:11	-33.5	ECR-B-227-C-SPI.jpg	13.8	Physical	12.9	15.3	2.4	1.4	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	1	No	8	0.98	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	disturbed surface. tan/grey silt/clay. Surface mudclasts. Feeding voids and polychaete visible at depth.
3	ECR-A-228	A	2021-08-25	8:05	-33.3	ECR-A-228-A-SPI.jpg	14.2	Physical	14	14.8	0.8	2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	3	1	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and tan/grey silt/clay. Surface mudclasts. Polychaete and feeding void at depth.
3	ECR-A-228	B	2021-08-25	8:11	-33.4	ECR-A-228-B-SPI.jpg	14.3	Physical	14.1	14.5	0.4	2.2	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	1	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay. Surface mudclast and tube dwelling biota. Feeding voids visible at depth.
3	ECR-B-229	B	2021-08-25	6:50	-35.9	ECR-B-229-B-SPI.jpg	17.6	Physical	17.2	19.1	1.9	2.1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	3	1.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay and trace biogenic carbonate shell fragments with black silt/clay in bottom right corner. Surface mudclasts. Feeding voids visible at depth.
3	ECR-B-229	C	2021-08-25	6:56	-35.8	ECR-B-229-C-SPI.jpg	14.9	Physical	14	15.7	1.7	1.6	>4 phi	>4 phi	4 to 3 phi	none	Stage III	none	none	0	No	9	0.72	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	mostly grey silt/clay. Surface mudclasts and artifact mud shavings. Feeding voids visible at depth.
3	ECR-A-230	A	2021-08-25	5:15	-36	ECR-A-230-A-SPI.jpg	15.1	Physical	14.4	15.8	1.4	1.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	4	0.55	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	disturbed profile. tan/grey f.sand and grey silt/clay. Surface mudclasts and bioaggregates. Feeding void and infaunal organism visible at depth.
3	ECR-A-230	B	2021-08-25	5:22	-35.9	ECR-A-230-B-SPI.jpg	15.7	Physical	15.4	16.2	0.8	1.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	4	0.71	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey sil/clay and trace f.sand. Surface mudclasts and shaving artifacts, tube/fecal clast. Feeding void visible at depth.
3	ECR-B-231	A	2021-08-25	3:48	-36.7	ECR-B-231-A-SPI.jpg	17.4	Physical	17.1	17.8	0.7	4.1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	4	0.38	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface burrow and mudclasts. Feeding void visible.
3	ECR-B-231	B	2021-08-25	3:53	-36.6	ECR-B-231-B-SPI.jpg	17.1	Physical	16.2	17.7	1.5	2.1	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	8	1.08	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace f.sand. Surface mudclasts and bioaggregates. Burrows, feeding voids, and polychaete visible at depth.
3	ECR-A-232	A	2021-08-25	1:37	-35.2	ECR-A-232-A-SPI.jpg	16.7	Physical	15.8	17.3	1.5	0.8	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	5	0.87	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts. Feeding voids visible at depth.
3	ECR-A-232	B	2021-08-25	1:42	-35.2	ECR-A-232-B-SPI.jpg	17.4	Physical	16.3	18.3	2	3.7	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	1	No	5	0.84	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with mudshaving dragdown. Polychaete and feeding voids visible at depth. Surface mudclast along with shaving artifact, and tube/fecal clast.
3	ECR-B-233	B	2021-08-25	0:41	-34.9	ECR-B-233-B-SPI.jpg	17.9	Physical	17.7	18.1	0.4	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	3	1	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with f.sand filled feeding void. slab of mud in the RPD. Polychaete and voids visible at depth.
3	ECR-B-233	C	2021-08-25	0:47	-34.9	ECR-B-233-C-SPI.jpg	17.1	Physical	16.1	17.6	1.5	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	8	0.63	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay. Surface mudclasts and mud shaving artifacts. Feeding voids visible at depth.
3	ECR-A-234	A	2021-08-24	22:08	-28.7	ECR-A-234-A-SPI.jpg	11.5	Physical	11	12.4	1.4	2.9	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	4	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan m/f.sand over grey silt/clay and trace biogenic carbonate shell fragments. Many polychaetes visible at depth and a filled feeding void.
3	ECR-A-234	C	2021-08-24	22:18	-28.4	ECR-A-234-C-SPI.jpg	12.7	Physical	12	13.2	1.2	2.1	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I on III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	8	tan m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding void visible at depth. Surface tubes.
3	ECR-B-235	B	2021-08-24	20:59	-27.6	ECR-B-235-B-SPI.jpg	9.9	Physical	9.4	10.3	0.9	5.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey m/f.sand and grey silt/clay. Surface tube dwelling structure and biogenic calcareous shells. Polychaetes and feeding void visible at depth.
3	ECR-B-235	C	2021-08-24	21:03	-27.6	ECR-B-235-C-SPI.jpg	8.9	Physical	8.6	9.8	1.2	4.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	2	1.56	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Feeding voids visible at depth.
3	ECR-A-236	A	2021-08-24	19:17	-29	ECR-A-236-A-SPI.jpg	14.5	Biological	12.3	15.5	3.2	2.6	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	4	0.97	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay. Surface pits, mudclasts, and floc. Deep oxidized burrow and feeding void at depth.
3	ECR-A-236	B	2021-08-24	19:21	-29	ECR-A-236-B-SPI.jpg	16	Physical	15.3	16.6	1.3	3.6	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	19	0.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace f.sand. Many surface mudclasts and a pit. Deep oxidized burrow.
3	ECR-B-237	A	2021-08-24	14:29	-31.1	ECR-B-237-A-SPI.jpg	16.5	Physical	15.9	16.8	0.9	3.7	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and trace biogenic carbonate shell fragments with patch of black clay in bottom right corner. Surface biogaggregates and mudclasts. Many feeding voids visible at depth.
3	ECR-B-237	C	2021-08-24	14:38	-31.3	ECR-B-237-C-SPI.jpg	16.3	Physical	16.1	16.7	0.6	4.1	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mud shaving artifacts. Feeding voids visible at depth.
3	ECR-A-238	C	2021-08-24	11:53	-30.4	ECR-A-238-C-SPI.jpg	15.1	Physical	12.4	15.9	3.5	1.3	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	Yes	1	No	4	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface pits and mudclasts. Polychaete and filled voids at depth
3	ECR-A-238	D	2021-08-24	12:55	-30.7	ECR-A-238-D-SPI.jpg	16.1	Physical	15.8	16.4	0.6	2.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	9	0.58	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with streaks of black clay. Surface mudclasts and possible dragdown. Feeding voids visible at depth.
3	ECR-B-239	B	2021-08-24	10:20	-29.8	ECR-B-239-B-SPI.jpg	16.2	Physical	16	16.2	0.2	3.8	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	2.7	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface burrow and large clump of mud. Feeding voids visible at depth.
3	ECR-B-239	C	2021-08-24	10:25	-29.8	ECR-B-239-C-SPI.jpg	16.1	Physical	15.5	16.5	1	2.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and fecal clasts. Feeding voids visible at depth.
3	ECR-A-240	A	2021-08-24	7:13	-28.5	ECR-A-240-A-SPI.jpg	15	Physical	14.2	15.4	1.2	3.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with biogenic carbonate shell fragments. Surface mud shaving artifacts and tubes in the background. Feeding voids visible at depth.
3	ECR-A-240	C	2021-08-24	7:24	-28.6	ECR-A-240-C-SPI.jpg	13.9	Physical	12.3	14.5	2.2	3.1	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	Yes	1	No	9	0.38	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and trace f.sand. Surface pit and mudclasts. Feeding voids visible at depth.
3	ECR-B-241	B	2021-08-24	4:46	-28.9	ECR-B-241-B-SPI.jpg	16.5	Physical	16	16.9	0.9	3	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	9	0.4	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Feeding void at possible polychaete visible at depth.
3	ECR-B-241	C	2021-08-24	4:53	-28.9	ECR-B-241-C-SPI.jpg	16.8	Physical	15.6	17.6	2	1.8	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	4	0.34	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface pit and mud artifact streak on the face plate. Feeding void visible at depth.
3	ECR-A-242	A	2021-08-24	3:18	-29.3	ECR-A-242-A-SPI.jpg	16.5	Physical	15.2	16.9	1.7	3.6	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	1	0.79	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and trace biogenic carbonate shell fragments. Surface mudclast and pit. Large feeding void and polychaete visible at depth.
3	ECR-A-242	C	2021-08-24	3:31	-29.3	ECR-A-242-C-SPI.jpg	15.6	Physical	14.2	16.4	2.2	2.1	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	6	0.79	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, pit, tubes, and fecal clast. Polychaete and feeding voids visible at depth.
3	ECR-B-243	D	2021-08-30	4:52	-29.3	ECR-B-243-D-SPI.jpg	13.3	Physical	13.2	13.4	0.2	2.4	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface bioaggregates, burrows, and fecal pellets. Deep oxidized burrow and feeding voids at depth.
3	ECR-B-243	E	2021-08-30	4:58	-29.2	ECR-B-243-E-SPI.jpg	14.3	Biological	13.9	14.5	0.6	2.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	2	No	30	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay. 50+ mudclasts with majority on the surface. Surface pit with 5mm shell fragment. Large void visible at depth with infauna visible in channel.
3	ECR-A-244	D	2021-08-23	23:22	-29.2	ECR-A-244-D-SPI.jpg	17.4	Biological	16.4	17.8	1.4	3.3	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	2	No	6	0.41	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and pits. Feeding voids and polychaetes visible at depth.
3	ECR-A-244	H	2021-08-30	6:34	-28.8	ECR-A-244-H-SPI.jpg	11.8	Physical	11.4	12	0.6	3.4	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay. Surface tubes and large voids at depth.
3	ECR-B-245	A	2021-08-30	8:08	-28.3	ECR-B-245-A-SPI.jpg	12.5	Physical	12.1	12.7	0.6	3.4	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface burrow leading to a void. Other feeding voids visible at depth.
3	ECR-B-245	B	2021-08-30	8:13	-28.2	ECR-B-245-B-SPI.jpg	14.4	Physical	13.9	14.8	0.9	3.3	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace vf.sand filling voids. Surface aggregates, tubes, and filled burrow. Polychaete and voids visible at depth.
3	ECR-A-246	A	2021-08-30	8:51	-28	ECR-A-246-A-SPI.jpg	11.1	Biological	10.7	11.5	0.8	4.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface covered in small mudclasts, bioaggregates, and tubes. Polychaete and feeding voids visible.
3	ECR-A-246	B	2021-08-30	8:58	-28	ECR-A-246-B-SPI.jpg	13.2	Physical	11.5	13.8	2.3	3.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	3	0.53	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and biogenic carbonate shell fragments. Surface mudclasts and tubes. Feeding voids visible at depth.
3	ECR-B-247	B	2021-08-30	10:34	-27.4	ECR-B-247-B-SPI.jpg	11.1	Physical	10.4	11.5	1.1	2.5	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.18	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay. Surface mudlcasts, bioaggregates, and fecal casts. Feeding void visible at depth.
3	ECR-B-247	C	2021-08-30	10:39	-27.3	ECR-B-247-C-SPI.jpg	11.4	Physical	11.2	11.7	0.5	4.2	>4 phi	>4 phi	4 to 3 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.47	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclast and burrows. Feeding voids visible at depth.
3	ECR-A-301	A	2021-08-30	11:18	-27.3	ECR-A-301-A-SPI.jpg	12.4	Physical	12.2	12.7	0.5	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace f.sand and biogenic carbonate shell fragments. Surface fecal pellets. Feeding void visible at depth.
3	ECR-A-301	B	2021-08-30	11:23	-27.3	ECR-A-301-B-SPI.jpg	14	Physical	13.7	14.3	0.6	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace f.sand and biogenic carbonate shell fragments. Surface fecal pellets and minor tubes. Feeding void and polychaete visible at depth.
3	ECR-B-302	A	2021-08-30	13:27	-27.6	ECR-B-302-A-SPI.jpg	17.2	Physical	17	17.5	0.5	3.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	3	0.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/frey silt/clay with trace biogenic carbonate shell grains and f.sand at base of feeding voids. Surface mudclasts and fecal pellets. Feeding voids visible at depth.
3	ECR-B-302	C	2021-08-30	13:38	-27.7	ECR-B-302-C-SPI.jpg	17	Physical	16.6	17.3	0.7	2.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	7	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace f.sand and biogenic carbonate shell grains. Surface mudclasts, fecal pellets, and tubes. Polychaete, shell (7mm), and feeding voids visible at depth.
3	ECR-A-303	A	2021-08-30	14:21	-27.9	ECR-A-303-A-SPI.jpg	17.2	Physical	16.9	17.3	0.4	2.7	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay with trace biogenic carbonate shell fragments and f.sand. Surface mudclasts, burrow, and fecal pellets. Feeding voids visible at depth.
3	ECR-A-303	B	2021-08-30	14:26	-27.9	ECR-A-303-B-SPI.jpg	17.3	Physical	17.1	17.8	0.7	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and trace biogenic carbonate shell fragments and f.sand. Surface burrow, tubes, and fecal pellets. Feeding voids visible at depth.
3	ECR-B-304	B	2021-08-30	15:56	-28.2	ECR-B-304-B-SPI.jpg	16.5	Biological	16.1	16.8	0.7	3.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	3	0.68	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Deep oxidized burrow and void at depth.
3	ECR-B-304	C	2021-08-30	16:01	-28.3	ECR-B-304-C-SPI.jpg	15.6	Physical	15.5	16	0.5	3.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and trace f.sand biogenic carbonate shell fragments. Surface tubes, fecal pellets, and mudclasts. Polychaete and feeding voids visible at depth.
3	ECR-A-305	A	2021-08-30	16:50	-28.5	ECR-A-305-A-SPI.jpg	17.3	Physical	17	17.6	0.6	2.3	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	Yes	1	No	2	0.7	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand/silt and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclast and pit. Burrows and feeding voids visible at depth.
3	ECR-A-305	B	2021-08-30	16:55	-28.5	ECR-A-305-B-SPI.jpg	16.5	Physical	16.3	16.7	0.4	2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	1	No	2	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey silt/clay with trace f.sand and biogenic carbonate shell fragments. Surface mudclasts. Deep oxidized burrow with polychaete and feeding void at depth.
3	ECR-B-306	A	2021-08-30	19:04	-28.5	ECR-B-306-A-SPI.jpg	16.5	Physical	16.1	17	0.9	4.1	>4 phi	>4 phi	4 to 3 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface pit and burrow, tubes/fecal cast. Large feeding void at depth.
3	ECR-B-306	B	2021-08-30	19:10	-28.5	ECR-B-306-B-SPI.jpg	16.6	Physical	16.2	17.1	0.9	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	2	0.24	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay and biogenic carbonate shell fragments. Surface tubes and mudclasts. Polychaete and feeding void at depth.
3	ECR-A-307	A	2021-08-30	19:55	-28.5	ECR-A-307-A-SPI.jpg	14.9	Physical	14.5	15	0.5	2.8	>4 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey silt/clay and biogenic carbonate shell fragments. f.sand throughout profile and base of voids. Surface burrow. Feeding voids visible at depth.
3	ECR-A-307	B	2021-08-30	20:00	-28.4	ECR-A-307-B-SPI.jpg	14.1	Biological	12.8	14.6	1.8	3.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	8	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with trace f.sand and biogenic carbonate shell fragments. Surface pit, mudclasts, and tubes. Feeding voids visible at depth.
3	ECR-B-308	A	2021-08-30	21:46	-28	ECR-B-308-A-SPI.jpg	14.4	Biological	12.8	15.3	2.5	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	4	0.56	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan/grey f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Large biotic structure on surface. Mudclasts, burrows, and tubes on surface. Polychaetes and voids visible at depth.
3	ECR-B-308	B	2021-08-30	21:51	-27.8	ECR-B-308-B-SPI.jpg	14.8	Physical	14.5	15.2	0.7	3.3	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan/grey f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Surface tubes. Polychaetes and feeding voids visible at depth.
3	ECR-A-309	A	2021-08-31	9:52	-27.9	ECR-A-309-A-SPI.jpg	17.2	Physical	16.8	17.5	0.7	2.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface burrow associated with feeding void, and tube. Feeding voids visible at depth.
3	ECR-A-309	C	2021-08-31	10:00	-28.1	ECR-A-309-C-SPI.jpg	18.1	Physical	17.6	18.6	1	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey silt/clay with biogenic carbonate shell fragments. Surface burrows and feeding voids at depth.
3	ECR-B-310	A	2021-08-30	23:26	-27.1	ECR-B-310-A-SPI.jpg	13.5	Physical	13.1	14.1	1	3.1	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	5	0.2	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan/grey f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts and fecal casts in background. Several polychaetes and feeding voids at depth.
3	ECR-B-310	C	2021-08-30	23:37	-27.1	ECR-B-310-C-SPI.jpg	15.5	Physical	15.2	15.7	0.5	1.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Epifaunal organisms and mudclast. Possible polychaete visible and feeding voids at depth.
3	ECR-A-311	B	2021-08-31	0:55	-26.8	ECR-A-311-B-SPI.jpg	14.6	Physical	14	15.3	1.3	3.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	2	0.28	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts and fecal clasts. Polychaetes and feeding voids at depth.
3	ECR-A-311	C	2021-08-31	1:01	-26.9	ECR-A-311-C-SPI.jpg	12.8	Physical	12.1	13.6	1.5	3.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Epifauna and surface tubes. Feeding voids visible at depth.
3	ECR-B-312	A	2021-08-31	2:35	-26.9	ECR-B-312-A-SPI.jpg	13.8	Physical	13.5	14	0.5	3.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and biogenic carbonate shell fragments with grey silt/clay. Surface tubes. Feeding voids at depth.
3	ECR-B-312	B	2021-08-31	2:41	-26.9	ECR-B-312-B-SPI.jpg	12.2	Physical	10.7	12.8	2.1	2.3	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/grey f.sand and biogenic carbonate shell fragments with grey silt/clay. Filled feeding void at depth.
3	ECR-A-313	B	2021-08-31	3:23	-26.8	ECR-A-313-B-SPI.jpg	12.2	Physical	11.7	12.4	0.7	2.9	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	tan/grey f.sand and biogenic carbonate shell fragments withgrey silt/clay. Epifaunal organism. Polychaete and feeding voids at depth.
3	ECR-A-313	C	2021-08-31	3:28	-26.7	ECR-A-313-C-SPI.jpg	10.3	Physical	9.6	10.8	1.2	2.8	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt/clay. Infauna present in large feeding void.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
3	ECR-B-314	A	2021-08-31	4:54	-27	ECR-B-314-A-SPI.jpg	12.4	Physical	11.6	13.3	1.7	3	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	2	0.38	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	tan/grey m/f.sand and biogenic carbonate shell fragments. Surface mudclasts and tubes. Large voids at depth.
3	ECR-B-314	C	2021-08-31	5:04	-26.9	ECR-B-314-C-SPI.jpg	9.9	Physical	9	11	2	2.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	tan m/f.sand and biogenic carbonate shell fragments with grey silt/clay. Large voids at depth.
3	ECR-A-315	A	2021-08-31	5:32	-26.9	ECR-A-315-A-SPI.jpg	9.1	Physical	8.2	10.5	2.3	2.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt/clay. Epifaunal mollusc and fecal clasts. Possible polychaete at depth and feeding voids.
3	ECR-A-315	C	2021-08-31	5:43	-26.9	ECR-A-315-C-SPI.jpg	9.8	Physical	9.1	10.3	1.2	3.8	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt/clay. Large viod at depth.
3	ECR-B-316	B	2021-08-31	8:24	-26.5	ECR-B-316-B-SPI.jpg	9.5	Physical	9	9.8	0.8	3	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage II	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments and grey silt/clay. Polychaete visible.
3	ECR-B-316	C	2021-08-31	8:29	-26.4	ECR-B-316-C-SPI.jpg	8.6	Physical	7.7	9.4	1.7	3.3	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	10	Underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt. Surface tubes and fecal clasts. Feeding void visible at depth.
3	ECR-A-317	B	2021-08-31	11:18	-25.4	ECR-A-317-B-SPI.jpg	7.2	Physical	6.9	7.4	0.5	2.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt. Minor feeding void at depth.
3	ECR-A-317	C	2021-08-31	11:22	-25.6	ECR-A-317-C-SPI.jpg	6.4	Physical	6	7.2	1.2	2.8	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and biogenic carbonate shell fragments with grey silt. Surface tubes and fecal clasts. Polychaetes visible and feeding void visible.
3	ECR-B-318	B	2021-08-31	13:25	-25.2	ECR-B-318-B-SPI.jpg	7.2	Physical	6.9	7.5	0.6	2.8	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan/grey m/f.sand and grey silt with trace biogenic carbonate shell fragments. Fecal clast visible on surface. Polychaete visible at depth.
3	ECR-B-318	C	2021-08-31	13:30	-25.2	ECR-B-318-C-SPI.jpg	8.4	Physical	8.1	8.9	0.8	3.8	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and grey silt with trace biogenic carbonate shell fragments. Large biogenic surface tube.
3	ECR-A-319	A	2021-08-31	14:14	-24.5	ECR-A-319-A-SPI.jpg	6.2	Physical	5.3	6.7	1.4	3.3	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage II	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and grey silt with trace biogenic carbonate shell fragments. Small surface pit.
3	ECR-A-319	B	2021-08-31	14:19	-24.5	ECR-A-319-B-SPI.jpg	7.1	Physical	6.8	7.5	0.7	3.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and grey silt with trace biogenic carbonate shell fragments. Deep oxidized burrows.
3	ECR-B-320	B	2021-08-31	15:44	-23.4	ECR-B-320-B-SPI.jpg	4	Physical	3	4.5	1.5	2.3	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey f/vf.sand and trace biogenic carbonate shell fragments. Shell (15mm) on surface. Feeding void visible.
3	ECR-B-320	C	2021-08-31	15:54	-23.5	ECR-B-320-C-SPI.jpg	4.1	Physical	3.9	4.3	0.4	3.2	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage II	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/[dk]grey f.sand and grey silt with trace biogenic carbonate shell fragments. Surface shells (3mm-10mm), woody debris, and fecal clasts.
3	ECR-A-321	A	2021-08-31	16:30	-22.6	ECR-A-321-A-SPI.jpg	2.1	Physical	1.7	2.5	0.8	2.1	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	6	underpen. tan m/f.sand with trace biogenic carbonate shell fragments. Biogenic structures in background.
3	ECR-A-321	C	2021-08-31	16:41	-22.8	ECR-A-321-C-SPI.jpg	2.7	Physical	2.4	3.3	0.9	2.7	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan m/f.sand. Large biogenic structure on surface.
3	ECR-B-322	B	2021-08-31	19:09	-22.1	ECR-B-322-B-SPI.jpg	3.9	Physical	3.4	4.3	0.9	3.9	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand. Epifaunal in background.
3	ECR-B-322	C	2021-08-31	19:15	-21.9	ECR-B-322-C-SPI.jpg	3.7	Physical	3.4	3.9	0.5	2.4	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan/grey m/f.sand. Biogenic artifacts on surface.
3	ECR-A-323	B	2021-09-01	10:51	-22.7	ECR-A-323-B-SPI.jpg	3.9	Physical	3.4	4.2	0.8	2.3	1 to 0 phi	3 to 2 phi	1 to 0 phi	none	Stage II	cluster(s) of rounded pellets	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan/grey m/f.sand and grey silt with trace biogenic carbonate shell fragments. Surface fecal clasts and mollusc shells (10-30mm) in background.
3	ECR-A-323	C	2021-09-01	10:58	-20.6	ECR-A-323-C-SPI.jpg	7.3	Physical	6.9	7.6	0.7	1.3	>4 phi	>4 phi	1 to 0 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	3	underpenn. tan m.sand over dk.grey/black silt/clay. mollusc shells on surface.
3	ECR-B-324	B	2021-08-31	21:20	-21.7	ECR-B-324-B-SPI.jpg	4	Physical	3.5	4.3	0.8	4	1 to 0 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	underpen. tan coarse sand with a few pebbles on the surface. Mollusc shells on the surface in the background.
3	ECR-B-324	C	2021-08-31	21:27	-21.4	ECR-B-324-C-SPI.jpg	1.8	Physical	1.5	2.2	0.7	1.8	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	8	underpen. coarse sand and trace pebbles. Calcareous shells on surface.
3	ECR-A-325	A	2021-08-31	22:23	-25.5	ECR-A-325-A-SPI.jpg	5.2	Physical	4.1	6.1	2	3.6	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan coarse/m.sand and grey f.sand. Biogenic shells on surface.
3	ECR-A-325	C	2021-08-31	22:35	-25.2	ECR-A-325-C-SPI.jpg	4.8	Physical	4.4	5	0.6	3.4	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage II	none	none	0	No	1	0.38	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan coarse/m.sand and grey f.sand/silt. Biogenic carbonate shells (4-55mm) on surface and hermit crab visible.
3	ECR-B-326	B	2021-09-01	1:09	-28.6	ECR-B-326-B-SPI.jpg	6.8	Physical	6.1	7.5	1.4	1.2	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	3	0.85	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	7	underpen. tan m.sand over grey silt/clay. Orange woody debris with porous burrows/voids. Surface mudclasts and shells in background.
3	ECR-B-326	C	2021-09-01	1:15	-28	ECR-B-326-C-SPI.jpg	8.9	Physical	8.7	9.3	0.6	5.3	3 to 2 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	none	0	No	6	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. m.sand and grey silt/clay with trace biogenic carbonate shell fragments. Pebbles, shells, mudclasts, and a hermit crab visible on surface.
3	ECR-C-1101	A	2021-09-15	10:37	-21.4	ECR-C-1101-A-SPI.jpg	12.8	Biological	12.3	13.3	1	2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	5	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, fecal clasts, and tubes. Feeding voids and polychaetes visible at depth.
3	ECR-C-1101	B	2021-09-15	10:43	-21.4	ECR-C-1101-B-SPI.jpg	12.1	Physical	11.8	12.6	0.8	2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	2	0.32	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, fecal pellets. Feeding voids at depth.
3	ECR-C-1207	A	2021-08-27	8:44	-20.3	ECR-C-1207-A-SPI.jpg	6.5	Physical	5.8	6.8	1	4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan coarse/m.sand and grey vf.sand/silt. Surface fecal clasts, shells, and tubes. Infauna and voids visible.
3	ECR-C-1207	B	2021-08-27	9:09	-20	ECR-C-1207-B-SPI.jpg	5.9	Physical	4.8	6.3	1.5	5.6	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and cluster of grey silt/clay. Surface shells and filamentous structures,
3	ECR-C-1208	A	2021-08-25	19:23	-19.4	ECR-C-1208-A-SPI.jpg	5.1	Biological	4	6.3	2.3	4.5	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand with grey silt at depth. Surface pit, shells in background, and filamentous structure. Infauna and voids visible at depth.
3	ECR-C-1208	B	2021-08-25	19:27	-21.5	ECR-C-1208-B-SPI.jpg	6.8	Biological	4.8	7.8	3	4.4	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface pits, tube structures, and shells inthe background. Voids visible at depth.
3	ECR-C-1215	A	2021-09-15	9:03	-23.5	ECR-C-1215-A-SPI.jpg	17.9	Physical	17.6	18.1	0.5	1.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and feeding void at depth.
3	ECR-C-1215	C	2021-09-15	9:15	-23.4	ECR-C-1215-C-SPI.jpg	18.3	Physical	18.1	18.7	0.6	3.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.95	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclast and tubes in background. Infauna and feeding voids visible at depth.
4	ECR-A-327	B	2021-09-01	2:12	-28.5	ECR-A-327-B-SPI.jpg	3.9	Physical	3.7	4.1	0.4	2.7	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan coarse/m.sand. Biogenic shells on surface in background.
4	ECR-A-327	C	2021-09-01	2:18	-28.7	ECR-A-327-C-SPI.jpg	5.2	Physical	4.7	5.9	1.2	4.1	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m.sand and grey f.sand. Epifaunal biota.
4	ECR-B-328	A	2021-09-01	4:01	-26.5	ECR-B-328-A-SPI.jpg	3.4	Physical	2.7	3.8	1.1	2.4	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan coarse/m.sand with a few pebbles and biogenic carbonate shells (3-5mm). Biogenic shells on surface in background. Surface burrow.
4	ECR-B-328	C	2021-09-01	4:12	-26.9	ECR-B-328-C-SPI.jpg	4.2	Physical	3.7	4.6	0.9	3.1	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	10	underpen. tan coarse/m.sand and biogenic carbonate shells (1-5mm).
4	ECR-A-329	B	2021-09-01	4:58	-28.9	ECR-A-329-B-SPI.jpg	2.8	Physical	2.2	3	0.8	2.8	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. tan coarse/m.sand and pebbles. Shells in backgrouond (8-40mm).
4	ECR-A-329	C	2021-09-01	5:03	-28.8	ECR-A-329-C-SPI.jpg	5.2	Physical	4.8	5.6	0.8	3.7	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	10	underpen. tan coarse/m.sand and grey f.sand with biogenic carbonate shell (5mm) and fragments. Biota on surface in background.
4	ECR-B-330	B	2021-09-01	6:57	-29.8	ECR-B-330-B-SPI.jpg	3.8	Physical	3	4.2	1.2	2	2 to 1 phi	4 to 3 phi	-2 to -3 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan coarse/m.sand with a few pebbles and biogenic carbonate shells (1-6mm). other biogenic shells riddled on the surface in background.
4	ECR-B-330	C	2021-09-01	7:02	-30	ECR-B-330-C-SPI.jpg	2.5	Physical	1.7	3	1.3	2.5	2 to 1 phi	3 to 2 phi	1 to 0 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. tan coarse/m.sand with pebbles and biogenic shells (3-7mm). Larger biogenic carbonate shells on surface in background.
4	ECR-A-331	B	2021-09-01	7:35	-32.9	ECR-A-331-B-SPI.jpg	7.4	Physical	6.7	7.6	0.9	3.3	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan m.sand and grey f.sand/silt with trace biogenic carbonate shell fragments. surface biota structures. Deep oxidized burrows. Polychaete and voids visible at depth.
4	ECR-A-331	C	2021-09-01	7:40	-32.8	ECR-A-331-C-SPI.jpg	5	Physical	3.9	5.8	1.9	3.7	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan coarse/m.sand and trace biogenic sell fragments. Surface biota structures.
4	ECR-B-332	A	2021-09-01	13:27	-32.7	ECR-B-332-A-SPI.jpg	5	Biological	2.9	5.9	3	3.8	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	none	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand and grey f.sand/silt. Surface pits and associated burrows. Large biotic surface structures.
4	ECR-B-332	C	2021-09-01	13:38	-32.9	ECR-B-332-C-SPI.jpg	7.4	Biological	5.9	8.2	2.3	3.1	2 to 1 phi	>4 phi	-1 to -2 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	10	underpen. tan coarse/m.sand and grey f.sand/silt with biogenic carbonate shell fragments. Large biogenic surface structures. Surface pits and a polychaete visible.
4	ECR-A-333	B	2021-09-01	14:44	-38.9	ECR-A-333-B-SPI.jpg	4.6	Physical	4	5.2	1.2	2.9	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	5	underpen. tan coarse/m.sand and grey silt/clay with biogenic carbonate shells (1-6mm). Large biogenic carbonate shells on surface (20-25mm).
4	ECR-A-333	C	2021-09-01	14:49	-39	ECR-A-333-C-SPI.jpg	2.3	Physical	1.8	2.7	0.9	2.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan coarse/m.sand and a grey silt/clay cluster. Multiple biotic structures on the surface.
4	ECR-B-334	B	2021-09-01	17:41	-35.7	ECR-B-334-B-SPI.jpg	5	Physical	4.7	5.3	0.6	5	1 to 0 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand with trace pebbles/granules and biogenic carbonate shell fragments. Shells (3-8mm) on the surface.
4	ECR-B-334	C	2021-09-01	17:47	-36.2	ECR-B-334-C-SPI.jpg	5.6	Physical	5.3	6	0.7	5.7	1 to 0 phi	4 to 3 phi	0 to -1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan coarse/m.sand with biogenic carbonate shell fragments. Possible surface burrow filled with tan silt.
4	ECR-A-335	A	2021-09-02	14:05	-37.9	ECR-A-335-A-SPI.jpg	6.4	Physical	5.7	7	1.3	5	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan coarse/m.sand with clusters of tan silt and trace biogenic carbonate shell fragments. Possible filled in surface burrow. Larger shells (5-12mm) in background.
4	ECR-A-335	B	2021-09-02	14:10	-38	ECR-A-335-B-SPI.jpg	4.8	Physical	4.6	5.2	0.6	4.8	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand and biogenic carbonate shell fragments with tan silt filled surface burrows. Voids and infaunal organism at depth.
4	ECR-B-336	C	2021-09-02	16:01	-38.3	ECR-B-336-C-SPI.jpg	8	Physical	7.7	8.1	0.4	3.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with grey silt/clay and biogenic carbonate shell fragments. Feeding void visible at depth.
4	ECR-B-336	D	2021-09-02	16:46	-38.8	ECR-B-336-D-SPI.jpg	11	Physical	10	11.7	1.7	4.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	1	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan m/f.sand and dk.grey silt/clay with trace biogenic carbonate shell fragments. Layered sediments. Surface mudclast. Feeding voids visible at depth.
4	ECR-A-337	A	2021-09-02	18:22	-36.9	ECR-A-337-A-SPI.jpg	3.9	Physical	3.6	4.2	0.6	0.9	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	7	underpen. tan m/f.sand and [dk] grey silt/clay with trace biogenic carbonate shell fragments. Layered sediment. Possible voids at depth.
4	ECR-A-337	B	2021-09-02	18:27	-36.7	ECR-A-337-B-SPI.jpg	4.8	Physical	4.5	5.1	0.6	2.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	5	underpen. lt.tan silt with biogenic carbonate shell fragments over dk.grey silt/clay. Layered sediment.
4	ECR-B-338	B	2021-09-02	20:05	-37.2	ECR-B-338-B-SPI.jpg	7.9	Physical	6.9	9.2	2.3	7.9	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with trace biogenic carbonate shell fragments. Possible void at depth and burrow.
4	ECR-B-338	C	2021-09-02	20:10	-37.3	ECR-B-338-C-SPI.jpg	10.5	Physical	10.5	10.6	0.1	10.1	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	tan coarse/m.sand and grey f.sand/silt at depth with trace biogenic carbonate shell fragments.
4	ECR-A-339	A	2021-09-02	21:09	-44.1	ECR-A-339-A-SPI.jpg	9.6	Physical	9.1	10.1	1	3.5	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan coarse/m.sand and grey silt/clay with biogenic carbonate shell fragments. Surface shell (24mm) in background. Feeding void visible.
4	ECR-A-339	C	2021-09-02	21:17	-43.7	ECR-A-339-C-SPI.jpg	4.5	Physical	3.6	5	1.4	2.5	2 to 1 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Stage II	none	none	0	No	2	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan coarse/m.sand and grey/dk.grey silt/clay with biogenic carbonate shell fragments and trace pebbles on surface. Large shell (25mm) on surface and biota attached to large pebble (37mm).
4	ECR-B-340	B	2021-09-03	1:40	-42.5	ECR-B-340-B-SPI.jpg	7.8	Physical	5.8	9.2	3.4	5.6	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage III	none	Yes	0	No	9	0.7	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and clusters of grey silt/clay. Surface mudclasts, biogenic shells (mm), and biota.
4	ECR-B-340	C	2021-09-03	1:50	-42.8	ECR-B-340-C-SPI.jpg	11	Physical	10.8	11.4	0.6	6.9	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	tan coarse/m.sand with biogenic carbonate shell fragments and grey silt/clay. Possible infauna and filled voids at depth.
4	ECR-A-341	A	2021-09-03	2:49	-43.4	ECR-A-341-A-SPI.jpg	6.4	Physical	6	7	1	6.4	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and grey silt. Surface shell (7mm)
4	ECR-A-341	C	2021-09-03	2:59	-43.7	ECR-A-341-C-SPI.jpg	8.9	Physical	8.1	9.8	1.7	8.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan coarse/m.sand and biogenic carbonate shell fragments with a cluster of grey silt/clay.
4	ECR-B-342	A	2021-09-03	5:09	-41.8	ECR-B-342-A-SPI.jpg	4	Physical	3.4	4.5	1.1	4	1 to 0 phi	3 to 2 phi	0 to -1 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	underpen. tan coarse/m.sand with trace pebbles (7mm) and biogenic carbonate shell fragments. Larger shells (20-25mm) on the surface/background.
4	ECR-B-342	C	2021-09-03	5:19	-41.6	ECR-B-342-C-SPI.jpg	4.4	Physical	3.9	4.9	1	4.4	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and a grey silt cluster. Surface shells (6-8mm).
4	ECR-A-343	B	2021-09-03	8:01	-39.6	ECR-A-343-B-SPI.jpg	6.9	Physical	6	7.3	1.3	6.7	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I on III	none	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	11	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and burrows filled with grey silt. Surface covered in biogenic shells (7-28mm)
4	ECR-A-343	D	2021-09-03	8:42	-39.7	ECR-A-343-D-SPI.jpg	4.5	Biological	3.6	5.1	1.5	4.5	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	11	underpen. tan f.sand and silt/clay with biogenic carbonate shells (6-9mm) and fragments. Surface covered in biogenic carbonate shells (25 mm scallop, 33 mm mussel)
4	ECR-B-344	B	2021-09-03	11:00	-34.9	ECR-B-344-B-SPI.jpg	6.5	Physical	6.2	6.7	0.5	6.5	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	--	underpen. pebbles and tan coarse/m.sand with biogenic calcareous shell fragments. Surface shells.
4	ECR-B-344	C	2021-09-03	11:05	-34.8	ECR-B-344-C-SPI.jpg	6.9	Physical	6.3	7.1	0.8	6.9	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Muddy Sandy Gravel	--	underpen. pebbles and tan coarse/m.sand with biogenic carbonate shell fragments. Surface shell
4	ECR-A-345	B	2021-09-03	12:43	-30.2	ECR-A-345-B-SPI.jpg	3.1	Biological	2.2	3.6	1.4	2.3	2 to 1 phi	>4 phi	0 to -1 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and grey silt/clay. Large surface pebble (47mm) and others in background. Multiple surface filamentous structures and epifaunal biota.
4	ECR-A-345	C	2021-09-03	12:48	-30	ECR-A-345-C-SPI.jpg	4.1	Physical	3.4	4.8	1.4	4.1	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments.
4	ECR-B-346	A	2021-09-03	17:01	-30.3	ECR-B-346-A-SPI.jpg	6.2	Physical	4.8	7.2	2.4	6.1	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand and biogenic carbonate shell fragments.
4	ECR-B-346	C	2021-09-03	17:16	-30.2	ECR-B-346-C-SPI.jpg	5.9	Physical	5.4	6.5	1.1	5.9	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and biogenic carbonate shell fragments.
4	ECR-A-347	A	2021-09-03	18:31	-31.3	ECR-A-347-A-SPI.jpg	2.4	Physical	1.5	3	1.5	2.3	2 to 1 phi	2 to 1 phi	0 to -1 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and biogenic carbonate shell fragments. Surface pebbles and biotic structure visible in background.
4	ECR-A-347	C	2021-09-03	18:41	-30.9	ECR-A-347-C-SPI.jpg	2.4	Physical	1.2	3.2	2	2.4	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and biogenic carbonate shell fragments. Large pebble (23mm) in background.
4	ECR-B-348	A	2021-09-03	21:59	-40.3	ECR-B-348-A-SPI.jpg	5.5	Physical	5.2	5.9	0.7	5.6	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m.sand with trace pebbles and biogenic carbonate shell fragments.
4	ECR-B-348	B	2021-09-03	22:04	-40.7	ECR-B-348-B-SPI.jpg	4.7	Physical	4.3	5.1	0.8	4.7	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and trace biogenic carbonate shell fragments. Biotic shells on surface.
4	ECR-A-349	A	2021-09-03	22:51	-42.6	ECR-A-349-A-SPI.jpg	4.1	Physical	3.4	4.6	1.2	4.1	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. pebbles overlaying tan coarse/m.sand with biogenic carbonate shell fragments.
4	ECR-A-349	B	2021-09-03	22:57	-42.6	ECR-A-349-B-SPI.jpg	6.5	Physical	5.8	7.1	1.3	5.2	2 to 1 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	9	underpen. Pebbles with tan coarse/m.sand and biogenic carbonate shell fragments. Hermit crabs visible in pebbles.
4	ECR-B-350	B	2021-09-04	9:00	-41.1	ECR-B-350-B-SPI.jpg	5.3	Physical	4.5	5.9	1.4	5.3	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with trace biogenic carbonate shell fragments.
4	ECR-B-350	C	2021-09-04	9:06	-41	ECR-B-350-C-SPI.jpg	5.3	Physical	4.4	6.4	2	5.3	2 to 1 phi	4 to 3 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand andtrace biogenic carbonate shell fragments. Small shells visible on surface in background.
4	ECR-A-401	B	2021-09-04	10:35	-43	ECR-A-401-B-SPI.jpg	8.7	Physical	7.4	9.5	2.1	3.6	3 to 2 phi	>4 phi	0 to -1 phi	Pebbles/Granule	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand	10	underpen. tan m/f.sand and tan/grey silt/clay with pebbles (2-5mm) on surface. Possible polychaete and void visible.
4	ECR-A-401	C	2021-09-04	10:40	-43	ECR-A-401-C-SPI.jpg	6.3	Physical	3.5	7.7	4.2	6	2 to 1 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. dk.tan m/f.sand with surface pebbles (2-14mm) and a cluster of grey vf.sand/silt. Surface shell fragments. Large biotic tube structure in pit/void.
4	ECR-B-402	A	2021-09-04	12:53	-45.1	ECR-B-402-A-SPI.jpg	5.7	Physical	4.7	6.1	1.4	5.7	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. coarse/m.sand with surface pebbles (2-11mm) and trace biogenic carbonate shell fragments. Surface tubes and biota. Infaunal bivalve and voids visible.
4	ECR-B-402	C	2021-09-04	13:03	-44.5	ECR-B-402-C-SPI.jpg	4.8	Physical	3.9	5.3	1.4	4.8	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m.sand with surface pebbles (3-8mm) and trace biogenic carbonate shell fragments. Surface tubes and shells. Void visible.
4	ECR-A-403	A	2021-09-04	13:45	-49.1	ECR-A-403-A-SPI.jpg	4.7	Physical	3.7	5.2	1.5	4.7	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m.sand with surface pebbles (3-24mm) and trace biogenic carbonate shell fragments. Surface tube structure. Void visible.
4	ECR-A-403	B	2021-09-04	13:50	-49.1	ECR-A-403-B-SPI.jpg	5.5	Physical	5.2	6.3	1.1	5.5	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. coarse/m.sand with pebbles (2-14mm) and trace biogenic carbonate shell fragments. Surface filamentous structure and gelatinous object.. Voids visible.
4	ECR-B-404	B	2021-09-04	15:26	-49.9	ECR-B-404-B-SPI.jpg	3.8	Physical	3.2	4.5	1.3	3.8	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. coarse/m.sand with surface pebbles (2-14mm) and trace biogenic carbonate shell fragments. Surface bioaggregates and shells. Voids at depth.
4	ECR-B-404	C	2021-09-04	15:32	-49.9	ECR-B-404-C-SPI.jpg	3	Physical	2.4	3.7	1.3	3	2 to 1 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. coarse/m.sand with surface pebbles (2-14mm) and cluster of grey vf.sand/silt. Surface shells (5-25mm) and fecal clasts.
4	ECR-A-405	B	2021-09-04	16:24	-50	ECR-A-405-B-SPI.jpg	4	Biological	3.1	4.7	1.6	3.2	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	10	underpen. tan m.sand and grey silt/clay with biogenic carbonate shell fragments (1-2mm). Surface covered in shells (14-30mm) and fecal clasts. Possible void at depth.
4	ECR-A-405	C	2021-09-04	16:29	-50	ECR-A-405-C-SPI.jpg	3.5	Physical	3.1	4	0.9	3.5	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	--	Gravelly Sand	10	underpen. tan m/f.sand and surface pebbles (2-14mm). Surface burrow, shell, and fecal clasts.

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NewFields

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
4	ECR-B-406	A	2021-09-04	19:19	-49.6	ECR-B-406-A-SPI.jpg	4.4	Physical	3.9	4.8	0.9	4.4	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m.sand with pebbles (2-9mm) and shells (3-9mm). Surface fecal clasts and pebbles/shell hash mixture.
4	ECR-B-406	B	2021-09-04	19:26	-49.4	ECR-B-406-B-SPI.jpg	4	Physical	3.4	4.5	1.1	4	1 to 0 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage III	none	none	0	No	1	0.56	Oxidized	Shell Substrate	Shell Hash	--	--	11	underpen. tan coarse/m.sand with pebbles (2-8mm) and shells (6-15mm). Surface fecal clasts, gelatinous blob, and mudclast.
4	ECR-A-407	A	2021-09-04	21:55	-48.1	ECR-A-407-A-SPI.jpg	3.9	Biological	2.6	4.4	1.8	3.9	2 to 1 phi	2 to 1 phi	-3 to -4 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. tan coarse/m.sand and shells (8-23mm). Surface fecal pellets/bioaggregates.
4	ECR-A-407	B	2021-09-04	21:59	-48	ECR-A-407-B-SPI.jpg	3.3	Biological	2.5	4.4	1.9	3.3	2 to 1 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. shells (6-15mm) and pebbles (5-11mm). Surface fecal pellets and gelatinous structure.
4	ECR-B-408	A	2021-09-04	23:31	-49.4	ECR-B-408-A-SPI.jpg	5.4	Physical	4.9	6.1	1.2	5.4	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	--	Gravelly Sand	11	underpen. tan coarse/m.sand with pebbles (4-11mm) and trace biogenic carbonate shells. Gelatinous surface structure and bioaggregates.
4	ECR-B-408	B	2021-09-04	23:36	-49.3	ECR-B-408-B-SPI.jpg	3.4	Biological	2.8	3.9	1.1	3.4	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	10	underpen. tan coarse/m.sand with shells (3-20mm) and pebbles (3-16mm). Surface gelatinous blob with possible tube structure and Crepidula fornicata in background.
4	ECR-A-409	A	2021-09-05	0:33	-51.3	ECR-A-409-A-SPI.jpg	3.6	Biological	1.4	4.4	3	3.6	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	10	underpen. tan m.sand with shells (2-8mm)/fragments and pebbles (2-10mm). Gelatinous tube like structure. Shell hash/pebble surface.
4	ECR-A-409	B	2021-09-05	0:39	-50.6	ECR-A-409-B-SPI.jpg	1.9	Physical	1.4	2.5	1.1	1.9	1 to 0 phi	4 to 3 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	--	Sandy Gravel	--	underpen. pebbles (6-15mm) and shells (5-24mm) over tan coarse/m.sand. Gelatinous tube structure and woody debris.
4	ECR-B-410	B	2021-09-05	2:21	-52.7	ECR-B-410-B-SPI.jpg	3.5	Biological	2.4	4.8	2.4	3.5	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	10	underpen. shells (6-30mm) over tan coarse/m.sand. Many Crepidula fornicata on the surface and fecal pellets. Shell dragdown.
4	ECR-B-410	C	2021-09-05	2:27	-51.1	ECR-B-410-C-SPI.jpg	3.7	Physical	3.3	4	0.7	3.7	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	--	Gravelly Sand	--	underpen. tan m/f.sand with surface pebbles (3-9mm). Multiple epifauna.
4	ECR-A-411	A	2021-09-05	3:52	-45.9	ECR-A-411-A-SPI.jpg	3.8	Biological	2.2	5.4	3.2	3.8	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage I on III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. Shells (4-19mm) and pebbles (3-18mm) over tan m/f.sand. Multiple surface biota and fecal pellets.
4	ECR-A-411	C	2021-09-05	4:02	-46.1	ECR-A-411-C-SPI.jpg	3.7	Biological	2.9	4.5	1.6	3.7	2 to 1 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	10	underpen. shells (1-17mm) and pebbles (6-8mm) over tan m.sand.
4	ECR-B-412	B	2021-09-04	1:24	-37.1	ECR-B-412-B-SPI.jpg	3	Physical	2.6	3.3	0.7	3	2 to 1 phi	4 to 3 phi	0 to -1 phi	Pebbles/Granule	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. tan m.sand and surface pebbles (2-16mm) with trace biogenic carbonate shell fragments. Biotic structure in background. Void visible at depth.
4	ECR-B-412	C	2021-09-04	1:31	-38.2	ECR-B-412-C-SPI.jpg	2.5	Physical	2.1	3.2	1.1	2.5	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. m/f.sand with trace pebbles (5-10mm) and biogenic carbonate shell fragments. Infaunal organism in void.
4	ECR-A-413	B	2021-09-04	3:01	-49.4	ECR-A-413-B-SPI.jpg	5.7	Physical	5.5	6.1	0.6	5.3	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Indet	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand and biogenic carbonate shell fragments. Surface shells in background. Possible infaunal organism.
4	ECR-A-413	C	2021-09-04	3:06	-49.4	ECR-A-413-C-SPI.jpg	5.4	Physical	4.9	5.8	0.9	2.4	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan m/f.sand and grey silt/clay with biogenic carbonate shell fragments. Surface burrow and infauna with shells in the background.
4	ECR-B-414	E	2021-09-05	12:46	-48	ECR-B-414-E-SPI.jpg	3.2	Physical	2.3	3.9	1.6	2.2	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand and grey silt/clay with coarse biogenic carbonate shell fragments.
4	ECR-B-414	F	2021-09-05	12:55	-48	ECR-B-414-F-SPI.jpg	4.1	Physical	3.8	4.4	0.6	2.3	3 to 2 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand and [dk].grey silt/clay with biogenic carbonate shell fragments.
4	ECR-A-415	B	2021-09-05	17:29	-44.3	ECR-A-415-B-SPI.jpg	5	Physical	4.3	5.5	1.2	2.7	2 to 1 phi	>4 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand and grey silt/clay with coarse biogenic carbonate shell fragments. Surface shells.
4	ECR-A-415	C	2021-09-05	17:40	-44.4	ECR-A-415-C-SPI.jpg	7.8	Physical	7.4	8.2	0.8	5.4	2 to 1 phi	>4 phi	-1 to -2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and grey silt/clay with coarse biogenic carbonate shell fragments. Voids visible.
4	ECR-B-416	B	2021-09-05	20:31	-49.5	ECR-B-416-B-SPI.jpg	9.8	Physical	9.4	10.2	0.8	9.8	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand and with coarse biogenic carbonate shell fragments. Polychaete visible.
4	ECR-B-416	C	2021-09-05	20:40	-49.9	ECR-B-416-C-SPI.jpg	5.6	Physical	5.2	5.9	0.7	5.6	2 to 1 phi	4 to 3 phi	0 to -1 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments and two pebbles (3-8mm). Surface shells (mussel and limpet). Voids visible.
4	ECR-A-417	A	2021-09-05	21:32	-51.5	ECR-A-417-A-SPI.jpg	4.4	Physical	3.9	4.7	0.8	4.4	1 to 0 phi	2 to 1 phi	-3 to -4 phi	none	Indet	none	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. shell hash with coarse/m.sand. Surface shells and fragments.
4	ECR-A-417	C	2021-09-05	21:45	-51.2	ECR-A-417-C-SPI.jpg	5.1	Physical	4.6	5.4	0.8	5.1	1 to 0 phi	2 to 1 phi	-2 to -3 phi	none	Indet	none	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. shell hash with coarse/m.sand. Surface shells and fragments.
4	ECR-B-418	A	2021-09-06	1:09	-43.3	ECR-B-418-A-SPI.jpg	0	Physical	0	0	0	--	indet	indet	-3 to -4 phi	Pebbles/Granule	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no penetration. surface with m.pebbles.
4	ECR-B-418	C	2021-09-06	1:24	-43.3	ECR-B-418-C-SPI.jpg	0	Physical	0	0	0	--	indet	indet	-5 to -6 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no penetration. [v].coarse pebbles on surface and bioaggregates.
4	ECR-A-419	A	2021-09-06	2:13	-15.3	ECR-A-419-A-SPI.jpg	0	Physical	0	0	0	--	indet	indet	indet	Cobbles, Pebbles/Granule	Indet	cluster(s) of rounded pellets	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Cobble	--	No penetration. Cobble, pebbles, shells, and bioaggregates. Various biota (soft corals, hermit crabs, barnacles).
4	ECR-A-419	C	2021-09-06	2:24	-14.9	ECR-A-419-C-SPI.jpg	0	Physical	0	0	0	--	indet	indet	indet	Cobbles, Pebbles/Granule	Indet	cluster(s) of rounded pellets	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Cobble	--	No penetration. Cobble, pebbles, and bioaggregates. Various biota (soft corals, barnacles).
4	ECR-B-420	B	2021-09-08	10:34	-23.9	ECR-B-420-B-SPI.jpg	3.5	Physical	1.8	5.1	3.3	3.5	1 to 0 phi	4 to 3 phi	0 to -1 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand with coarse pebbles on surface. Anomalous pink sediment (surface and in profile). Epifaunal organisms.
4	ECR-B-420	C	2021-09-08	10:40	-24.8	ECR-B-420-C-SPI.jpg	3	Physical	2.3	3.4	1.1	3	2 to 1 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	1	No	2	0.88	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan coarse/m.sand with trace pebbles (2-9mm) and cluster of grey silt/clay. Infaunal organism and voids visible.
4	ECR-A-421	B	2021-09-06	3:25	-30.4	ECR-A-421-B-SPI.jpg	8.5	Physical	8	8.9	0.9	8.5	2 to 1 phi	>4 phi	1 to 0 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with streak of grey silt/clay and trace biogenic carbonate shell fragments.
4	ECR-A-421	C	2021-09-06	3:32	-30.1	ECR-A-421-C-SPI.jpg	8.4	Physical	7.7	9.8	2.1	4	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and biogenic carbonate shell fragments. Possible filled void at depth.
4	ECR-B-456	B	2021-09-10	11:07	-43.6	ECR-B-456-B-SPI.jpg	9.1	Physical	8.5	9.4	0.9	9.1	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments.
4	ECR-B-456	C	2021-09-10	11:15	-43.6	ECR-B-456-C-SPI.jpg	5.4	Physical	4.1	5.9	1.8	5.4	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments.
4	ECR-A-457	C	2021-09-10	8:56	-45.3	ECR-A-457-C-SPI.jpg	7.4	Biological	6.3	8.4	2.1	7.4	3 to 2 phi	>4 phi	0 to -1 phi	none	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan silt/grey with biogenic carbonate shell fragments. Surface biota and fecal pellets. Voids visible at depth.
4	ECR-A-457	D	2021-09-10	13:13	-46.3	ECR-A-457-D-SPI.jpg	7.5	Biological	7.1	7.8	0.7	5.6	3 to 2 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m. sand and surface pebbles with tan/grey vf.sand/silt and biogenic carbonate shell fragments. Large biotic structures. Voids visible at depth.
4	ECR-B-458	B	2021-09-10	7:15	-47.1	ECR-B-458-B-SPI.jpg	6.4	Biological	5.3	7	1.7	4.1	2 to 1 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m. sand and surface pebbles with grey vf.sand/silt and biogenic carbonate shell fragments. Voids visible at depth.
4	ECR-B-458	C	2021-09-10	7:49	-48.2	ECR-B-458-C-SPI.jpg	4.2	Biological	3.5	4.7	1.2	1.7	2 to 1 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage II	cluster(s) of rounded pellets	none	0	No	3	0.76	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	6	underpen. tan coarse/m. sand and surface pebbles with grey vf.sand/silt and biogenic carbonate shell fragments. Surface mudclasts and interesting biota.
4	ECR-A-459	A	2021-09-08	22:06	-52.1	ECR-A-459-A-SPI.jpg	4.6	Physical	3.7	5	1.3	4.6	3 to 2 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m. sand and surface pebbles with biogenic carbonate shell fragments.
4	ECR-A-459	B	2021-09-08	22:13	-51.9	ECR-A-459-B-SPI.jpg	3.9	Physical	2.9	4.3	1.4	3.1	2 to 1 phi	4 to 3 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m. sand and surface pebbles with grey silt/clay clusters and biogenic carbonate shell fragments.
4	ECR-B-460	A	2021-09-08	21:06	-53	ECR-B-460-A-SPI.jpg	5.3	Physical	4.7	6.2	1.5	5.3	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m. sand and surface pebbles with biogenic carbonate shell fragments.
4	ECR-B-460	C	2021-09-08	21:21	-53.1	ECR-B-460-C-SPI.jpg	3.7	Physical	2.7	4.7	2	3.7	3 to 2 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan m/f.sand with surface pebbles and biogenic carbonate shell fragments. Porous structures and fecal pellets on surface.
4	ECR-A-461	B	2021-09-08	17:16	-46.8	ECR-A-461-B-SPI.jpg	4.1	Biological	3.5	4.8	1.3	4.1	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m. sand and surface pebbles with biogenic carbonate shell fragments.
4	ECR-A-461	C	2021-09-08	17:20	-46.8	ECR-A-461-C-SPI.jpg	3.5	Biological	2.1	4.5	2.4	3.5	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m. sand and surface pebbles with biogenic carbonate shell fragments. Surface biota
4	ECR-B-462	A	2021-09-08	16:15	-52	ECR-B-462-A-SPI.jpg	5.1	Physical	4.6	5.5	0.9	5.1	3 to 2 phi	4 to 3 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan m/f.sand with surface pebbles and biogenic carbonate shell fragments.
4	ECR-B-462	C	2021-09-08	16:25	-51.6	ECR-B-462-C-SPI.jpg	4.7	Biological	4.2	5.2	1	4.7	3 to 2 phi	4 to 3 phi	-3 to -4 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan m/f.sand with pebbles and biogenic carbonate shell fragments. Surface biota, shells, fecal pellets, and pebbles.
4	ECR-A-463	A	2021-09-08	13:51	-47.9	ECR-A-463-A-SPI.jpg	4	Physical	3.4	4.6	1.2	4	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. pebbles and tan coarse/m.sand with biogenic carbonate shell fragments. Surface pebbles, biotic structures, and fecal pellets.
4	ECR-A-463	D	2021-09-08	14:39	-47.8	ECR-A-463-D-SPI.jpg	4.1	Physical	2.1	5	2.9	4.1	3 to 2 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. pebbles and tan m/f.sand with biogenic carbonate shell fragments. Surface pebbles, biotic structures, and fecal pellets.
4	ECR-B-464	B	2021-09-05	7:27	-51.4	ECR-B-464-B-SPI.jpg	3.9	Physical	2.9	4.7	1.8	3.9	2 to 1 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	11	underpen. pebbles and tan coarse/m.sand with coarse biogenic carbonate shell fragments. Surface pebbles, biotic structures, pit, and fecal pellets.
4	ECR-B-464	C	2021-09-05	7:34	-51.3	ECR-B-464-C-SPI.jpg	4	Physical	2.7	4.4	1.7	3.2	3 to 2 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. pebbles, tan m/f.sand, and grey silt/clay with coarse biogenic carbonate shell fragments. Surface pebbles, biotic structures, pit, and fecal pellets.
4	ECR-A-465	A	2021-09-04	7:02	-49.4	ECR-A-465-A-SPI.jpg	7	Physical	6.1	7.4	1.3	7	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m.sand with coarse biogenic carbonate shell fragments and vf.pebbles.
4	ECR-A-465	C	2021-09-04	7:17	-49.4	ECR-A-465-C-SPI.jpg	5.8	Physical	4.8	6.4	1.6	5.8	1 to 0 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan coarse/m.sand and grey vf.sand/silt with coarse biogenic carbonate shell fragments. Surface fecal pellets and voids visible.
4	ECR-B-466	B	2021-09-05	8:50	-42.2	ECR-B-466-B-SPI.jpg	4.8	Physical	3.9	5.5	1.6	4.8	3 to 2 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan m/f.sand with trace pebbles and biogenic carbonate shell fragments. Surface pebbles and biota.
4	ECR-B-466	C	2021-09-05	8:59	-42.4	ECR-B-466-C-SPI.jpg	5.3	Physical	4.5	6.1	1.6	5.3	3 to 2 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan m/f.sand with trace pebbles and biogenic carbonate shell fragments. Surface pebbles and fecal pellets.
4	ECR-A-467	B	2021-09-05	13:50	-47.4	ECR-A-467-B-SPI.jpg	7	Physical	6.7	7.3	0.6	7	2 to 1 phi	4 to 3 phi	-1 to -2 phi	none	Indet	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and biogenic carbonate shell fragments. Polychaete visible at depth.
4	ECR-A-467	C	2021-09-05	13:56	-47.2	ECR-A-467-C-SPI.jpg	5.7	Physical	5.3	6.2	0.9	5.7	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and biogenic carbonate shell fragments.
4	ECR-B-468	A	2021-09-05	16:09	-40.1	ECR-B-468-A-SPI.jpg	5.1	Physical	4.8	5.3	0.5	5.1	0 to -1 phi	2 to 1 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan [v].coarse/m.sand and coarse biogenic carbonate shell fragments.
4	ECR-B-468	B	2021-09-05	16:16	-41.3	ECR-B-468-B-SPI.jpg	5	Physical	4	5.4	1.4	3.5	3 to 2 phi	>4 phi	-2 to -3 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan [v].coarse/m.sand and coarse biogenic carbonate shell fragments with cluster of dk.grey silt/clay.
4	ECR-C-1302	A	2021-09-01	19:09	-33.6	ECR-C-1302-A-SPI.jpg	5.3	Physical	4.2	5.8	1.6	5.3	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. vf.pebbles and tan coarse sand. trace biogenic carbonate shells.
4	ECR-C-1302	C	2021-09-01	19:23	-34.4	ECR-C-1302-C-SPI.jpg	4.7	Physical	4.3	4.9	0.6	4.7	0 to -1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. trace vf.pebbles over tan coarse/m.sand and trace biogenic carbonate shells.
5	ECR-A-469	B	2021-09-10	15:08	-42.8	ECR-A-469-B-SPI.jpg	3.9	Physical	3.1	4.6	1.5	3.9	3 to 2 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage I	none	none	0	No	1	0.47	Oxidized	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	7	underpen. pebbles and tan m/f.sand with trace biogenic carbonate shell fragments. Large surface shell (40mm), pebbles, mudclast, and biotic structures.
5	ECR-A-469	C	2021-09-10	15:14	-42.5	ECR-A-469-C-SPI.jpg	4.3	Physical	3.6	5	1.4	4.3	2 to 1 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage II	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	9	underpen. pebbles and tan m/f.sand with coarse biogenic carbonate shell fragments. Large surface shell (38mm), pebbles, fecal pellets, and biotic structures.
5	ECR-B-470	B	2021-09-10	16:53	-42.7	ECR-B-470-B-SPI.jpg	5.3	Physical	5	5.7	0.7	5.3	3 to 2 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. pebbles over m/f.sand with biogenic carbonate shell fragments. Large shells (17-40mm) and bioaggregates. Voids visible.
5	ECR-B-470	C	2021-09-10	17:00	-42.4	ECR-B-470-C-SPI.jpg	5.4	Physical	4.9	5.8	0.9	4.5	3 to 2 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. m/f.sand and dk.grey silt/clay with pebbles and biogenic carbonate shell fragments. Large shells (9-22mm) and bioaggregates. Voids visible.
5	ECR-B-471	A	2021-09-10	18:49	-36.3	ECR-B-471-A-SPI.jpg	4.6	Biological	3.7	5.1	1.4	3.9	2 to 1 phi	4 to 3 phi	-2 to -3 phi	Pebbles/Granule	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments and trace vf.pebbles. Surface shells, pebbles, and biotic structures. Void visible.
5	ECR-B-471	B	2021-09-10	19:00	-36.3	ECR-B-471-B-SPI.jpg	4.5	Biological	3.8	5.1	1.3	4.5	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Stage III	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. pebbles over tan coarse/m.sand with biogenic carbonate shell fragments. Surface pit, pebbles, shells, and large gelatinous biotic structures.
5	ECR-B-472	B	2021-09-10	20:43	-27.4	ECR-B-472-B-SPI.jpg	6.7	Physical	5.6	7.1	1.5	4.9	3 to 2 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Shell Hash	--	--	--	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments, black silt/clay, and trace pebbles. Surface biota and fecal pellets.
5	ECR-B-472	C	2021-09-10	20:47	-27.4	ECR-B-472-C-SPI.jpg	9.4	Physical	9	9.9	0.9	9.4	3 to 2 phi	4 to 3 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments and grey silt/clay. Surface shells and fecal pellets. Possible voids at depth.
5	ECR-A-473	B	2021-09-11	2:03	-24.2	ECR-A-473-B-SPI.jpg	6.4	Physical	5.8	6.8	1	6.4	3 to 2 phi	>4 phi	-2 to -3 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments, grey silt/clay, and trace pebbles. Surface shells and fecal pellets.
5	ECR-A-473	C	2021-09-11	2:08	-24.4	ECR-A-473-C-SPI.jpg	6.2	Physical	5.7	7	1.3	6.2	3 to 2 phi	>4 phi	-2 to -3 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand with coarse biogenic carbonate shell fragments and grey silt/clay. Surface biota and fecal pellets. Minor voids visible.
5	ECR-B-474	B	2021-09-11	7:26	-15.2	ECR-B-474-B-SPI.jpg	10.2	Physical	10	10.5	0.5	10.2	3 to 2 phi	4 to 3 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and coarse biogenic carbonate shell fragments. Surface fecal pellets. Large void visible and cloudy porewater.
5	ECR-B-474	C	2021-09-11	7:33	-15.2	ECR-B-474-C-SPI.jpg	9.5	Physical	9.2	9.7	0.5	3.1	4 to 3 phi	>4 phi	0 to -1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	1	0.74	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan coarse/m.sand and biogenic carbonate shell fragments over grey silt/clay. Surface mudclast. Voids at depth.
5	ECR-A-475	A	2021-11-10	10:15	-10.6	ECR-A-475-A-SPI.jpg	4.9	Physical	4.2	5.6	1.4	2.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand with biogenic carbonate shell fragments. Possible surface tubes in the background. Polychaete and feeding voids at depth.
5	ECR-A-475	B	2021-11-10	10:18	-10.6	ECR-A-475-B-SPI.jpg	6	Physical	5.5	6.4	0.9	2.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and grey silt/clay at depth with biogenic carbonate shell fragments. Surface tubes in the background. Polychaete and feeding voids at depth.
5	ECR-B-476	B	2021-11-10	7:51	-9	ECR-B-476-B-SPI.jpg	8.8	Physical	8.3	9.2	0.9	2.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and grey silt/clay at depth with trace biogenic carbonate shell fragments. Surface tubes. Polychaete and feeding voids at depth.
5	ECR-B-476	C	2021-11-10	7:53	-9	ECR-B-476-C-SPI.jpg	8.6	Physical	7.2	9.2	2	2.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	none	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand and grey silt/clay at depth with trace biogenic carbonate shell fragments. Surface pit and tubes. Polychaetes and feeding voids at depth.
5	ECR-A-477	A	2021-11-10	8:17	-7.3	ECR-A-477-A-SPI.jpg	10.2	Physical	9.6	10.5	0.9	2	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and grey silt/clay at depth with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth.
5	ECR-A-477	C	2021-11-10	8:21	-7.3	ECR-A-477-C-SPI.jpg	11	Physical	10.5	11.4	0.9	1.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaete and feeding voids at depth.
5	ECR-B-478	B	2021-11-10	9:49	-3.8	ECR-B-478-B-SPI.jpg	0	Biological	0	0	0	--	indet	indet	indet	none	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	--	--	--	--	no penetration. macro algae visible.
5	ECR-B-478	C	2021-11-10	9:51	-4	ECR-B-478-C-SPI.jpg	3.3	Physical	3	3.4	0.4	0.9	1 to 0 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	5	underpen. c/m.sand with trace pebbles and clusters of grey f.sand/silt. Surface algal clusters and biogenic carbonate shells.
5	ECR-A-479	A	2021-11-10	8:11	-7.3	ECR-A-479-A-SPI.jpg	11	Physical	10.6	11.5	0.9	2.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	tan/grey m/f.sand and grey silt/clay. Surface tube structure. Polychaete and feeding voids at depth.
5	ECR-A-479	B	2021-11-10	8:13	-7.3	ECR-A-479-B-SPI.jpg	9.2	Physical	8.4	10.2	1.8	2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	tan/grey m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Streaks of orange sediments leading to void at depth. Feeding voids at depth.
5	ECR-B-480-A	A	2021-11-10	9:03	-5.5	ECR-B-480-A-SPI.jpg	3.7	Physical	3.3	4.1	0.8	3.7	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	1	0.34	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan/grey m/f.sand with pink sediment. Surface mudclast and biota in background.
5	ECR-B-480-A	C	2021-11-10	9:08	-5.8	ECR-B-480-C-SPI.jpg	4.6	Physical	3.6	4.8	1.2	2.7	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	5	underpen. tan/grey m/f.sand with pink sediment and clusters of grey silt/clay. Surface biota in background.
5	ECR-A-481	B	2021-09-10	21:23	-26.9	ECR-A-481-B-SPI.jpg	6.4	Biological	6	6.8	0.8	6.4	2 to 1 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. tan coarse/m.sand with coarse biogenic carbonate shell fragments, tan silt/clay, and trace pebbles. Surface biota and fecal pellets. Voids visible.
5	ECR-A-481	C	2021-09-10	21:30	-27	ECR-A-481-C-SPI.jpg	6.3	Biological	5.8	6.9	1.1	3.6	1 to 0 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	--	underpen. tan coarse/m.sand with coarse biogenic carbonate shell fragments, tan silt/clay, and trace pebbles.
5	ECR-B-482	B	2021-09-11	1:10	-21.7	ECR-B-482-B-SPI.jpg	7.6	Physical	6.6	8.2	1.6	7.6	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with coarse biogenic carbonate shell fragments. Surface biota and fecal pellets. Voids with cloudy porewater visible.
5	ECR-B-482	C	2021-09-11	1:16	-21.6	ECR-B-482-C-SPI.jpg	5.7	Physical	4.8	6.1	1.3	5.7	2 to 1 phi	3 to 2 phi	-1 to -2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with coarse biogenic carbonate shell fragments. Surface biota. Voids visible.
5	ECR-A-483	B	2021-09-11	5:26	-15.9	ECR-A-483-B-SPI.jpg	4.8	Physical	4.6	5	0.4	2.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey m/f.sand with coarse biogenic carbonate shell fragments and streaks of grey silt/clay. Polychaete and small voids visible at depth.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
5	ECR-A-483	C	2021-09-11	5:31	-15.6	ECR-A-483-C-SPI.jpg	3.9	Physical	3.8	4	0.2	2.3	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Indet	none	none	0	No	2	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan/grey m/f.sand with biogenic carbonate shell fragments. Surface mudclasts.
5	ECR-B-484	A	2021-09-11	9:33	-10.5	ECR-B-484-A-SPI.jpg	7	Physical	6.5	7.8	1.3	2.7	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Polychaetes and void at depth.
5	ECR-B-484	B	2021-09-11	9:39	-10.4	ECR-B-484-B-SPI.jpg	9.7	Biological	8.3	10.3	2	1.4	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan/grey f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Large surface pit leading to void at depth.
5	ECR-A-485	A	2021-11-10	7:24	-9.7	ECR-A-485-A-SPI.jpg	3.7	Physical	3	4.5	1.5	1.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan/grey m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Polychaete and large surface pit leading to void at depth.
5	ECR-A-485	C	2021-11-10	7:31	-9.7	ECR-A-485-C-SPI.jpg	4.6	Physical	4	4.8	0.8	1.6	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan/grey m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Streaks of orange sediment. Small feeding voids at depth.
5	ECR-B-486	B	2021-11-10	7:02	-15	ECR-B-486-B-SPI.jpg	5	Physical	4.7	5.2	0.5	5	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	11	underpen. tan/grey m/f.sand and surface m/f.pebbles with pink sediment and biogenic carbonate shell fragments. Larger shells on the surface (6-20mm). Possible voids at depth.
5	ECR-B-486	C	2021-11-10	7:04	-15	ECR-B-486-C-SPI.jpg	4.5	Physical	4.3	4.7	0.4	4.5	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan/grey m/f.sand and vf.pebbles with biogenic carbonate shell fragments. Biota in background.
5	ECR-A-487	B	2021-11-10	10:57	-7.3	ECR-A-487-B-SPI.jpg	11.5	Physical	11.2	11.7	0.5	2.5	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan/grey f/vf.sand over [dk].grey silt/clay. Filled feeding voids at depth.
5	ECR-A-487	C	2021-11-10	11:00	-7.4	ECR-A-487-C-SPI.jpg	10.8	Physical	9.9	11.2	1.3	2	>4 phi	>4 phi	3 to 2 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	8	tan/grey f/vf.sand over [dk].grey silt/clay. Small feeding voids at depth.
5	ECR-B-488	A	2021-11-09	14:37	-4.5	ECR-B-488-A-SPI.jpg	5.6	Physical	4.7	6.5	1.8	1.3	2 to 1 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage I on III	none	none	0	No	1	0.61	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan/grey m/f.sand and cluster of grey silt/clay with trace vf.pebbles. Surface mudclast, biogenic carbonate shell (18mm), algae mats. Algal dragdown.
5	ECR-B-488	B	2021-11-09	14:42	-4.7	ECR-B-488-B-SPI.jpg	4.4	Physical	4.1	4.6	0.5	1.5	1 to 0 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan/grey c/m.sand with trace vf.pebbles. Surface algae mats.
5	ECR-C-1437	A	2021-11-10	9:21	-7.1	ECR-C-1437-A-SPI.jpg	2.3	Physical	1.7	2.9	1.2	1.3	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan m/f.sand. Epifaunal macroalgae. Voids visible at depth.
5	ECR-C-1437	C	2021-11-10	9:26	-7	ECR-C-1437-C-SPI.jpg	2.9	Physical	2.6	3.2	0.6	1.3	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan m/f.sand, cluster of grey silt, and streak of orange sediment. Epifaunal macroalgae. Voids visible at depth.
6	ECR-B-422	A	2021-09-06	9:28	-25.5	ECR-B-422-A-SPI.jpg	8.2	Physical	7.9	8.6	0.7	3.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	8	underpen. tan m/f.sand and streaks of tan/grey silt/clay with biogenic carbonate shell fragments. cluster of fecal pellets.
6	ECR-B-422	C	2021-09-06	9:39	-24	ECR-B-422-C-SPI.jpg	5.2	Physical	4.8	5.5	0.7	5.2	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and clusters of tan/grey silt/clay with biogenic carbonate shell fragments. Surface patches of bioaggregates.
6	ECR-A-423	B	2021-09-06	10:25	-22.6	ECR-A-423-B-SPI.jpg	6.5	Physical	5.4	8.3	2.9	6.5	3 to 2 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan coarse/m/f.sand and streak of tan/grey silt/clay with trace biogenic carbonate shell fragments.
6	ECR-A-423	C	2021-09-06	10:30	-24.8	ECR-A-423-C-SPI.jpg	6.9	Physical	6.1	7.8	1.7	6.9	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and streaks of tan/grey silt/clay with biogenic carbonate shell fragments.
6	ECR-B-424	B	2021-09-06	15:21	-22	ECR-B-424-B-SPI.jpg	9.5	Physical	8.9	9.9	1	9.5	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and streaks of tan/grey silt/clay with trace biogenic carbonate shell fragments. Anomalous pink sediment grains.
6	ECR-B-424	C	2021-09-06	15:28	-21.9	ECR-B-424-C-SPI.jpg	9.5	Physical	8.3	10.4	2.1	9.5	3 to 2 phi	>4 phi	0 to -1 phi	none	Stage III	cluster(s) of rounded pellets	none	1	No	3	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan coarse/m.sand and clusters of tan/grey silt/clay with trace biogenic carbonate shell fragments. Anomalous pink sediment grains. Clusters of fecal pellets, infaunal organism, and voids visible.
6	ECR-A-425	A	2021-09-06	16:02	-21.3	ECR-A-425-A-SPI.jpg	10.5	Physical	9.6	11	1.4	10.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and clusters of tan/grey silt/clay with trace biogenic carbonate shell fragments. Fecal pellets. Void visible.
6	ECR-A-425	B	2021-09-06	16:08	-21.3	ECR-A-425-B-SPI.jpg	9.7	Physical	9.3	10.3	1	9.7	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand and clusters of tan/grey silt/clay with biogenic carbonate shell fragments.
6	ECR-B-426	B	2021-09-06	17:32	-22	ECR-B-426-B-SPI.jpg	4.6	Physical	3.8	5.6	1.8	1.5	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	cluster(s) of rounded pellets	none	0	No	4	0.12	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan f.sand and clusters of tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface patches of bioaggregates and mudclasts. Voids visible.
6	ECR-B-426	C	2021-09-06	17:36	-21.9	ECR-B-426-C-SPI.jpg	6	Physical	5.4	6.4	1	4.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with clusters of tan/grey vf.sand/silt and trace biogenic carbonate shell fragments. Surface fecal pellets.
6	ECR-A-427	A	2021-09-06	18:42	-26.1	ECR-A-427-A-SPI.jpg	4.2	Physical	3.5	4.9	1.4	2.9	3 to 2 phi	>4 phi	2 to 1 phi	none	Indet	loose biogenic aggregates	none	0	No	7	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan/grey m/f.sand and grey silt/clay. Surface mudclasts and fecal pellets.
6	ECR-A-427	B	2021-09-06	18:57	-25.9	ECR-A-427-B-SPI.jpg	3.6	Physical	2.6	4.5	1.9	3.2	4 to 3 phi	>4 phi	2 to 1 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and clusters of dk.grey silt/clay with trace biogenic carbonate shell fragments. Mudclasts and fecal pellets. Epifaunal fish.
6	ECR-B-428	A	2021-09-06	20:24	-25.6	ECR-B-428-A-SPI.jpg	3.6	Physical	3.2	4.4	1.2	3.6	3 to 2 phi	>4 phi	0 to -1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	10	underpen. tan f.sand with trace biogenic carbonate shell fragments. Void at depth.
6	ECR-B-428	B	2021-09-06	20:29	-26.2	ECR-B-428-B-SPI.jpg	3.9	Physical	3.4	4.4	1	3.9	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan f.sand and grey silt/clay with biogenic carbonate shell fragments. Mudclasts and fecal pellets above void.
6	ECR-A-429	B	2021-09-06	21:15	-22.3	ECR-A-429-B-SPI.jpg	4.7	Physical	2.8	5.3	2.5	4.7	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan f.sand and trace biogenic carbonate shell fragments. Fecal pellets visible and possible void.
6	ECR-A-429	C	2021-09-06	21:20	-21.9	ECR-A-429-C-SPI.jpg	3.4	Physical	2.3	4.1	1.8	3.4	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and trace biogenic carbonate shell fragments.
6	ECR-B-430	A	2021-09-06	22:55	-23.8	ECR-B-430-A-SPI.jpg	3.1	Physical	2.2	4.5	2.3	3.1	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and trace biogenic carbonate shell fragments. surface burrow and fecal pellets.
6	ECR-B-430	B	2021-09-06	23:01	-23.2	ECR-B-430-B-SPI.jpg	3.9	Physical	3.2	4.7	1.5	3.9	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and trace biogenic carbonate shell fragments.
6	ECR-A-431	A	2021-09-07	0:32	-26.6	ECR-A-431-A-SPI.jpg	5	Physical	3.6	6.1	2.5	3.7	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	10	underpen. tan f.sand and biogenic carbonate shell fragments. surface burrow and voids at depth.
6	ECR-A-431	B	2021-09-07	0:38	-26.2	ECR-A-431-B-SPI.jpg	3.9	Physical	3.5	4.3	0.8	3.9	3 to 2 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	6	0.32	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan f.sand and trace biogenic carbonate shell fragments. Surface mudclasts and fecal pellets.
6	ECR-B-432	A	2021-09-07	2:38	-29.7	ECR-B-432-A-SPI.jpg	2.7	Physical	2.2	3	0.8	1.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Indet	none	none	0	No	2	0.62	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and grey silt/clay clusters with trace biogenic carbonate shell fragments.
6	ECR-B-432	B	2021-09-07	2:44	-29.7	ECR-B-432-B-SPI.jpg	4.1	Physical	3.9	4.3	0.4	1.7	3 to 2 phi	>4 phi	1 to 0 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand and grey silt/clay clusters with trace biogenic carbonate shell fragments. Small voids visible.
6	ECR-A-433	B	2021-09-07	4:08	-25.7	ECR-A-433-B-SPI.jpg	5	Physical	4.5	5.8	1.3	5	3 to 2 phi	>4 phi	0 to -1 phi	none	Indet	loose biogenic aggregates	none	0	No	2	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan f.sand with trace biogenic carbonate shell fragments. Mudclasts and fecal pellets.
6	ECR-A-433	C	2021-09-07	4:14	-25.9	ECR-A-433-C-SPI.jpg	4.3	Physical	4	4.6	0.6	1.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	7	underpen. tan m/f.sand and grey silt/clay clusters with trace v.coarse sand and biogenic carbonate shell fragments. Small voids and fecal pellets.
6	ECR-B-434	A	2021-09-07	6:46	-25.1	ECR-B-434-A-SPI.jpg	1.1	Physical	0.2	1.6	1.4	1	2 to 1 phi	>4 phi	2 to 1 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	--	--	underpen (>2cm). tan m/f.sand and cluster of tan silt/clay. Surface fecal clasts and large biotic structures.
6	ECR-B-434	B	2021-09-07	6:52	-25.9	ECR-B-434-B-SPI.jpg	0	Physical	0	0	0	--	indet	indet	indet	indet	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no penetration. hard rock bottom. interesting biota.
6	ECR-A-435	A	2021-09-07	7:38	-26.5	ECR-A-435-A-SPI.jpg	7.5	Physical	7	8.2	1.2	7.5	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand. Small voids visible.
6	ECR-A-435	C	2021-09-07	7:45	-26.6	ECR-A-435-C-SPI.jpg	4.2	Physical	3.6	4.4	0.8	4.2	1 to 0 phi	2 to 1 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand.
6	ECR-B-436	A	2021-09-07	9:55	-27.6	ECR-B-436-A-SPI.jpg	3	Physical	2.1	3.5	1.4	3	2 to 1 phi	4 to 3 phi	-1 to -2 phi	none	Indet	none	none	0	No	2	0.2	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand. Small voids and mudclasts visible.
6	ECR-B-436	B	2021-09-07	10:02	-27.8	ECR-B-436-B-SPI.jpg	3.8	Physical	3.5	3.9	0.4	3.8	4 to 3 phi	>4 phi	-1 to -2 phi	none	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan silt/clay. bioaggregates/turbation around small voids.
6	ECR-A-437	A	2021-09-07	12:19	-33.7	ECR-A-437-A-SPI.jpg	4.6	Physical	4.2	5.2	1	1.8	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage I	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	4	underpen. tan/grey m/f.sand and dk.grey silt/clay with biogenic carbonate shell fragments. Fecal pellets.
6	ECR-A-437	B	2021-09-07	12:25	-33.4	ECR-A-437-B-SPI.jpg	3.4	Physical	3.1	3.7	0.6	1.9	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage II	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	6	underpen. tan/grey m/f.sand and dk.grey silt/clay with biogenic carbonate shell fragments. Polychaete and fecal pellets visible.
6	ECR-B-438	A	2021-09-07	14:05	-29.1	ECR-B-438-A-SPI.jpg	4.2	Physical	3.8	4.6	0.8	4.2	3 to 2 phi	4 to 3 phi	0 to -1 phi	none	Indet	none	none	0	No	8	0.15	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface mudclasts and large shell fragments (11-12mm)
6	ECR-B-438	C	2021-09-07	14:16	-29.2	ECR-B-438-C-SPI.jpg	4.7	Physical	4.1	5.2	1.1	4.7	3 to 2 phi	>4 phi	1 to 0 phi	none	Indet	loose biogenic aggregates	none	0	No	5	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	--	tan m/f.sand with biogenic carbonate shell fragments and clusters of grey silt/clay. Mudclasts and fecal pellets visible.
6	ECR-A-439	B	2021-09-07	16:05	-30.4	ECR-A-439-B-SPI.jpg	4.1	Physical	3.8	4.2	0.4	2.4	3 to 2 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.35	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan m/f.sand and grey vf.sand/silt with biogenic carbonate shell fragments. Fecal pellets, mudclasts, and void visible.
6	ECR-A-439	C	2021-09-07	16:11	-30.6	ECR-A-439-C-SPI.jpg	3.7	Physical	2.6	4.3	1.7	3	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Fecal pellets and small voids visible.
6	ECR-B-440	A	2021-09-07	23:17	-22.7	ECR-B-440-A-SPI.jpg	4.2	Physical	2.9	5.3	2.4	4.2	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and tan vf.sand/silt surface cluster. Fecal pellets and voids at depth.
6	ECR-B-440	B	2021-09-07	23:23	-23.1	ECR-B-440-B-SPI.jpg	5.6	Physical	5.3	5.8	0.5	5.6	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments.
6	ECR-A-441	A	2021-09-07	21:59	-23.2	ECR-A-441-A-SPI.jpg	3.6	Physical	2.7	4.1	1.4	3.6	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments (2-20mm) and trace vf.pebbles.
6	ECR-A-441	C	2021-09-07	22:09	-23.8	ECR-A-441-C-SPI.jpg	4.3	Physical	4.1	4.4	0.3	4.3	2 to 1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand with biogenic carbonate shell fragments and trace vf.pebbles.
6	ECR-B-442	A	2021-09-07	19:08	-23.3	ECR-B-442-A-SPI.jpg	4.3	Physical	3.8	4.4	0.6	4.3	1 to 0 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand with trace vf.pebbles and biogenic carbonate shell fragments. Shell fragments on surface.
6	ECR-B-442	C	2021-09-07	19:17	-23	ECR-B-442-C-SPI.jpg	7.4	Physical	7.3	7.6	0.3	7.4	1 to 0 phi	3 to 2 phi	-1 to -2 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse/m.sand with trace biogenic carbonate shell fragments.
6	ECR-A-443	B	2021-09-08	1:33	-13.9	ECR-A-443-B-SPI.jpg	0	Physical	0	0	0	--	indet	indet	-6 to -7 phi	Cobbles, Pebbles/Granule	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Cobble	--	no penetration. cobble and v.coarse pebbles. Surface biota.
6	ECR-A-443	C	2021-09-08	1:39	-13.7	ECR-A-443-C-SPI.jpg	0	Physical	0	0	0	--	indet	indet	-6 to -7 phi	Cobbles, Pebbles/Granule	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Cobble	--	no penetration. cobble and v.coarse pebbles. Surface biota.
6	ECR-B-444	A	2021-09-08	2:54	-18.1	ECR-B-444-A-SPI.jpg	0	Physical	0	0	0	--	indet	indet	-5 to -6 phi	Pebbles/Granule	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no penetration. v.coarse pebbles and Crepidula fornicata surface.
6	ECR-B-444	C	2021-09-08	3:06	-15.8	ECR-B-444-C-SPI.jpg	0.4	Physical	0.4	1.2	0.8	0.4	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen (>1.2cm). pebbles and Crepidula fornicata over tan coarse/m.sand.
6	ECR-A-445	A	2021-09-08	3:37	-21.7	ECR-A-445-A-SPI.jpg	4.5	Physical	3.7	4.9	1.2	3.9	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	3	0.46	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan/grey coarse/m.sand with biogenic carbonate shells (2-7mm) and trace pebbles. Multiple Crepidula fornicata on surface and mudclast.
6	ECR-A-445	C	2021-09-08	3:49	-19.6	ECR-A-445-C-SPI.jpg	4.3	Physical	3.5	4.8	1.3	4.3	2 to 1 phi	3 to 2 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravelly	Gravelly Sand	--	underpen. tan coarse/m.sand and f.pebbles with trace biogenic carbonate shells. Multiple Crepidula fornicata on the surface and shards of woody debris.
6	ECR-B-446	A	2021-09-08	6:26	-18	ECR-B-446-A-SPI.jpg	0	Indet	0	0	0	--	indet	indet	indet	Pebbles/Granule	Indet	indet	indet	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no penetration. hard rock bottom. epifaunal biota visible.
6	ECR-B-446	B	2021-09-08	6:31	-18.3	ECR-B-446-B-SPI.jpg	0	Biological	0	0	0	--	indet	indet	indet	none	Indet	indet	indet	999	indet	--	--	--	Shell Substrate	Shell Hash	--	--	--	no penetration. shell hash composed of clams and Crepidula fornicata.
6	ECR-A-447	A	2021-09-11	15:18	-17.9	ECR-A-447-A-SPI.jpg	5	Physical	4.2	5.6	1.4	5	-1 to -2 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. m/f.pebbles with tan coarse/m/f.sand and trace dk.grey silt/clay and biogenic carbonate shells (6-8mm). Fecal pellets and epifaunal molluscs visible.
6	ECR-A-447	B	2021-09-11	15:26	-18	ECR-A-447-B-SPI.jpg	4.2	Physical	3.7	4.7	1	4.2	-1 to -2 phi	>4 phi	-3 to -4 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	underpen. m/f.pebbles with coarse sand and trace grey silt/clay and biogenic carbonate shells (3-6mm). Fecal pellets and epifaunal molluscs visible.
7	ECR-B-448	B	2021-09-11	18:57	-17.4	ECR-B-448-B-SPI.jpg	4	Physical	3.2	4.6	1.4	4	1 to 0 phi	2 to 1 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	--	underpen. m/f.pebbles over coarse/m.sand and trace biogenic carbonate shell fragments.
7	ECR-B-448	F	2021-09-11	19:44	-17.5	ECR-B-448-F-SPI.jpg	3.2	Physical	2.1	4	1.9	3.2	1 to 0 phi	2 to 1 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand with pebbles. Surface shells.
7	ECR-A-449	B	2021-09-11	20:31	-16.2	ECR-A-449-B-SPI.jpg	5.5	Biological	4.7	6.2	1.5	2.4	>4 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Shell Substrate	Shell Hash	--	--	9	underpen. Crepidula fornicata shell hash over tan m.sand and dk.grey silt/clay with biogenic carbonate shell fragments. Polychaete and voids at depth.
7	ECR-A-449	C	2021-09-11	20:34	-16.3	ECR-A-449-C-SPI.jpg	3.2	Biological	1.6	4.2	2.6	0.7	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I	loose biogenic aggregates	none	0	No	--	--	--	Shell Substrate	Shell Hash	--	--	2	underpen. Crepidula fornicata shell hash over tan/dk.grey m.sand and dk.grey silt/clay with trace biogenic carbonate shell fragments.
7	ECR-B-450	B	2021-09-14	19:06	-16.3	ECR-B-450-B-SPI.jpg	4.7	Physical	4.1	5.3	1.2	4.7	1 to 0 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand and surface pebbles with biogenic carbonate shell fragments. Anomalous pink sediment.
7	ECR-B-450	C	2021-09-14	19:10	-16.2	ECR-B-450-C-SPI.jpg	4.6	Physical	4.2	5	0.8	4.6	1 to 0 phi	2 to 1 phi	-3 to -4 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand and pebbles with biogenic carbonate shell fragments. Anomalous pink sediment.
7	ECR-A-451	A	2021-09-14	17:39	-16.4	ECR-A-451-A-SPI.jpg	5.9	Physical	5.4	6.2	0.8	5.9	1 to 0 phi	2 to 1 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand with trace vf.pebbles and biogenic carbonate shell fragments.
7	ECR-A-451	C	2021-09-14	17:49	-16.3	ECR-A-451-C-SPI.jpg	3.5	Physical	2.8	4	1.2	3.5	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand with trace vf.pebbles and biogenic carbonate shell fragments.
7	ECR-B-452	A	2021-09-14	16:50	-14.4	ECR-B-452-A-SPI.jpg	5.1	Physical	4.2	5.7	1.5	5.1	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand with trace vf.pebbles and biogenic carbonate shell fragments.
7	ECR-B-452	B	2021-09-14	16:57	-14.2	ECR-B-452-B-SPI.jpg	4.7	Physical	4	5.3	1.3	4.7	1 to 0 phi	2 to 1 phi	-2 to -3 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand and vf.pebbles with trace biogenic carbonate shell fragments.
7	ECR-A-453	B	2021-09-14	14:52	-29.6	ECR-A-453-B-SPI.jpg	7.8	Physical	7.2	8.1	0.9	1.8	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	6	underpen. tan vf.sand over grey/dk.grey silt/clay with biogenic carbonate shell fragments. Epi/infaunal sand dollars.
7	ECR-A-453	C	2021-09-14	14:56	-29.8	ECR-A-453-C-SPI.jpg	8.4	Physical	7.9	8.8	0.9	2.5	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	3	No	3	0.4	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	underpen. tanvf.sand over dk.grey silt/clay with biogenic carbonate shell fragments. Epi/infaunal sand dollars and mudclasts. Polychaete and voids visible at depth.
7	ECR-B-454	B	2021-09-14	13:32	-35.4	ECR-B-454-B-SPI.jpg	14.5	Biological	14.2	14.9	0.7	3.2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	9	No	2	0.46	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan vf.sand and dk.grey/black silt/clay with biogenic carbonate shell fragments. Surface tubes, mudclasts, and fecal pellets. Multiple polychaetes visible and voids at depth.
7	ECR-B-454	D	2021-09-14	14:09	-35.3	ECR-B-454-D-SPI.jpg	13.3	Physical	12.3	13.9	1.6	2.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan vf.sand and dk.grey/black silt/clay with biogenic carbonate shell fragments. Surface tubes and fecal pellets. Polychaete and voids visible at depth.
7	ECR-A-455	A	2021-09-14	9:53	-36.6	ECR-A-455-A-SPI.jpg	12.1	Biological	12	12.3	0.3	2.7	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	2	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan vf.sand and dk.grey/black silt/clay with biogenic carbonate shell fragments. Surface tubes, mudclasts, and fecal pellets. Infauna and void at depth.
7	ECR-A-455	B	2021-09-14	9:58	-36.7	ECR-A-455-B-SPI.jpg	11	Physical	10.8	11.3	0.5	3	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	3	No	3	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	tan/black vf.sand and dk.grey/black silt/clay with biogenic carbonate shell fragments. Surface mudclasts and fecal pellets. Polychaete and filled voids at depth.
7	ECR-A-501	A	2021-09-14	8:25	-35.7	ECR-A-501-A-SPI.jpg	5.8	Physical	5.2	6.9	1.7	5.8	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m.sand with trace biogenic carbonate shell fragments.
7	ECR-A-501	C	2021-09-14	8:34	-35.9	ECR-A-501-C-SPI.jpg	3.1	Physical	2.5	3.8	1.3	3.1	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m.sand with trace biogenic carbonate shell fragments. Surface shell fragments.
7	ECR-B-502	E	2021-09-14	10:47	-39.7	ECR-B-502-E-SPI.jpg	10.4	Physical	9.3	10.9	1.6	4	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. m/f.sand with trace biogenic carbonate shell fragments over dk.grey silt/clay. Surface tubes.. Filled voids at depth.
7	ECR-B-502	F	2021-09-14	10:52	-39.8	ECR-B-502-F-SPI.jpg	8.8	Physical	8	9.3	1.3	3.9	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. m/f.sand with trace biogenic carbonate shell fragments over dk.grey silt/clay. Filled voids at depth.
7	ECR-A-503	A	2021-09-14	6:46	-40.5	ECR-A-503-A-SPI.jpg	3.7	Physical	3.2	4.1	0.9	3.7	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	1	No	4	0.44	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	10	underpen. tan m.sand with trace biogenic carbonate shell fragments. Surface mudclasts and fecal clasts. Polychaete visible.
7	ECR-A-503	C	2021-09-14	6:58	-40.4	ECR-A-503-C-SPI.jpg	7.5	Physical	7.1	7.7	0.6	7.5	2 to 1 phi	3 to 2 phi	1 to 0 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with trace biogenic carbonate shell fragments. Surface tubes in background.
7	ECR-B-504	A	2021-09-14	5:00	-43.1	ECR-B-504-A-SPI.jpg	4.3	Physical	3.9	4.7	0.8	4.3	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	2	0.35	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface mudclasts, shell fragments, and fecal clasts.
7	ECR-B-504	C	2021-09-14	5:08	-42.8	ECR-B-504-C-SPI.jpg	3.3	Physical	2.9	3.8	0.9	3.3	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	4	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	10	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface mudclasts, shell fragments, and fecal clasts.
7	ECR-A-505	A	2021-09-14	4:12	-43	ECR-A-505-A-SPI.jpg	5.4	Physical	5.1	5.7	0.6	5.4	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Stage III	none	none	0	No	2	0.31	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface fecal clasts.
7	ECR-A-505	B	2021-09-14	4:17	-43	ECR-A-505-B-SPI.jpg	5.6	Physical	4.2	6.5	2.3	5.3	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	cluster(s) of rounded pellets	none	0	No	5	0.2	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand with biogenic carbonate shell fragments and clusters of dk.grey silt/clay. Surface mudclasts, shell fragments, and fecal clasts.
7	ECR-A-506	A	2021-09-14	3:08	-43	ECR-A-506-A-SPI.jpg	6	Physical	4.6	6.9	2.3	6	1 to 0 phi	3 to 2 phi	0 to -1 phi	none	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface mudclasts, shell fragments, and fecal clasts.
7	ECR-A-506	C	2021-09-14	3:16	-43.7	ECR-A-506-C-SPI.jpg	5.8	Physical	5.2	6.2	1	5.8	1 to 0 phi	3 to 2 phi	0 to -1 phi	none	Stage III	none	none	1	No	1	0.57	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand with biogenic carbonate shell fragments. Surface crab. Polychaete visible.
7	ECR-A-507	A	2021-09-14	2:20	-44.1	ECR-A-507-A-SPI.jpg	4.7	Physical	4.1	6.5	2.4	4.7	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand with biogenic carbonate shell fragments. Surface shell fragments and fecal clasts.
7	ECR-A-507	B	2021-09-14	2:24	-43.9	ECR-A-507-B-SPI.jpg	4.2	Physical	3.7	4.6	0.9	4.2	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage I	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	7	underpen. tan coarse/m.sand with biogenic carbonate shell fragments. Surface shell fragments, tubes, and fecal pellets.
7	ECR-B-508	B	2021-09-14	1:36	-44.2	ECR-B-508-B-SPI.jpg	5.6	Physical	4.2	6.7	2.5	5.6	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand with biogenic carbonate shell fragments and streak of grey silt/clay. Surface tubes and fecal pellets.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
7	ECR-B-508	C	2021-09-14	1:41	-44.2	ECR-B-508-C-SPI.jpg	4.8	Physical	3.6	5.5	1.9	4.7	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan f.sand with biogenic carbonate shell fragments and clusters of dk.grey silt/clay. Surface fecal pellets. Polychaete visible.
7	ECR-B-509	B	2021-09-13	22:40	-42	ECR-B-509-B-SPI.jpg	10.9	Physical	9.7	11.6	1.9	10.9	0 to -1 phi	1 to 0 phi	-1 to -2 phi	Pebbles/Granule	Indet	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. [v.]coarse sand with trace vf.granules/pebbles. Infaunal organism and fecal pellets within profile.
7	ECR-B-509	C	2021-09-13	22:46	-42.2	ECR-B-509-C-SPI.jpg	6.6	Physical	2.9	10.1	7.2	5.5	0 to -1 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. [v.]coarse sand with trace vf.granules/pebbles and streak of grey silt/clay.
7	ECR-B-510	A	2021-09-13	21:33	-41	ECR-B-510-A-SPI.jpg	5.8	Physical	4.3	7.1	2.8	5.8	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage II	loose biogenic aggregates	none	0	No	5	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand and trace biogenic carbonate shell fragments. Mudclasts within profile. Surface fecal pellet/clast and shell fragments.
7	ECR-B-510	C	2021-09-13	21:43	-41.1	ECR-B-510-C-SPI.jpg	6.7	Physical	5.2	8.3	3.1	6.7	2 to 1 phi	3 to 2 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and trace biogenic carbonate shell fragments. Small surface burrow and infaunal organism with possible small voids at depth.
7	ECR-B-511	B	2021-09-13	19:06	-40.3	ECR-B-511-B-SPI.jpg	6.4	Physical	5.2	7.4	2.2	6.4	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	loose biogenic aggregates	none	0	No	2	0.18	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand with biogenic carbonate shell fragments (1-5mm) and patch of grey silt/clay. Surface mudclast and fecal pellet.
7	ECR-B-511	C	2021-09-13	19:11	-40.2	ECR-B-511-C-SPI.jpg	4.5	Physical	3.9	5.9	2	4.5	2 to 1 phi	>4 phi	1 to 0 phi	none	Indet	none	none	0	No	5	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan m/f.sand with biogenic carbonate shell fragments (2-4mm) and patch of grey silt/clay. Surface mudclasts and fecal pellet.
7	ECR-B-512	A	2021-09-13	17:41	-40	ECR-B-512-A-SPI.jpg	6.9	Physical	6.3	7.3	1	6.9	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	tan m/f.sand. Surface shell fragments and tubes. Polychaete and small voids visible.
7	ECR-B-512	B	2021-09-13	17:50	-39.5	ECR-B-512-B-SPI.jpg	5.2	Physical	5	5.6	0.6	5.2	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and trace biogenic carbonate shell fragments. Sea star in background. Surface fecal pellet and void at depth.
7	ECR-A-513	A	2021-09-13	15:55	-39.6	ECR-A-513-A-SPI.jpg	7.1	Physical	6.5	8	1.5	7.1	1 to 0 phi	2 to 1 phi	-1 to -2 phi	Pebbles/Granule	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. coarse/m.sand with trace vf.granules/pebbles and biogenic carbonate shell fragments (1-6mm). Surface shell fragments. Possible voids at depth.
7	ECR-A-513	B	2021-09-13	16:02	-39.4	ECR-A-513-B-SPI.jpg	2.9	Physical	2.6	3.2	0.6	2.9	1 to 0 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. coarse/m.sand with trace vf.granules/pebbles and biogenic carbonate shell fragments (3-6mm). Surface shells.
7	ECR-B-514	B	2021-09-13	14:31	-41.7	ECR-B-514-B-SPI.jpg	7.5	Physical	5	9.2	4.2	7.5	0 to -1 phi	1 to 0 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. coarse sand with vf.granules/pebbles
7	ECR-B-514	F	2021-09-13	15:18	-41.4	ECR-B-514-F-SPI.jpg	9.9	Physical	7.9	10.9	3	9.9	0 to -1 phi	3 to 2 phi	-1 to -2 phi	Pebbles/Granule	Indet	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. coarse sand with trace vf.granules/pebbles. Possible voids at depth.
7	ECR-C-1429	B	2021-09-12	2:04	-16.1	ECR-C-1429-B-SPI.jpg	0.3	Physical	0.1	1.2	1.1	0.3	indet	indet	indet	Pebbles/Granule	Indet	loose biogenic aggregates	none	999	indet	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	--	no/minimal penetration. coarse pebbles on surface along with crabs.
7	ECR-C-1429	C	2021-09-12	2:05	-16	ECR-C-1429-C-SPI.jpg	3.4	Physical	1.8	4	2.2	3.4	-1 to -2 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravels	Pebble/Granule	8	underpen. pebbles in profile and along surface with biogenic carbonate shells.
7	ECR-C-1430	A	2021-09-12	1:01	-19.2	ECR-C-1430-A-SPI.jpg	5.5	Physical	4.7	5.9	1.2	5.5	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	9	underpen. pebbles with m.sand. Barnacles and clam shell within profile. Gelatinous egg sac.
7	ECR-C-1430	C	2021-09-12	1:14	-18.7	ECR-C-1430-C-SPI.jpg	4.2	Physical	3.9	4.5	0.6	4.2	2 to 1 phi	3 to 2 phi	-3 to -4 phi	Pebbles/Granule	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel Mixes	Sandy Gravel	9	underpen. pebbles with m.sand. Chunk of woody debirs visible.
8	ECR-A-515	A	2021-09-13	13:23	-45	ECR-A-515-A-SPI.jpg	4.3	Physical	3.8	4.5	0.7	1.9	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	0	No	1	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and [dk].grey silt/clay. Surface mudclast, fecal pellets, and tubes in the background.
8	ECR-A-515	C	2021-09-13	13:36	-45	ECR-A-515-C-SPI.jpg	2.4	Physical	1.6	3	1.4	2.4	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan vf.sand/silt. Surface fecal clasts. Infauna and voids at depth.
8	ECR-B-516	B	2021-08-21	7:55	-46.6	ECR-B-516-B-SPI.jpg	4	Physical	3.8	4.1	0.3	2.2	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	0	No	2	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and streak of grey silt/clay. Surface mudclasts. Void at depth.
8	ECR-B-516	C	2021-08-21	8:02	-46.6	ECR-B-516-C-SPI.jpg	3.4	Physical	3.1	3.6	0.5	2.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	0	No	2	0.25	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and tan/grey vf.sand/silt. Surface mudclasts and fecal pellets. Void at depth.
8	ECR-A-517	A	2021-08-21	5:19	-48.8	ECR-A-517-A-SPI.jpg	3.9	Biological	3.5	4.5	1	3.9	1 to 0 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	13	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. coarse/m.sand and cluster of grey silt/clay. Surface mudclasts and fecal clusters, tubes, shells (7-15mm).
8	ECR-A-517	C	2021-08-21	5:29	-48.8	ECR-A-517-C-SPI.jpg	2.8	Biological	2.2	3.3	1.1	1.6	1 to 0 phi	>4 phi	0 to -1 phi	Pebbles/Granule	Indet	cluster(s) of rounded pellets	none	0	No	9	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. [v].coarse sand with trace vf.granules/pebbles and mudclasts. Surface fecal clasts.
8	ECR-B-518	B	2021-08-21	1:25	-48.7	ECR-B-518-B-SPI.jpg	5.6	Biological	5.1	6	0.9	4.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan silt. Surface tubes and bioaggregate clusters. Voids visible.
8	ECR-B-518	C	2021-08-21	1:30	-48.5	ECR-B-518-C-SPI.jpg	5.5	Physical	5.4	5.7	0.3	4.7	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage II	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand andtan/grey vf.sand/silt. Surface tubes and bioaggregates.
8	ECR-A-519	B	2021-08-20	23:08	-50	ECR-A-519-B-SPI.jpg	6.3	Physical	5.6	7	1.4	2.7	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey vf.sand/silt. Surface bioaggregates. Polychaete and void at depth.
8	ECR-A-519	C	2021-08-20	23:13	-50	ECR-A-519-C-SPI.jpg	6.9	Physical	6.7	7	0.3	2.3	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	1	No	3	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey vf.sand/silt. Surface mudclasts and tubes. Polychaete and filled voids at depth.
8	ECR-B-520	A	2021-08-20	21:25	-50.8	ECR-B-520-A-SPI.jpg	5	Physical	4.3	5.5	1.2	2.4	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and grey silt/clay with trace biogenic carbonate shell fragments. Surface fecal clasts and burrow. Polychaete and filled void.
8	ECR-B-520	C	2021-08-20	21:37	-50.7	ECR-B-520-C-SPI.jpg	6.2	Physical	5.9	6.5	0.6	2.8	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey silt/clay. Surface fecal pellets and tubes. Polychaetes and void at depth.
8	ECR-A-521	A	2021-08-20	19:55	-51.7	ECR-A-521-A-SPI.jpg	6.3	Physical	6	6.4	0.4	2	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage III	cluster(s) of rounded pellets	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface fecal pellets. Polychaetes and filled void at depth.
8	ECR-A-521	C	2021-08-20	20:04	-51.7	ECR-A-521-C-SPI.jpg	5.4	Physical	4.8	5.8	1	2.3	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey vf.sand/silt. Surface tubes and fecal clusters. Polychaete and void visible.
8	ECR-B-522	A	2021-08-20	18:53	-52.1	ECR-B-522-A-SPI.jpg	4.1	Physical	3.8	4.3	0.5	2.3	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey silt/clay. Surface bioaggregates. Polychaete and voids at depth.
8	ECR-B-522	B	2021-08-20	19:00	-51.1	ECR-B-522-B-SPI.jpg	5.4	Physical	4.3	6	1.7	2.4	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey silt/clay. Surface tubes, mudclasts, and fecal pellets. Polychaete and voids at depth.
8	ECR-A-523	B	2021-08-20	16:44	-52.1	ECR-A-523-B-SPI.jpg	5.5	Biological	5	5.9	0.9	2.1	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	2	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and tan/grey silt/clay. Surface tubes, mudclasts, and fecal pellets. Oxidized burrows. Polychaete and voids at depth.
8	ECR-A-523	C	2021-08-20	16:49	-52.1	ECR-A-523-C-SPI.jpg	4.3	Physical	3.7	4.6	0.9	2.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and fecal pellets. Polychaete and voids visible.
8	ECR-B-524	A	2021-08-20	15:43	-52.1	ECR-B-524-A-SPI.jpg	3.9	Physical	3.6	4.3	0.7	2	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan f.sand and tan/grey silt/clay. Surface mudclasts and fecal pellets. Voids visible.
8	ECR-B-524	C	2021-08-20	15:51	-52	ECR-B-524-C-SPI.jpg	4.4	Physical	4.1	4.6	0.5	4.3	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	3	0.66	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan f.sand and tan/grey silt/clay. Surface mudclasts and fecal pellets. Voids visible.
8	ECR-A-525	B	2021-08-20	13:41	-52.4	ECR-A-525-B-SPI.jpg	6.2	Physical	5.8	6.5	0.7	2.5	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey silt/clay. Surface tubes and fecal pellets. Polychaete and voids visible.
8	ECR-A-525	C	2021-08-20	13:47	-52.2	ECR-A-525-C-SPI.jpg	5.3	Physical	5	5.8	0.8	2.4	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and tan/grey/dk.grey silt/clay. Surface fecal pellets and tubes. Polychaete and voids at depth.
8	ECR-B-526	B	2021-08-20	12:58	-52.3	ECR-B-526-B-SPI.jpg	6.6	Physical	6.1	7.3	1.2	6.4	2 to 1 phi	>4 phi	0 to -1 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	3	0.96	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and cluster of grey silt/clay. Surface tubes, fecal pellets, and mudclasts.
8	ECR-B-526	C	2021-08-20	13:03	-52.5	ECR-B-526-C-SPI.jpg	7.8	Physical	7.6	8	0.4	7.8	2 to 1 phi	4 to 3 phi	0 to -1 phi	none	Stage I on III	none	none	0	No	2	0.13	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand and cluster of grey silt/clay. Surface burrow, mudclasts, and filamentous tubes.
8	ECR-A-527	A	2021-08-20	10:26	-54.6	ECR-A-527-A-SPI.jpg	5.4	Physical	4.9	6.2	1.3	5.4	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Stage II	loose biogenic aggregates	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan m/f.sand and cluster of grey silt/clay. Surface tubes, burrow, and fecal pellets.
8	ECR-A-527	B	2021-08-20	10:31	-54.5	ECR-A-527-B-SPI.jpg	4	Physical	3.3	4.5	1.2	4	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage II	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan f.sand and grey silt/clay clusters. Surface tubes and fecal pellets. Infaunal organism and filled voids visible.
8	ECR-B-528	A	2021-08-20	9:37	-54.6	ECR-B-528-A-SPI.jpg	4.8	Biological	3.5	5.3	1.8	4.8	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and grey silt/clay with trace biogenic carbonate shell fragments (1-4mm). Surface covered in tubes and bioaggregates. Burrow leading to void.
8	ECR-B-528	C	2021-08-20	9:45	-54.4	ECR-B-528-C-SPI.jpg	6.7	Physical	5.5	7.4	1.9	6.2	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan coarse/m.sand and cluster of dk.grey silt/clay. Surface tubes and fecal pellets.
8	ECR-A-529	B	2021-08-19	13:26	-56.3	ECR-A-529-B-SPI.jpg	12.1	Biological	11.3	12.4	1.1	3.9	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal pellets, and burrows. Polychaete and voids at depth. Shadow artifact.
8	ECR-A-529	C	2021-08-19	13:32	-56.4	ECR-A-529-C-SPI.jpg	8.2	Biological	7.7	8.5	0.8	4.2	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	2	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and tan/grey silt/clay. Surface tubes, mudclasts, and fecal pellets. Infauna and voids visible at depth.
8	ECR-B-530	A	2021-08-19	12:29	-57.5	ECR-B-530-A-SPI.jpg	8.2	Biological	7.5	8.7	1.2	3.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	Yes	1	No	2	0.47	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan/grey f.sand and tan/grey silt/clay. Surface tubes, mudclasts, and large surface pit. Polychaete and voids visible at depth.
8	ECR-B-530	B	2021-08-19	12:35	-57.5	ECR-B-530-B-SPI.jpg	12.2	Biological	11.4	13	1.6	4.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	3	No	6	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, mudclasts, and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-531	A	2021-08-19	10:31	-57.6	ECR-A-531-A-SPI.jpg	9.6	Physical	9.3	9.9	0.6	3.9	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and tan/grey silt/clay. Surface tubes and fecal clasts. Polychaete and voids visible at depth.
8	ECR-A-531	B	2021-08-19	10:36	-57.6	ECR-A-531-B-SPI.jpg	9.2	Physical	8.8	9.5	0.7	4.7	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	3	0.31	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and grey silt/clay. Surface tubes, fecal clasts, and mudclasts. Polychaetes and voids at depth.
8	ECR-B-532	B	2021-08-19	9:45	-57.1	ECR-B-532-B-SPI.jpg	6.8	Physical	5.9	8.1	2.2	3.9	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and grey silt/clay. Surface tubes and fecal clasts. Polychaetes and voids at depth.
8	ECR-B-532	C	2021-08-19	9:49	-57.3	ECR-B-532-C-SPI.jpg	11.4	Physical	10.5	12.3	1.8	5.6	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes and fecal clasts. Polychaete and voids at depth.
8	ECR-A-533	A	2021-08-19	5:10	-57.6	ECR-A-533-A-SPI.jpg	5.4	Physical	4.3	6.3	2	4.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan/grey f.sand and grey vf.sand/silt. Surface tubes and bioaggregates. Polychaete and voids at depth.
8	ECR-A-533	C	2021-08-19	5:21	-57.5	ECR-A-533-C-SPI.jpg	8	Physical	7.5	8.6	1.1	3.1	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	10	underpen. tan/grey f.sand and tan/grey vf.sand/silt. Surface tubes and fecal clasts. Voids at depth.
8	ECR-B-534	A	2021-08-19	4:24	-58.2	ECR-B-534-A-SPI.jpg	10.9	Physical	9.7	12.3	2.6	5.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	2	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey f.sand and tan/grey vf.sand/silt. Surface burrow, tubes, mudclasts, and bioaggregates. Polychaetes and voids at depth.
8	ECR-B-534	B	2021-08-19	4:30	-58.1	ECR-B-534-B-SPI.jpg	9.2	Physical	8.8	9.7	0.9	6.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	3	0.44	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and tan/grey vf.sand/silt. Surface tubes, mudclasts, and bioaggregates. Polychaete and voids at depth.
8	ECR-A-535	A	2021-08-19	2:38	-57.4	ECR-A-535-A-SPI.jpg	6.6	Physical	5.9	7	1.1	3.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan/grey f.sand and tan/grey vf.sand/silt. Surface tubes and bioaggregates. Voids at depth.
8	ECR-A-535	B	2021-08-19	2:43	-57.3	ECR-A-535-B-SPI.jpg	10.3	Biological	9.2	10.8	1.6	3.9	4 to 3 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	tan/grey f.sand and tan/grey vf.sand/silt. Surface tubes, burrow, and fecal pellets. Polychaetes and voids at depth.
8	ECR-B-536	A	2021-08-19	1:52	-55.9	ECR-B-536-A-SPI.jpg	5.4	Physical	5.2	5.8	0.6	2.6	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	underpen. tan/grey f.sand and tan/grey vf.sand/silt. Surface tubes and fecal pellets. Polychaete and voids at depth.
8	ECR-B-536	B	2021-08-19	1:58	-55.9	ECR-B-536-B-SPI.jpg	8.7	Physical	8.4	9.2	0.8	4	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and tan/grey vf.sand/silt. Surface burrow, tubes, mudclasts, and fecal pellets. Voids at depth.
8	ECR-A-537	A	2021-08-18	23:34	-54.6	ECR-A-537-A-SPI.jpg	4.6	Physical	3.5	5.3	1.8	4.6	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	6	0.4	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and clusters of grey silt/clay. Surface mudclasts, fecal pellets, and tubes. Burrow leading to void.
8	ECR-A-537	B	2021-08-18	23:39	-54.5	ECR-A-537-B-SPI.jpg	4.5	Physical	3.8	5.2	1.4	4.5	3 to 2 phi	4 to 3 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	Yes	0	No	5	0.3	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan/grey vf.sand/silt. Surface burrow and mudclasts.
8	ECR-B-538	A	2021-08-18	22:05	-54.8	ECR-B-538-A-SPI.jpg	5	Physical	3.7	7.4	3.7	5	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	1	No	9	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan/grey vf.sand/silt. Surface mudclasts, bioaggregates, tubes. Polychaete at depth.
8	ECR-B-538	C	2021-08-18	22:16	-54.8	ECR-B-538-C-SPI.jpg	6.4	Physical	4.4	7.2	2.8	6.4	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	7	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	11	underpen. tan m/f.sand and tan/grey silt/clay. Surface mudclasts, fecal pellets, and tubes. Small voids at depth.
8	ECR-A-539	B	2021-08-18	20:35	-56.6	ECR-A-539-B-SPI.jpg	9.2	Physical	9	9.6	0.6	2.8	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	underpen. tan m/f.sand and grey vf.sand/silt with trace biogenic carbonate shell fragments. Plume of black silt/clay. Surface tubes, biota, and fecal pellets. Infauna and voids at depth.
8	ECR-A-539	C	2021-08-18	20:41	-56.2	ECR-A-539-C-SPI.jpg	5.7	Physical	5.2	6.6	1.4	2.8	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	9	underpen. tan m/f.sand and grey vf.sand/silt. Surface tubes in background. Polychaete and voids at depth.
8	ECR-B-540	A	2021-08-18	18:56	-57.5	ECR-B-540-A-SPI.jpg	8.1	Physical	7.1	8.9	1.8	8.1	2 to 1 phi	2 to 1 phi	0 to -1 phi	none	Stage III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	11	underpen. tan m/f.sand and grey vf.sand/silt. Surface tubes in background. Polychaete and voids at depth.
8	ECR-B-540	B	2021-08-18	19:01	-57.4	ECR-B-540-B-SPI.jpg	3.9	Physical	3.4	4.4	1	3.9	1 to 0 phi	4 to 3 phi	0 to -1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. coarse sand and tan f.sand/silt. Surface tubes in the background. Voids at depth.
8	ECR-A-541	A	2021-08-18	16:42	-57.5	ECR-A-541-A-SPI.jpg	9.9	Physical	8.8	10.6	1.8	3.3	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan coarse/m.sand with tan/grey vf.sand/silt. Surface tubes and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-541	C	2021-08-18	16:57	-57.5	ECR-A-541-C-SPI.jpg	8.3	Physical	7.4	8.9	1.5	3.4	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	4	No	5	0.16	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan m/f.sand with tan/grey vf.sand/silt. Surface tubes, mudclasts, and fecal pellets. Polychaetes and voids at depth.
8	ECR-B-542	A	2021-08-18	15:52	-58.4	ECR-B-542-A-SPI.jpg	6.6	Physical	6.3	7	0.7	6.6	1 to 0 phi	4 to 3 phi	0 to -1 phi	none	Stage III	none	none	2	No	1	0.4	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. tan coarse/m.sand with cluster of grey silt/clay. Surface tubes. Infauna and possible voids visible.
8	ECR-B-542	B	2021-08-18	15:56	-58.5	ECR-B-542-B-SPI.jpg	6.9	Physical	6.6	7.3	0.7	6.2	2 to 1 phi	>4 phi	0 to -1 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. tan coarse/m.sand with streak of black silt/clay. Surface tubes. Possible voids visible.
8	ECR-A-543	B	2021-08-18	14:04	-59	ECR-A-543-B-SPI.jpg	12.8	Physical	12.4	13.2	0.8	3.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	3	0.95	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan m/f.sand and tan vf.sand/silt. Surface mudclasts, tubes, and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-543	C	2021-08-18	14:10	-58.9	ECR-A-543-C-SPI.jpg	11.9	Physical	11.1	13.1	2	3.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	9	0.3	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan m/f.sand and tan vf.sand/silt. Surface mudclasts, tubes, and fecal pellets. Polychaete and voids at depth. Shadow artifact.
8	ECR-B-544	A	2021-08-18	13:10	-59.2	ECR-B-544-A-SPI.jpg	13.5	Biological	12.8	13.9	1.1	3.4	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	3	0.21	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan m/f.sand and tan/grey vf.sand/silt. Surface burrow, mudclasts, tubes, and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-544	B	2021-08-18	13:15	-59.4	ECR-B-544-B-SPI.jpg	13.8	Biological	13.5	14.2	0.7	5.1	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	3	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Patches of black silt/clay. Surface tubes, mudclasts, and fecal pellets. Polychaete and large void at depth.
8	ECR-A-545	B	2021-08-18	11:38	-57.3	ECR-A-545-B-SPI.jpg	14.1	Physical	13.8	14.3	0.5	5.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	2	1.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts and tubes. Voids and polychaete at depth. Shadow artifact.
8	ECR-A-545	C	2021-08-18	11:42	-59	ECR-A-545-C-SPI.jpg	12.9	Physical	12.6	13.4	0.8	3.2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and tan/grey silt/clay. Surface mudclasts and tubes. Voids and polychaete at depth. Shadow artifact.
8	ECR-B-546	A	2021-08-18	10:52	-58.1	ECR-B-546-A-SPI.jpg	13.7	Physical	13.2	14	0.8	6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface burrows, mudclasts, tubes, and fecal pellets. Voids and polychaetes at depth. Shadow artifact.
8	ECR-B-546	B	2021-08-18	10:56	-58	ECR-B-546-B-SPI.jpg	11.4	Physical	10.4	12.7	2.3	3.1	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	tan f.sand and tan/grey silt/clay. Surface tubes and fecal pellets. Voids and polychaetes at depth. Shadow artifact.
8	ECR-A-547	A	2021-08-18	9:12	-57	ECR-A-547-A-SPI.jpg	8.3	Physical	8	9.1	1.1	3.8	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.47	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	11	underpen. tan/grey f.sand and tan/grey silt/clay. Surface mudclasts, tubes, and fecal pellets. Void at depth.
8	ECR-A-547	C	2021-08-18	9:22	-56.9	ECR-A-547-C-SPI.jpg	7.2	Physical	6.5	7.6	1.1	2.2	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	8	underpen. tan/grey m/f.sand and [dk].grey silt/clay. Surface tubes and fecal pellets. Void at depth.
8	ECR-B-548	B	2021-08-18	7:52	-57.7	ECR-B-548-B-SPI.jpg	7.3	Physical	5	9.2	4.2	6.1	1 to 0 phi	>4 phi	0 to -1 phi	none	Indet	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. coarse/m.sand and clusters of grey silt/clay. Surface tubes, fecal pellets, and biota in the background.
8	ECR-B-548	C	2021-08-18	7:56	-57.7	ECR-B-548-C-SPI.jpg	7.7	Biological	6.7	8.5	1.8	7.7	1 to 0 phi	>4 phi	-1 to -2 phi	none	Indet	cluster(s) of rounded pellets	none	1	No	1	1.06	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	--	underpen. tan coarse/m.sand and grey silt/clay cluster. Surface tubes and fecal pellets. {epi/in}faunal sand dollars.
8	ECR-A-601	A	2021-08-18	5:39	-58.3	ECR-A-601-A-SPI.jpg	14.2	Physical	13.8	14.4	0.6	4.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal pellets, and pit. Polychaete and void visible at depth. Shadow artifact.
8	ECR-A-601	C	2021-08-18	5:50	-58.3	ECR-A-601-C-SPI.jpg	14.8	Biological	14.2	15.2	1	5.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	6	0.32	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes and mudclasts. Polchaetes and void visible at depth. Shadow artifact.
8	ECR-B-602	A	2021-08-18	4:51	-58.4	ECR-B-602-A-SPI.jpg	13.4	Biological	12.9	13.8	0.9	3.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal pellets, and amphipod. Polychaete and void visible at depth. Shadow artifact.
8	ECR-B-602	C	2021-08-18	5:01	-58.2	ECR-B-602-C-SPI.jpg	11.5	Biological	10.7	12.6	1.9	3.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal clasts, and burrows. Deep oxidized burrows. Polychaete and void visible at depth. Shadow artifact.
8	ECR-A-603	B	2021-08-18	2:21	-58.3	ECR-A-603-B-SPI.jpg	13.6	Physical	13	14	1	3.6	>4 phi	>4 phi	2 to 1 phi	none	Stage III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Polychaetes and voids visible at depth. Shadow artifact.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	OSI	Comments
8	ECR-A-603	C	2021-08-18	2:26	-58.3	ECR-A-603-C-SPI.jpg	13.2	Biological	12.7	14.1	1.4	4.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	5	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal pellets, and mudclasts. Multiple polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-604	A	2021-08-18	1:25	-57.9	ECR-B-604-A-SPI.jpg	13.9	Biological	13.2	14.5	1.3	6.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes. Multiple polychaetes and filled voids visible at depth. Shadow artifact.
8	ECR-B-604	B	2021-08-18	1:31	-57.9	ECR-B-604-B-SPI.jpg	13.6	Biological	13.1	14	0.9	5.3	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes and mudclasts. Polychaete and filled void at depth.
8	ECR-A-605	B	2021-08-17	23:28	-58	ECR-A-605-B-SPI.jpg	5.8	Biological	5.4	6.3	0.9	2.6	4 to 3 phi	>4 phi	-1 to -2 phi	Pebbles/Granule	Stage I on III	cluster(s) of rounded pellets	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan m/f.sand with trace granules/pebbles overlaying grey silt/clay. Surface tubes. Voids visible at depth.
8	ECR-A-605	C	2021-08-17	23:33	-58.3	ECR-A-605-C-SPI.jpg	8.8	Biological	8.4	9	0.6	3.7	4 to 3 phi	>4 phi	0 to -1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	10	underpen. tan m/f.sand and grey f.sand/silt. Surface tubes, fecal clusters, epifauna. Polychaetes, deep oxidized burrows, and feeding voids.
8	ECR-B-606	A	2021-08-17	21:59	-57.4	ECR-B-606-A-SPI.jpg	13.3	Physical	11.1	14.4	3.3	5.1	>4 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan m/f.sand and tan/grey silt/clay. Surface tubes. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-606	B	2021-08-17	22:04	-57.4	ECR-B-606-B-SPI.jpg	13.8	Biological	13.5	14.3	0.8	4.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes and burrow. Polychaetes and filled voids at depth.
8	ECR-A-607	A	2021-08-17	19:33	-57	ECR-A-607-A-SPI.jpg	13.2	Biological	12.9	13.4	0.5	5.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, bioaggregates, and biota. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-A-607	B	2021-08-17	19:38	-56.9	ECR-A-607-B-SPI.jpg	12.9	Biological	12.5	13.1	0.6	5.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-608	A	2021-08-17	17:01	-57.4	ECR-B-608-A-SPI.jpg	4.2	Physical	2.7	6.3	3.6	3.8	1 to 0 phi	4 to 3 phi	-1 to -2 phi	none	Stage I on III	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	11	underpen. tan coarse/m.sand and a cluster of grey f.sand/silt. Surface tubes. Possible void at depth.
8	ECR-B-608	B	2021-08-17	17:07	-57.3	ECR-B-608-B-SPI.jpg	3	Physical	2.9	3.5	0.6	2.1	4 to 3 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan m/f.sand and grey vf.sand/silt clusters. Surface tubes. Possible void visible.
8	ECR-A-609	B	2021-08-17	15:23	-57.1	ECR-A-609-B-SPI.jpg	14.5	Physical	13.9	14.8	0.9	5.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	1	0.51	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-A-609	C	2021-08-17	15:29	-57.2	ECR-A-609-C-SPI.jpg	13.6	Biological	13	13.9	0.9	2.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	6	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and tan/grey silt/clay. Surface tubes and mudclasts. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-610	B	2021-08-17	14:25	-56.4	ECR-B-610-B-SPI.jpg	4.3	Physical	3.9	5.1	1.2	2.2	3 to 2 phi	4 to 3 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	8	underpen. tan m/f.sand and clusters of grey silt/clay. Surface tubes and bioaggregates. Possible void visible.
8	ECR-B-610	C	2021-08-17	14:32	-56.4	ECR-B-610-C-SPI.jpg	5	Biological	3.9	5.9	2	2.3	3 to 2 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan m/f.sand and clusters of grey silt/clay. Surface tubes. Polychaetes and void visible at depth.
8	ECR-A-611	A	2021-08-17	12:30	-58.7	ECR-A-611-A-SPI.jpg	12.7	Biological	11.9	13.3	1.4	3.2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Surface tubes and fecal clusters. Polychaetes and voids visible. Shadow artifact.
8	ECR-A-611	B	2021-08-17	12:35	-58.8	ECR-A-611-B-SPI.jpg	13.8	Biological	13.2	14.1	0.9	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Surface tubes and bioaggregates. Polychaetes and filled void at depth. Shadow artifact.
8	ECR-B-612	A	2021-08-17	11:01	-58	ECR-B-612-A-SPI.jpg	11.8	Biological	10.8	12.6	1.8	3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan f.sand and tan/grey silt/clay. Surface tubes. Polychaetes and void at depth. Shadow artifact.
8	ECR-B-612	B	2021-08-17	11:06	-58	ECR-B-612-B-SPI.jpg	14.2	Biological	13.8	14.5	0.7	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and tan/grey silt/clay. Surface tubes. Polychaete and void visible at depth. Shadow artifact.
8	ECR-A-613	A	2021-08-17	9:22	-57.1	ECR-A-613-A-SPI.jpg	13.8	Biological	13.2	14.1	0.9	5.1	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Deep oxidized burrow at depth. Surface tubes and fecal clusters. Polychaete and filled void at depth. Shadow artifact.
8	ECR-A-613	B	2021-08-17	9:27	-57.1	ECR-A-613-B-SPI.jpg	12.8	Biological	12	13.8	1.8	3.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	1	2.07	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclast and tubes. Polychaetes visible at depth and possible filled void. Shadow artifact.
8	ECR-B-614	A	2021-08-17	8:42	-56.7	ECR-B-614-A-SPI.jpg	13.6	Biological	12.7	14.3	1.6	3.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan/grey f.sand and tan/grey silt/clay. Surface tubes. Polychaete and void at depth. Shadow artifact.
8	ECR-B-614	C	2021-08-17	8:53	-56.8	ECR-B-614-C-SPI.jpg	14.6	Biological	13.8	15.3	1.5	4.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes and fecal clusters. Polychaete and voids at depth. Shadow artifact.
8	ECR-A-615	A	2021-08-17	7:21	-57	ECR-A-615-A-SPI.jpg	13.8	Biological	13.1	14.3	1.2	4.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface tubes, fecal pellets, and epifaunal organisms. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-615	B	2021-08-17	7:26	-57.2	ECR-A-615-B-SPI.jpg	13.8	Biological	13.5	14.2	0.7	4.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes. Polychaetes and void at depth. Shadow artifact.
8	ECR-B-616	A	2021-08-17	6:30	-56.3	ECR-B-616-A-SPI.jpg	13.8	Biological	13.5	14.2	0.7	4.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-616	B	2021-08-17	6:35	-56.3	ECR-B-616-B-SPI.jpg	13.8	Physical	13.4	14.3	0.9	3.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	disturbed profile. tan/grey m/f.sand and tan/grey silt/clay. Surface burrows. Void and filled viods.
8	ECR-A-617	B	2021-08-17	4:49	-56.4	ECR-A-617-B-SPI.jpg	5.5	Physical	4.9	6.3	1.4	4.1	2 to 1 phi	>4 phi	1 to 0 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand with clusters of grey silt/clay. Surface tubes.
8	ECR-A-617	C	2021-08-17	4:54	-56.3	ECR-A-617-C-SPI.jpg	6.4	Physical	5.3	7	1.7	6.3	2 to 1 phi	4 to 3 phi	1 to 0 phi	none	Stage II	none	none	0	No	1	0.4	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Medium Sand	9	underpen. tan m/f.sand. Surface tubes.
8	ECR-B-618	A	2021-08-17	3:59	-57.1	ECR-B-618-A-SPI.jpg	6.7	Physical	4.4	7.3	2.9	2.5	3 to 2 phi	>4 phi	1 to 0 phi	none	Stage I on III	loose biogenic aggregates	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Fine/Very Fine Sand	9	underpen. tan m/f.sand and tan/grey vf.sand/silt. Surface tubes. Large surface pit and associated infauna. Other polychaete visible and voids visible.
8	ECR-B-618	B	2021-08-17	4:04	-57.3	ECR-B-618-B-SPI.jpg	8.5	Physical	7.7	9.4	1.7	3.5	4 to 3 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	5	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Muddy Sand	--	10	underpen. tan/grey m/f.sand and grey silt/clay. Surface tubes and burrows. Polychaetes and voids visible at depth.
8	ECR-A-619	B	2021-08-17	2:03	-59.2	ECR-A-619-B-SPI.jpg	13.9	Physical	13.3	14.4	1.1	4.5	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface burrows leading to voids at depth. Polychaete visible at depth. Surface artifact.
8	ECR-A-619	C	2021-08-17	2:07	-59.3	ECR-A-619-C-SPI.jpg	14.2	Physical	13.8	14.5	0.7	4.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.19	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes and mudclasts. Polychaete and void at depth. Shadow artifact.
8	ECR-B-620	A	2021-08-17	1:10	-60.7	ECR-B-620-A-SPI.jpg	15.3	Biological	14.8	15.4	0.6	7.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Surface tubes. Polychaete and voids visible. Shadow artifact.
8	ECR-B-620	C	2021-08-17	1:21	-60.6	ECR-B-620-C-SPI.jpg	13.9	Biological	13.6	14.2	0.6	3.7	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	5	0.87	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Polychaetes and voids visible at depth.
8	ECR-A-621	A	2021-08-16	22:51	-60.3	ECR-A-621-A-SPI.jpg	14.8	Physical	14.2	15.2	1	10.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	3	0.28	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts, tubes, and burrows. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-A-621	B	2021-08-16	22:56	-60.2	ECR-A-621-B-SPI.jpg	15.1	Physical	12.7	16.2	3.5	9.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes. Polychaetes and void visible at depth.
8	ECR-B-622	A	2021-08-16	21:52	-60.6	ECR-B-622-A-SPI.jpg	14.9	Physical	14.2	15.2	1	7	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes and burrow. Polychaete and voids visible at depth. Shadow artifact.
8	ECR-B-622	C	2021-08-16	22:03	-60.5	ECR-B-622-C-SPI.jpg	13.6	Physical	13.3	14.2	0.9	5.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	4	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes, burrows, mudclasts, and epifauna. Voids at depth. Shadow artifact.
8	ECR-A-623	A	2021-08-16	19:53	-61.3	ECR-A-623-A-SPI.jpg	16.4	Physical	16.2	16.7	0.5	8.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface tubes. Polychaete and voids visible at depth. Shadow artifact.
8	ECR-A-623	C	2021-08-16	20:04	-61.3	ECR-A-623-C-SPI.jpg	15.1	Physical	14.8	15.5	0.7	6.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	5	0.89	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Polychaetes and voids at depth. Shadow artifacts.
8	ECR-B-624	B	2021-08-16	19:11	-62	ECR-B-624-B-SPI.jpg	15.7	Physical	15.4	16	0.6	5.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	4	0.6	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and epifaunal sea star. Feeding void at depth.
8	ECR-B-624	C	2021-08-16	19:17	-62	ECR-B-624-C-SPI.jpg	14.7	Biological	13.7	15.2	1.5	5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	5	0.47	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand and tan/grey silt/clay. Surface burrow, mudclasts, and tubes. Voids at depth. Shadow artifact.
8	ECR-A-625	A	2021-08-16	17:05	-62.6	ECR-A-625-A-SPI.jpg	15.2	Biological	14.4	16.4	2	4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	3	No	3	0.84	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Surface pit, tubes, and mudclasts. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-625	C	2021-08-16	17:14	-62.5	ECR-A-625-C-SPI.jpg	15.7	Physical	15.5	16.5	1	4.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	1	No	1	0.99	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts and tubes. Polychaete and void at depth. Shadow artifact.
8	ECR-B-626	A	2021-08-16	16:16	-63.4	ECR-B-626-A-SPI.jpg	15.2	Biological	15.1	15.5	0.4	6.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	4	0.48	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, and burrows. Polychaete and voids visible. Shadow artifact.
8	ECR-B-626	B	2021-08-16	16:25	-63.4	ECR-B-626-B-SPI.jpg	15	Physical	14.1	15.4	1.3	5.2	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	none	none	1	No	6	1.3	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaete and void visible at depth. Shadow artifact.
8	ECR-A-627	A	2021-08-16	13:59	-64.2	ECR-A-627-A-SPI.jpg	16.2	Physical	15.8	16.4	0.6	5.9	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Feeding voids at depth. Shadow artifact.
8	ECR-A-627	C	2021-08-16	14:09	-64.1	ECR-A-627-C-SPI.jpg	15.4	Physical	14.9	15.8	0.9	4.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	10	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts, tubes, and burrows. Polychaete and voids at depth. Shadow artifact.
8	ECR-B-628	A	2021-08-16	13:16	-64.8	ECR-B-628-A-SPI.jpg	16.3	Biological	15.8	16.5	0.7	5.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	1	0.35	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaete and voids visible at depth. Shadow artifact.
8	ECR-B-628	C	2021-08-16	13:28	-64.7	ECR-B-628-C-SPI.jpg	13.4	Physical	11.4	15.6	4.2	5.2	>4 phi	>4 phi	1 to 0 phi	none	Stage II	loose biogenic aggregates	none	1	No	10	0.64	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	9	tan m/f.sand and tan/grey silt/clay. Surface mudclasts and tubes. Polychaete visible. Shadow artifact.
8	ECR-A-629	A	2021-08-16	11:28	-64.5	ECR-A-629-A-SPI.jpg	15.3	Physical	14.9	16.1	1.2	5.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	3	0.25	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaetes and voids at depth.
8	ECR-A-629	C	2021-08-16	11:39	-64.6	ECR-A-629-C-SPI.jpg	17.2	Physical	16.6	18	1.4	4.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.42	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Voids at depth. Shadow artifact.
8	ECR-B-630	A	2021-08-16	10:46	-64.6	ECR-B-630-A-SPI.jpg	12.5	Physical	11.6	14	2.4	7.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	5	0.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts and tubes. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-630	C	2021-08-16	10:55	-64.6	ECR-B-630-C-SPI.jpg	14	Physical	13.6	14.7	1.1	6.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	4	0.8	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan/grey f.sand andtan/grey silt/clay. Mudclast dragdown. Surface mudclasts and tubes. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-A-631	B	2021-08-16	8:47	-64.6	ECR-A-631-B-SPI.jpg	16.4	Physical	16.1	16.7	0.6	6.4	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.82	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Surface mudclasts, tubes, and burrows. Voids at depth. Shadow artifact.
8	ECR-A-631	C	2021-08-16	8:52	-64.7	ECR-A-631-C-SPI.jpg	16.7	Physical	16	17.1	1.1	7.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	0	No	9	0.52	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments.Surface mudclasts and tubes. Voids at depth. Shadow artifact.
8	ECR-B-632	A	2021-08-16	7:58	-64.7	ECR-B-632-A-SPI.jpg	14.8	Biological	14.7	15	0.3	6.1	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	Yes	0	No	6	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan//grey/black silt/clay. Surface mudclasts, tubes, and pit with associated burrow. Deep oxidized burrows with voids at depth. Shadow artifact.
8	ECR-B-632	C	2021-08-16	8:07	-64.6	ECR-B-632-C-SPI.jpg	14.8	Biological	14.2	15.1	0.9	5.5	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	6	0.39	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with a cluster of dk.grey silt. Surface mudclasts and tubes. Polychaetes and voids visible. Shadow artifact.
8	ECR-A-633	B	2021-08-16	6:37	-65	ECR-A-633-B-SPI.jpg	17.3	Physical	16.1	18.3	2.2	7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.46	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sandand tan/grey silt/clay with biogenic carbonate shell fragments. Surface mudclasts, tubes, and epifauna. Unknown infauna and a void at depth. Shadow artifact.
8	ECR-A-633	C	2021-08-16	6:42	-65	ECR-A-633-C-SPI.jpg	16.5	Physical	16.3	16.9	0.6	5.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	5	0.59	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-634	A	2021-08-16	5:14	-65.2	ECR-B-634-A-SPI.jpg	13	Physical	12.8	13.3	0.5	4.8	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	5	1	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/caly with biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaetes and void at depth. Shadow artifact.
8	ECR-B-634	B	2021-08-16	5:20	-65.3	ECR-B-634-B-SPI.jpg	15.3	Physical	14.8	15.7	0.9	5.8	>4 phi	>4 phi	2 to 1 phi	none	Stage III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts/shavings, fecal pellets, and burrows. Polychaetes and filled voids at depth. Shadow artifact.
8	ECR-A-635	A	2021-08-16	3:10	-65.9	ECR-A-635-A-SPI.jpg	17.1	Physical	16.6	17.2	0.6	7.6	>4 phi	>4 phi	2 to 1 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with biogenic carbonate shell fragments. Surface tubes and fecal pellets. Polychaete and void visible. Shadow artifact.
8	ECR-A-635	B	2021-08-16	3:17	-65.8	ECR-A-635-B-SPI.jpg	17.5	Biological	17.2	17.8	0.6	7.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	11	0.43	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Mud shavings in upper 2cm. Surface mudclasts, tubes, and burrows. Deep oxidized burrow with polychaetes visible. Voids at depth. Shadow artifact.
8	ECR-B-636	A	2021-08-16	2:20	-66	ECR-B-636-A-SPI.jpg	15.3	Physical	14.9	15.7	0.8	8.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and void at depth. Shadow artifact.
8	ECR-B-636	B	2021-08-16	2:25	-66	ECR-B-636-B-SPI.jpg	16.7	Physical	16.2	17.3	1.1	6.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay. Mud dragdown. Surface tubes, mudclasts, and burrow leading to feeding void. Infaunal organisms/polychaete visible at depth. Shadow artifact.
8	ECR-A-637	A	2021-08-15	23:33	-65.9	ECR-A-637-A-SPI.jpg	17.1	Physical	16.8	17.4	0.6	6.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Infauna and voids at depth. Shadow artifact.
8	ECR-A-637	C	2021-08-15	23:43	-65.9	ECR-A-637-C-SPI.jpg	16.7	Physical	16.2	16.9	0.7	8.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaete and voids visible at depth. Shadow artifact.
8	ECR-B-638	B	2021-08-15	22:04	-65.7	ECR-B-638-B-SPI.jpg	15.9	Physical	15.3	16.4	1.1	6.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mud shavings and tubes. Polychaetes visible at depth and filled voids. Shadow artifact.
8	ECR-B-638	C	2021-08-15	22:09	-65.7	ECR-B-638-C-SPI.jpg	16.8	Biological	16.4	17.2	0.8	6.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Cluster of black silt/clay in bottom left corner. Surface tubes and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-639	A	2021-08-15	20:13	-65.5	ECR-A-639-A-SPI.jpg	19	Physical	18.6	19.1	0.5	8.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	3	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-639	B	2021-08-15	20:19	-65.5	ECR-A-639-B-SPI.jpg	17.9	Biological	17.3	18.3	1	6.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	12	0.29	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Deep oxidized burrow. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-640	A	2021-08-15	19:06	-65.4	ECR-B-640-A-SPI.jpg	18.6	Physical	18.3	19	0.7	10.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-640	C	2021-08-15	19:19	-65.4	ECR-B-640-C-SPI.jpg	18.2	Biological	18.1	18.6	0.5	7.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	5	No	1	0.27	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mud clasts/shavings. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-641	A	2021-08-15	17:04	-65.5	ECR-A-641-A-SPI.jpg	17.1	Biological	16.7	17.5	0.8	6.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	5	No	2	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-A-641	C	2021-08-15	17:13	-65.5	ECR-A-641-C-SPI.jpg	18.7	Physical	17.8	19.7	1.9	9.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	2	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Sea star dragged into sediment. Surface tubes and mudclasts. Feeding void at depth. Shadow artifact.
8	ECR-B-642	A	2021-08-15	16:12	-65.2	ECR-B-642-A-SPI.jpg	18.1	Physical	17.7	18.5	0.8	7.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	3	No	1	0.17	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, and burrows. Polychaetes and voids at depth.
8	ECR-B-642	C	2021-08-15	16:24	-65.3	ECR-B-642-C-SPI.jpg	17.1	Biological	16.9	17.8	0.9	4.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	0	No	6	0.51	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts/shavings, tubes, burrows, and epifauna. Voids visible. Shadow artifact.
8	ECR-A-643	B	2021-08-15	14:15	-65.4	ECR-A-643-B-SPI.jpg	16.4	Physical	16	17	1	6.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	6	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, fecal pellets, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-643	C	2021-08-15	14:19	-65.4	ECR-A-643-C-SPI.jpg	17	Physical	16.6	17.5	0.9	6.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	6	No	8	0.57	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and tubes. Polychaetes and voids visible. Shadow artifact.
8	ECR-B-644	A	2021-08-15	13:12	-65	ECR-B-644-A-SPI.jpg	17.5	Biological	16.8	18	1.2	8.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	5	No	8	0.28	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface pit, mudclasts, tubes, and burrows. Polychaetes and voids visible. Shadow artifact.
8	ECR-B-644	C	2021-08-15	13:22	-65	ECR-B-644-C-SPI.jpg	17.5	Physical	16.8	18.1	1.3	7.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	6	0.44	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, and pit. Polychaete and voids at depth. Shadow artifact.

Segment	Station	Rep.	Local Date	Local Time (EST)	Water Depth (m)	SPI Image ID	Prism Penetration (cm)	SWI Roughness Origin	Prism Min Penetration (cm)	Prism Max Penetration (cm)	Relief (cm)	aRPD Mean Depth (cm)	Grain Size Major Mode	Grain Size Minimum	Grain Size Maximum	Gravel Type	Infaunal Successional Stage	Fecal Pellet Type	Pit Mound Presence	Infauna Count	Low DO	Mudclast Count	Mudclast Mean Diameter (cm)	Mudclast Oxidation	CMECS Class	CMECS Subclass	CMECS Group	CMECS Subgroup	CSI	Comments
8	ECR-A-645	A	2021-08-15	11:01	-63.8	ECR-A-645-A-SPI.jpg	16.9	Biological	16.3	17.4	1.1	5.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	3	No	1	0.77	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mud shavings and clasts, pit, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-645	B	2021-08-15	11:06	-63.9	ECR-A-645-B-SPI.jpg	17.1	Physical	16.7	17.3	0.6	6.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	2	0.22	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay and trace biogenic carbonates shell fragments. Surface mud shavings and clasts, tubes, pit, and burrows. Polychaetes and burrows at depth. Shadow artifact.
8	ECR-B-646	A	2021-08-15	10:14	-63.5	ECR-B-646-A-SPI.jpg	16.4	Physical	16.1	16.6	0.5	5.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	2	0.2	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-646	B	2021-08-15	10:20	-63.5	ECR-B-646-B-SPI.jpg	16.3	Physical	15.3	17.7	2.4	4.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	4	0.36	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts and shavings, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-647	A	2021-08-15	8:08	-62.8	ECR-A-647-A-SPI.jpg	17.1	Physical	16.8	17.4	0.6	6.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	4	0.34	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-647	C	2021-08-15	8:19	-62.8	ECR-A-647-C-SPI.jpg	16.7	Biological	16	17.3	1.3	6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	4	0.37	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-648	B	2021-08-15	7:17	-62.3	ECR-B-648-B-SPI.jpg	16.5	Biological	16	17.1	1.1	3.7	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and tan/grey silt/clay. Surface mud shavings/dragdown, tubes, and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-648	C	2021-08-15	7:23	-62.4	ECR-B-648-C-SPI.jpg	15.5	Biological	15.1	15.8	0.7	6.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.56	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and burrows. Filled voids at depth. Shadow artifact.
8	ECR-A-649	A	2021-08-15	4:34	-62.3	ECR-A-649-A-SPI.jpg	16.3	Biological	16	16.5	0.5	6.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and fecal pellets. Polychaete and void at depth. Shadow artifact.
8	ECR-A-649	B	2021-08-15	4:40	-62.2	ECR-A-649-B-SPI.jpg	16.6	Biological	16.3	17	0.7	6.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mud shavings. Polychaete and filled voids. Shadow artifact.
8	ECR-B-650	A	2021-08-15	3:44	-62.1	ECR-B-650-A-SPI.jpg	16.6	Biological	16.3	16.8	0.5	6.6	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	7	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments.Surface tubes and burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-650	B	2021-08-15	3:50	-62.1	ECR-B-650-B-SPI.jpg	16.7	Biological	14.9	17.9	3	6.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	none	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mud clumps and tubes. Polychaetes and filled voids at depth. Shadow artifact.
8	ECR-A-651	A	2021-08-15	1:38	-62.2	ECR-A-651-A-SPI.jpg	17.5	Biological	17.3	17.7	0.4	7.1	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaete, burrows, and voids at depth. Shadow artifact.
8	ECR-A-651	C	2021-08-15	1:53	-62.3	ECR-A-651-C-SPI.jpg	17.2	Biological	16.2	17.8	1.6	6.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	Yes	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, pits, and fecal pellets. Polychaetes and voids visible at depth. Shadow artifact.
8	ECR-B-652	A	2021-08-15	0:37	-61.9	ECR-B-652-A-SPI.jpg	16.4	Biological	16	16.6	0.6	5.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	1	0.75	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-652	B	2021-08-15	0:43	-61.9	ECR-B-652-B-SPI.jpg	15.8	Biological	15.1	16.4	1.3	3.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	1	0.55	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclast, and burrowing polychaete. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-653	A	2021-08-14	22:13	-61.3	ECR-A-653-A-SPI.jpg	16.1	Biological	15.6	16.5	0.9	6.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and burrows. Polychaete and void at depth.
8	ECR-A-653	C	2021-08-14	22:23	-61.3	ECR-A-653-C-SPI.jpg	16.6	Biological	16.3	16.9	0.6	5.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	5	0.45	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface mudclasts, tubes, and epifauna. Mud shaving dragdown. Polychaetes and filled voids at depth. Shadow artifact.
8	ECR-B-654	A	2021-08-14	21:14	-61.1	ECR-B-654-A-SPI.jpg	16.9	Biological	16.4	17.3	0.9	6.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and burrows. Polychaetes and void at depth. Shadow artifact.
8	ECR-B-654	C	2021-08-14	21:26	-61.2	ECR-B-654-C-SPI.jpg	16.6	Biological	16.3	17.2	0.9	6.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	7	0.33	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Voids at depth. Shadow artifact.
8	ECR-A-655	A	2021-08-14	19:33	-60.5	ECR-A-655-A-SPI.jpg	17.4	Biological	17	17.7	0.7	5.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	4	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and voids at depth. Shadow artifact.
8	ECR-A-655	C	2021-08-14	19:44	-60.5	ECR-A-655-C-SPI.jpg	17.4	Biological	16.8	17.8	1	7.8	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	3	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mud shaving artifacts. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-656	A	2021-08-14	17:34	-60	ECR-B-656-A-SPI.jpg	16.3	Biological	15.7	16.8	1.1	4.9	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	1	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaete and voids at depth. Shadow artifact.
8	ECR-B-656	C	2021-08-14	17:46	-60.4	ECR-B-656-C-SPI.jpg	16.3	Biological	15.6	16.9	1.3	4.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	0	No	8	0.38	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Voids at depth. Shadow artifact.
8	ECR-A-657	A	2021-08-14	16:02	-60.2	ECR-A-657-A-SPI.jpg	16.2	Biological	15.6	16.5	0.9	6.2	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes. Polychaetes and burrows at depth. Shadow artifact.
8	ECR-A-657	B	2021-08-14	16:07	-60.4	ECR-A-657-B-SPI.jpg	15.4	Biological	15.1	15.6	0.5	5.4	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	2	No	5	0.26	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Deep oxidized burrows. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-658	B	2021-08-14	15:11	-60.1	ECR-B-658-B-SPI.jpg	15.2	Biological	14.6	15.8	1.2	4.3	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	cluster(s) of rounded pellets	none	1	No	3	0.23	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	11	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes, mudclasts, and fecal pellets. Polychaetes and voids at depth. Shadow artifact.
8	ECR-B-658	C	2021-08-14	15:18	-60.1	ECR-B-658-C-SPI.jpg	14.7	Biological	14.4	15.4	1	3.5	>4 phi	>4 phi	3 to 2 phi	none	Stage I on III	loose biogenic aggregates	none	3	No	3	0.43	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sandy Mud	--	10	tan f.sand and tan/grey silt/clay with trace biogenic carbonate shell fragments. Surface tubes and mudclasts. Polychaetes and voids at depth. Shadow artifact.
8	ECR-C-1516	A	2021-08-21	3:20	-48.3	ECR-C-1516-A-SPI.jpg	4.3	Physical	3.1	5.9	2.8	4.3	0 to -1 phi	4 to 3 phi	-1 to -2 phi	none	Indet	loose biogenic aggregates	none	0	No	3	0.67	Oxidized	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	--	underpen. tan coarse sand and a cluster of grey silt. Surface mudclasts and hermit crab.
8	ECR-C-1516	F	2021-08-21	4:30	-48.3	ECR-C-1516-F-SPI.jpg	3.8	Physical	3.6	4	0.4	3.8	0 to -1 phi	3 to 2 phi	-1 to -2 phi	none	Stage II	none	none	0	No	--	--	--	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Sand	Very Coarse/Coarse Sand	9	underpen. tan coarse sand, Surface shells in the background.

ATTACHMENT G PV IMAGE ANALYSES RESULTS

Attachment G-1 - Segment 1 CMECS - Biotic Component

Total Number of Stations Sampled: 12

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	12	Attached Fauna	1	Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals		*Astrangiidae* Corals			--	
				Attached Anemones	1	Attached *Metridium*	1	0.1%	--	2
				Attached Hydroids		Attached *Sertularia*			--	
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates	1	Attached *Didemnidae*	1	40.0%	--	9
				Sessile Gastropods		Attached *Crepidula*			--	
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	11	Burrowing Anemones	1	*Cerianthus* Bed	1	0.1%	--	1
				Clam Bed	3	--	--	50.0%	--	266
				Mobile Crustaceans on Soft Sediments		*Pagurus* Bed			--	
				Tunicate Bed		Didemnidae Bed			--	
				Hydroid Bed	8	*Sertularia* Bed	8	50.0%	--	17
				Sessile Gastropod Bed	3	*Crepidula* Bed	3	50.0%	--	238
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna		*Ampelisca* Bed			--	--
						Chaetopterus Bed			--	
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments		*Ilyanassa* Bed			--	
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna		Tracks and Trails		Decapod Tracks		--	--	--
						Gastropod Trails		--	--	--
				Fecal Mounds		*Arenicola* Castings		--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 2 CMECS - Biotic Component

Total Number of Stations Sampled: 44

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	44	Attached Fauna	2	Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals		*Astrangiidae* Corals			--	
				Attached Anemones	1	Attached *Metridium*	1	8.0%	--	134
				Attached Hydroids	2	Attached *Sertularia*	2	10.0%	--	32
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates		Attached *Didemnidae*			--	
				Sessile Gastropods		Attached *Crepidula*			--	
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	37	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed	1	--	--	0.1%	--	1
				Mobile Crustaceans on Soft Sediments		*Pagurus* Bed			--	
				Tunicate Bed		Didemnidae Bed			--	
				Hydroid Bed	2	*Sertularia* Bed	2	25.0%	--	8
				Sessile Gastropod Bed		*Crepidula* Bed			--	
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna	3	*Ampelisca* Bed			--	--
						Chaetopterus Bed	3	0.1%	--	6
				Tunneling Megafauna	2	*Squilla* Bed	2	1.0%	--	3
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments	6	*Ilyanassa* Bed	6	20.0%	--	166
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	12	Tracks and Trails	2	Decapod Tracks	1	--	--	--
						Gastropod Trails	1	--	--	--
				Fecal Mounds	7	*Arenicola* Castings	7	--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 3 CMECS - Biotic Component

Total Number of Stations Sampled: 77

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	77	Attached Fauna	3	Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals	5	*Astrangiidae* Corals	5	25.0%	--	24
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids	2	Attached *Sertularia*	2	10.0%	--	9
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates		Attached *Didemnidae*			--	
				Sessile Gastropods	2	Attached *Crepidula*	2	25.0%	--	66
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	44	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed		--	--		--	
				Mobile Crustaceans on Soft Sediments	8	*Pagurus* Bed	8	1.0%	--	31
				Tunicate Bed		Didemnidae Bed			--	
				Hydroid Bed	7	*Sertularia* Bed	7	30.0%	--	46
				Sessile Gastropod Bed	2	*Crepidula* Bed	2	1.0%	--	12
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna	8	*Ampelisca* Bed			--	--
						Chaetopterus Bed	8	0.2%	--	10
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments	18	*Ilyanassa* Bed	18	1.0%	--	23
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	42	Tracks and Trails	13	Decapod Tracks	1	--	--	--
						Gastropod Trails	13	--	--	--
				Fecal Mounds	34	*Arenicola* Castings	34	--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 4 CMECS - Biotic Component

Total Number of Stations Sampled: 46

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	44	Attached Fauna	8	Attached Barnacles	3	*Balanus* Communities	3	1.0%	--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals	4	*Astrangiidae* Corals	4	10.0%	--	8*
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids	3	Attached *Sertularia*	3	10.0%	--	10
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates	4	Attached *Didemnidae*	4	5.0%	--	32
				Sessile Gastropods	4	Attached *Crepidula*	4	50.0%	--	110
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	42	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed		--	--		--	
				Mobile Crustaceans on Soft Sediments	9	*Pagurus* Bed	9	1.0%	--	25
				Tunicate Bed	4	Didemnidae Bed	4	5.0%	--	20
				Hydroid Bed	11	*Sertularia* Bed	11	40.0%	--	61
				Sessile Gastropod Bed	5	*Crepidula* Bed	5	40.0%	--	210
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna		*Ampelisca* Bed			--	--
						Chaetopterus Bed			--	
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments	1	*Ilyanassa* Bed	1	1.0%	--	7
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	0	Tracks and Trails		Decapod Tracks		--	--	--
						Gastropod Trails		--	--	--
				Fecal Mounds		*Arenicola* Castings		--	--	--
Aquatic Vegetation	3	Aquatic Vascular Vegetation	0	Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae	3	Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed	3	*Chondrus crispus*	2	--	1.0%	--
						Coccotylus truncatus	1	--	1.0%	--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note: * Number of coral colonies combined two stations with two colonies from soft sediment fauna stations
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 5 CMECS - Biotic Component

Total Number of Stations Sampled: 11

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	11	Attached Fauna	2	Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals	1	*Astrangiidae* Corals	1	2.0%	--	4
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids		Attached *Sertularia*			--	
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates	3	Attached *Didemnidae*	3	2.0%	--	45
				Sessile Gastropods	1	Attached *Crepidula*	1	5.0%	--	24
				Attached Sea Urchins	1	Attached *Arbacia punctulata*	1	1.0%	--	2
		Soft Sediment Fauna	7	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed		--	--		--	
				Mobile Crustaceans on Soft Sediments	6	*Pagurus* Bed	6	0.1%	--	12
				Tunicate Bed	3	Didemnidae Bed	3	15.0%	--	16
				Hydroid Bed	2	*Sertularia* Bed	2	30.0%	--	24
				Sessile Gastropod Bed	3	*Crepidula* Bed	3	5.0%	--	34
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna	2	*Ampelisca* Bed			--	--
						Chaetopterus Bed	2	0.1%	--	21
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments	3	*Ilyanassa* Bed	3	1.0%	--	9
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	1	Tracks and Trails		Decapod Tracks		--	--	--
						Gastropod Trails		--	--	--
				Fecal Mounds	1	*Arenicola* Castings	1	--	--	--
Aquatic Vegetation	4	Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae	4	Filamentous Algal Bed	1	*Rhizoclonium riparium*	1	--	1%	--
						Ceramium rubrum	1	--	1%	--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed	1	*Agardhiella subulata*	1	--	1%	--
						Grinella americana	1	--	1%	--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 6 CMECS - Biotic Component

Total Number of Stations Sampled: 26

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	26	Attached Fauna	5	Attached Barnacles	4	*Balanus* Communities	4	20.0%	--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals	2	*Astrangiidae* Corals	2	1.0%	--	5
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids		Attached *Sertularia*				
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates		Attached *Didemnidae*			--	
				Sessile Gastropods	4	Attached *Crepidula*	4	40.0%	--	407
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	20	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed		--	--		--	
				Mobile Crustaceans on Soft Sediments	15	*Pagurus* Bed	15	1.0%	--	30
				Tunicate Bed		Didemnidae Bed			--	
				Hydroid Bed	2	*Sertularia* Bed	2	20.0%	--	12
				Sessile Gastropod Bed	2	*Crepidula* Bed	2	2.0%	--	32
				Sand Dollar Bed		*Echinarachnius* Bed			--	
				Pennatulid Bed		--	--		--	
				Larger Tube-Building Fauna		*Ampelisca* Bed			--	--
						Chaetopterus Bed			--	
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments	5	*Ilyanassa* Bed	5	0.1%	--	13
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	7	Tracks and Trails	3	Decapod Tracks	1	--	--	--
						Gastropod Trails	2	--	--	--
				Fecal Mounds	3	*Arenicola* Castings	3	--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 7 CMECS - Biotic Component

Total Number of Stations Sampled: 25

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	25	Attached Fauna	3	Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals	1	*Astrangiidae* Corals	1	25.0%	--	17
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids	1	Attached *Sertularia*	1	1.0%	--	1
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates		Attached *Didemnidae*			--	
				Sessile Gastropods	3	Attached *Crepidula*	3	50.0%	--	251
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	18	Burrowing Anemones		*Cerianthus* Bed			--	
				Clam Bed		--	--		--	
				Mobile Crustaceans on Soft Sediments	9	*Pagurus* Bed	9	0.1%	--	12
				Tunicate Bed		Didemnidae Bed		10.0%	--	11
				Hydroid Bed		*Sertularia* Bed			--	
				Sessile Gastropod Bed	5	*Crepidula* Bed	5	80.0%	--	520
				Sand Dollar Bed	3	*Echinarachnius* Bed	3	10.0%	--	33
				Pennatulid Bed	2	--	--	0.1%	--	5
				Larger Tube-Building Fauna	1	*Ampelisca* Bed	1	25.0%	--	--
						Chaetopterus Bed			--	
				Tunneling Megafauna		*Squilla* Bed			--	
				Soft Sediment Brittle Stars		*Amphiura* Bed			--	--
				Mobile Mollusks on Soft Sediments		*Ilyanassa* Bed			--	
				Sea Star Bed		*Astropecten* Bed			--	
		Inferred Fauna	11	Tracks and Trails	11	Decapod Tracks	1	--	--	--
						Gastropod Trails	7	--	--	--
				Fecal Mounds	1	*Arenicola* Castings	1	--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

Attachment G-1 - Segment 8 CMECS - Biotic Component

Total Number of Stations Sampled: 93

Class		Subclass		Group		Community		Segment Composition		
Type	# Stations	Type	# Stations	Type	# Stations	Type	# Stations	Highest Percent Cover of Fauna	Highest Percent Cover of Flora	Total Number of Observed Individuals
Faunal bed	93	Attached Fauna		Attached Barnacles		*Balanus* Communities			--	--
				Attached Bryozoans		Attached *Celleporaria*			--	
				Attached Corals		*Astrangiidae* Corals			--	
				Attached Anemones		Attached *Metridium*			--	
				Attached Hydroids		Attached *Sertularia*			--	
				Attached Sponges		Attached *Cliona*			--	
				Attached Tunicates		Attached *Didemnidae*			--	
				Sessile Gastropods		Attached *Crepidula*			--	
				Attached Sea Urchins		Attached *Arbacia punctulata*			--	
		Soft Sediment Fauna	91	Burrowing Anemones	10	*Cerianthus* Bed	10	0.1%	--	17
				Feather duster worms	16	Sabellidae Bed	16	40.0%	--	266
				Mobile Crustaceans on Soft Sediments		*Pagurus* Bed			--	
				Tunicate Bed		Didemnidae Bed			--	
				Hydroid Bed	7	*Sertularia* Bed	7	0.1%	--	9
				Sessile Gastropod Bed	1	*Crepidula* Bed	1	0.1%	--	1
				Sand Dollar Bed	3	*Echinarachnius* Bed	3	20.0%	--	41
				Pennatulid Bed	6	--	--	0.1%	--	9
				Larger Tube-Building Fauna	56	*Ampelisca* Bed	56	60.0%	--	--
						Chaetopterus Bed			--	
				Scallop Bed	1	*Placopecten magellanicus* Bed	1	1.0%	--	1
				Soft Sediment Brittle Stars	21	*Amphiura* Bed	21	50.0%	--	--
				Mobile Mollusks on Soft Sediments		*Ilyanassa* Bed			--	
				Sea Star Bed	71	*Astropecten* Bed	71	10.0%	--	230
		Inferred Fauna	2	Tracks and Trails	2	Decapod Tracks	1	--	--	--
						Gastropod Trails	1	--	--	--
				Fecal Mounds		*Arenicola* Castings		--	--	--
Aquatic Vegetation		Aquatic Vascular Vegetation		Seagrass Bed		*Zostera marina*		--		--
		Benthic Macroalgae		Filamentous Algal Bed		*Rhizoclonium riparium*		--		--
						Ceramium rubrum		--		--
				Leathery/Leafy Algal Bed		*Chondrus crispus*		--		--
						Coccotylus truncatus		--		--
				Sheet Algal Bed		*Agardhiella subulata*		--		--
						Grinella americana		--		--
						Ulva Lactuca		--		--

Note:
Two image replicates were analyzed at each station. Stations with a 0.5 value indicate that each image replicate had a different classification within the same station (e.g., 1 clam bed and 1 Sea star bed).
Percent cover of fauna and flora are provided as the highest percent noted at any replicate location
Total number of individuals observed is the sum of all individuals counted in a segment.

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
1 Alt	ECR-B-1157	B	ECR-B-1157-B-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	hydroid	None	hydroid	soft sediment fauna	Hydroids	1	0	0	No	0	hydroid	0	0	0	Gravelly sand with hydroid attached to gravel or shell fragments
1 Alt	ECR-B-1157	C	ECR-B-1157-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	Yes	No	hydroid	None	hydroid	soft sediment fauna	Hydroids	1	0	0	No	0	hydroid	0	0	0	Gravelly sand with hydroid attached to gravel or shell fragments
1 Alt	ECR-B-1156	A	ECR-B-1156-A-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	Yes	hyfroid	None	8 gastropod (Ilyanassa obsoleta)	Soft Sediment Fauna	Ilyanassa Bed	0	0	0	No	0	0	8 gastropod (Ilyanassa obsoleta)	0	0	Muddy sand with gastropod (8 Ilyanassa obsoleta) with high Lebensspueren
1 Alt	ECR-B-1156	C	ECR-B-1156-C-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	Yes	hyfroid	None	6 gastropod (Ilyanassa obsoleta)	Soft Sediment Fauna	Ilyanassa Bed	0	0	0	No	0	0	6 gastropod (Ilyanassa obsoleta)	0	0	Muddy sand with gastropod (6 Ilyanassa obsoleta) with high Lebensspueren, image out of focus
1 Alt	ECR-B-1155	A	ECR-B-1155-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	hydroid	None	polychaete tubes, hydroid	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes,	hydroid	0	0	0	Image is slightly blurred, fecal strands, shell fragments,hydroid
1 Alt	ECR-B-1155	C	ECR-B-1155-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	hyfroid	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes,	0	0	0	0	Image out of focus, polychaete tubes present, shell fragments
1 Alt	ECR-B-1154	B	ECR-B-1154-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hyfroid	None	None	Soft Sediment Fauna	None	0	0	0	No	0	0	0	0	0	Muddy sand with ripples, shell fragments
1 Alt	ECR-B-1154	C	ECR-B-1154-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hydroid	None	hydroid	Soft sediment fauna	Hydroids	5	0	0	No	0	hydroid	0	0	0	Muddy sand with ripples, shell fragments,hydroid
1 Alt	ECR-B-1153	A	ECR-B-1153-A-PV.jpg	Gravel Mixes	Sandy Gravel	Coarse sand/Pebbles	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravel mixes with coarse sand, gravel and shell hash
1 Alt	ECR-B-1153	C	ECR-B-1153-C-PV.jpg	Gravel Mixes	Sandy Gravel	Coarse sand/Pebbles	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravel mixes with coarse sand, gravel and shell hash, blurred image
1 Alt	ECR-B-1152	A	ECR-B-1152-A-PV.jpg	Gravel Mixes	Muddy Sandy Gravel	Fine muddy sand with boulder	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with cobble, clay casts and shell fragment,
1 Alt	ECR-B-1152	B	ECR-B-1152-B-PV.jpg	Gravel Mixes	Muddy Sandy Gravel	Coarse sand/Shell hash	None	Physical	No	No	No	No	None	3 Ascidiacea	3 Ascidiacea	Attached fauna	Ascidiacea	15	0	0	No	0	3 Ascidiacea	0	0	0	Gravelly sand with cobble and shell fragment, Ascidiacea attached to cobble and decaying wooden tree branches
1 Alt	ECR-B-1151	A	ECR-B-1151-A-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with shell hash, blue mussels shells
1 Alt	ECR-B-1151	B	ECR-B-1151-B-PV.jpg	Gravel Mixes	Sandy Gravel	Cobble, Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with cobble and shell hash, blue mussels shells
1 Alt	ECR-B-1150	A	ECR-B-1150-A-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with shell hash, clam shells
1 Alt	ECR-B-1150	C	ECR-B-1150-C-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with shell hash, clam shells and cobbles
1	ECR-B-101	A	ECR-B-101-A-PV.jpg	Gravelly	Gravelly Muddy Sand	Fine muddy sand with boulder	None	Physical	No	Yes	Yes	Yes	None	1 Ascidiacea	1 Ascidiacea	Attached fauna	Ascidiacea	25	0	0	No	0	1 Ascidiacea	0	0	0	Poor image quality due to suspended particles, probably human made metal spoon near boulder, 1 Ascidiacea openings near boulder, shell fragments, possibly red oak leaf
1	ECR-B-101	C	ECR-B-101-C-PV.jpg	Gravel Mixes	Muddy Gravel	Muddy cobble with boulder	None	Physical	No	No	No	No	hydroid	5 Ascidiacea	5 Ascidiacea, hydroid	Attached fauna	Ascidiacea	40	0	0	No	0	5 Ascidiacea , hydroid	0	0	0	Muddy cobble with boulder, shell fragments, terrestrial oak or maple leaf, 5 Ascidiacea , hydroid
1	ECR-B-1158	A	ECR-B-1158-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandybottom with coarse sand and shell fragments accumulaying in sand ripple troughs
1	ECR-B-1158	B	ECR-B-1158-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandybottom with coarse sand and shell fragments accumulaying in sand ripple troughs
1	ECR-B-102	B	ECR-B-102-B-PV.jpg	Gravel Mixes	Sandy Gravel	Medium sand, gravel, shell hash and cobble	Ripples	Physical	Yes	No	Yes	No	Bivalves, hydroid	None	4 bivalves, 1 hydroid	Soft sediment fauna	Bivalves	1	1	0	No	4 bivalves	hydroid	0	0	0	cobble with shell hash and muddy sand with 4 bivalve siphons
1	ECR-B-102	C	ECR-B-102-C-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	hydroid	None	hydroid	Soft sediment fauna	Hydroids	1	0	0	No	0	hydroid	0	0	0	gravelly sand with shell hash, onehydroid
1	ECR-A-103	B	ECR-A-103-B-PV.jpg	Gravelly	Gravelly Muddy Sand	Gravel, Shell hash, Live clams	None	Biological	No	Yes	No	Yes	Bivalves, hydroid	None	100 bivalves, hydroid	Soft sediment fauna	Bivalves	50	0	0	No	100 bivalves	hydroid	0	0	0	100 bivalves interspersed with organic debris and shell hash, hydroid on shell
1	ECR-A-103	C	ECR-A-103-C-PV.jpg	Gravelly	Gravelly Muddy Sand	Gravel, Shell hash, Live clams	None	Biological	No	Yes	No	Yes	Bivalves	3 Ascidiacea	112 bivalves, 3 Ascidiacea	Soft sediment fauna	Bivalves	50	0	0	No	112 bivalves	3 Ascidiacea	0	0	0	112 bivalves interspersed with organic debris and shell hash, 3 Ascidiacea
1	ECR-B-104	A	ECR-B-104-A-PV.jpg	Gravels	Pebble/Granule	Pebble/Granule interspersed with live clams	None	Biological	No	No	No	No	Bivalves, hydroid	None	36 bivalves, hydroid, 2 anemone	soft sediment fauna	Bivalves	5	0,1	0	No	36 bivalves	2 anemone	0	0	0	36 bivalves interspersed with organic debris, gravel and shell hash, anemone top middle image
1	ECR-B-104	C	ECR-B-104-C-PV.jpg	Gravels	Pebble/Granule	Pebble/Granule interspersed with live clams	None	Biological	No	No	No	No	Bivalves	None	14 bivalves	Soft sediment fauna	Bivalves	1	0	0	No	14 bivalves	0	0	0	0	14 bivalves interspersed with oranic debris and shell hash
1	ECR-A-105	A	ECR-A-105-A-PV.jpg	Gravelly	Gravelly Sand	Gravel, Shell hash, Live clams	None	Biological	No	No	No	No	Bivalves	None	1 crab (Cancer sp.), 4 clam	Soft sediment fauna	Bivalves	1	0	0	No	4 clam	0	1 crab (Cancer sp.)	0	0	Gavelly sand interspersed with clams and shell hash, Cancer sp.
1	ECR-A-105	C	ECR-A-105-C-PV.jpg	Gravelly	Gravelly Sand	Gravel, Shell hash, Live clams	None	Biological	No	No	No	No	Bivalves	None	4 clam	Soft sediment fauna	Bivalves	1	0	0	No	4 clam	0	0	0	0	Gavelly sand interspersed with clams and shell hash
1	ECR-B-106	A	ECR-B-106-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	hydroid	None	1 hydroid	Soft sediment fauna	Hydroids	1	0	0	No	0	1 hydroid	0	0	0	Shell fragments
1	ECR-B-106	B	ECR-B-106-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hydroid	None	2 isopods, hydroid (multiple)	Soft sediment fauna	Hydroids	50	0	0	No	0	hydroid (multiple)	2 isopods	0	0	Large hydroids with terrestrial plant debris, mussel shells, 2 isopods, fecal strands
1	ECR-A-107	C	ECR-A-107-C-PV.jpg	Gravelly	Gravelly Sand	Gravel and shell hash	Ripples	Physical	Yes	No	No	No	Ceriantharia, hydroid	None	1 Ceriantharia, hydroid	Soft sediment fauna	Burrowing Anemones	0	0,1	0	No	1 Ceriantharia	hydroid	0	0	0	Fine muddy sand with gravel and shell hash, 1 Ceriantharia and hydroid, Image out of focus,
1	ECR-A-107	D	ECR-A-107-D-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	None	None	5 Crepidula fornicata, 1 shrimp	Soft sediment fauna	Crepidula fornicata	20	0	0	No	0	5 Crepidula fornicata	1 shrimp	0	0	cobble, gravel with Crepidula shell hash
1	ECR-B-108	A	ECR-B-108-A-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	hydroid	None	hydroid, 48 Crepidula fornicata	soft sediment fauna	Crepidula fornicata	50	7	0	No	0	hydroid, 48 Crepidula fornicata	0	0	0	Crepidula fornicata reef bed with muddy sand and a hydroid, silty layer over Crepidula reef
1	ECR-B-108	B	ECR-B-108-B-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	hydroid	None	17 hydroid, 112 Crepidula fornicata, 1 spider crab	soft sediment fauna	Crepidula fornicata	50	15	0	No	0	17 hydroid, 112 Crepidula fornicata	1 spider crab	0	0	Crepidula fornicata reef bed with muddy sand and 17 hydroid, silty layer over Crepidula reef
1	ECR-A-109	A	ECR-A-109-A-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	yes	No	None	None	45 Crepidula fornicata, 1 Paguroidea	soft sediment fauna	Crepidula fornicata	20	0	0	No	0	45 Crepidula fornicata	1 Paguroidea	0	0	Crepidula fornicata reef bed with muddy sand, silty layer over Crepidula reef
1	ECR-A-109	B	ECR-A-109-B-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	None	None	28 Crepidula fornicata	soft sediment fauna	Crepidula fornicata	25	0	0	No	0	28 Crepidula fornicata	0	0	0	Crepidula fornicata reef bed with muddy sandsilty layer over Crepidula reef, all Crepidula shells are dead
1	ECR-B-110	A	ECR-B-110-A-DC.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren sandy bottom, shell fragments, still image from drop video camera, poor image quality due to suspended particles
1	ECR-B-110	B	ECR-B-110-B-DC.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren sandy bottom, shell fragments, still image from drop video camera, poor image quality due to suspended particles
1	ECR-A-111	A	ECR-A-111-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	No	Yes	hydroid	None	hydroid	Soft sediment fauna	Hydroids	30	0	0	No	0	hydroid	0	0	0	Muddy sandy bottom with interspersed hydroid and shell fragments
1	ECR-A-111	B	ECR-A-111-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	No	Yes	hydroid	None	hydroid	Soft sediment fauna	Hydroids	10	0	0	No	0	hydroid	0	0	0	Muddy sandy bottom with interspersed hydroid and shell fragments
2	ECR-B-112	A	ECR-B-112-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	Yes	Yes	None	None	1 Chaetopterus tube	Soft sediment fauna	Chaetopterus	0.1	1	0	No	1 Chaetopterus tube	0	0	0	0	Muddy sandy bottom with 1 Chaetopterus parchment polychaete tubes worm tube
2	ECR-B-112	C	ECR-B-112-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hydroid	None	2 hydroid, 2 Paguroidea	Soft sediment fauna	Hydroids	7	0	0	No	0	2 hydroid	2 Paguroidea	0	0	Muddy sandy bottom with hydroid and shell hash
2	ECR-A-113	D	ECR-A-113-D-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	Yes	None	None	1 blue crab	Soft sediment fauna	None	1	0	0	No	0	0	1 blue crab	0	0	Muddy sandy bottom with shell hash, one cobble
2	ECR-A-113	F	ECR-A-113-F-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	No	Bivalves, hydroid	None	1 clam, 3 hydroid	Soft sediment fauna	Hydroids	10	0	0	No	1 clam	3 hydroid	0	0	0	Muddy sandy bottom with hydroid and shell hash
2	ECR-B-114	B	ECR-B-114-B-DC.jpg	Muddy Sand			None	Biological	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren muddy sandy bottom, shell fragments, still image from drop video camera, poor image quality due to suspended particles
2	ECR-B-114	C	ECR-B-114-C-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren muddy sandy bottom, shell fragments, poor image quality due to suspended particles

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
2	ECR-A-115	D	ECR-A-115-D-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	yes	hydroid	None	polychaete tubes, 3 hydroid	Soft sediment fauna	Hydroids	25	0	0	No	polychaete tubes	3 hydroid	0	0	0	Muddy sandy bottom, hydroid, polychaete tubes, poor image quality due to suspended particles
2	ECR-A-115	F	ECR-A-115-F-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren muddy sandy bottom, poor image quality due to suspended particles
2	ECR-B-116	A	ECR-B-116-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-B-116	B	ECR-B-116-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	5	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-A-117	A	ECR-A-117-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, poor image quality due to suspended particles
2	ECR-A-117	B	ECR-A-117-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, poor image quality due to suspended particles
2	ECR-B-118	B	ECR-B-118-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-B-118	C	ECR-B-118-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-A-119	B	ECR-A-119-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-A-119	C	ECR-A-119-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	30	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-B-120	B	ECR-B-120-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	25	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-B-120	C	ECR-B-120-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	20	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-A-121	A	ECR-A-121-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	20	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes
2	ECR-A-121	B	ECR-A-121-B-DC.jpg	Muddy Sand			None	Biological	Yes	IND	Yes	Yes	None	None	120 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	20	0	No	0	0	120 gastropod (Ilyanassa)	0	0	Poor visibility due to high contrast still image from drop video camera, muddys sand ripples with gastropod
2	ECR-B-122	B	ECR-B-122-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom with shell fragments.polychaete tubes
2	ECR-B-122	C	ECR-B-122-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom with shell fragments.polychaete tubes
2	ECR-A-123	B	ECR-A-123-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes, burrow
2	ECR-A-123	D	ECR-A-123-D-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, polychaete tubes, burrow
2	ECR-B-124	B	ECR-B-124-B-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren muddy sandy bottom, poor image quality due to suspended particles
2	ECR-B-124	C	ECR-B-124-C-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	Yes	None	None	1 Squilla	Soft sediment fauna	Squilla	0	1	0	No	0	0	1 Squilla	0	0	Muddy sandy bottom with Squilla burrow, poor image quality due to suspended particles
2	ECR-A-125	A	ECR-A-125-A-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell fragments
2	ECR-A-125	C	ECR-A-125-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	1 Squilla	Soft sediment fauna	Squilla	0	0	0	No	0	0	1 Squilla	0	0	Muddy sandy bottom with Squilla present in burrow, poor image quality due to suspended particles
2	ECR-B-126	A	ECR-B-126-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom with shell fragments
2	ECR-B-126	B	ECR-B-126-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell fragments, poor image quality due to suspended particles
2	ECR-A-127	A	ECR-A-127-A-DC.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, area highly bioturbated with burrows and feeding depressions, poor image quality due to suspended particles
2	ECR-A-127	C	ECR-A-127-C-DC.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell hash, area highly bioturbated with burrows and feeding depressions, poor image quality due to suspended particles
2	ECR-B-128	A	ECR-B-128-A-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	1 fish	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 fish	Muddy sandy bottom with shell hash, poor image quality due to suspended particles
2	ECR-B-128	B	ECR-B-128-B-DC.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, poor image quality due to suspended particles
2	ECR-A-129	A	ECR-A-129-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell hash, poor image quality due to suspended particles
2	ECR-A-129	B	ECR-A-129-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube	Soft sediment fauna	Chaetopterus	0.1	0	0	No	1 Chaetopterus tube	0	0	0	0	Muddy sandy bottom with shell hash, Squilla burrow, 1 Chaetopterus parchment polychaete tubes worm tube, poor image quality due to suspended particles
2	ECR-B-130	B	ECR-B-130-B-DC.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes, 25 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	25 gastropod (Ilyanassa)	0	0	Muddy sandy bottom with gastropod (Ilyanassa), area highly bioturbated with gastropod tracks and feeding depressions
2	ECR-B-130	C	ECR-B-130-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	2 Chaetopterus tubes	Soft sediment fauna	Chaetopterus	0.1	0	0	No	2 Chaetopterus tubes	0	0	0	0	Muddy sandy bottom, 2 Chaetopterus tubes, Squilla burrow, feeding depressions
2	ECR-A-131	A	ECR-A-131-A-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	2 gastropod (Ilyanassa)	soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	2 gastropod (Ilyanassa)	0	0	Muddy sandy bottom with shell hash, poor image quality due to suspended particles
2	ECR-A-131	B	ECR-A-131-B-PV.jpg	Muddy Sand			None	Biological	Yes	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell hash, poor image quality due to suspended particles
2	ECR-B-132	B	ECR-B-132-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell hash, feeding depressions, poor image quality due to suspended particles
2	ECR-B-132	C	ECR-B-132-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with shell hash, feeding depressions, poor image quality due to suspended particles
2	ECR-A-133	A	ECR-A-133-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	3 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	3 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, poor image quality due to suspended particles
2	ECR-A-133	C	ECR-A-133-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	1 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, poor image quality due to suspended particles
2	ECR-B-134	A	ECR-B-134-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	3 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	5	0	No	0	0	3 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, feeding depressions, Squilla burrow
2	ECR-B-134	B	ECR-B-134-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	2 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	3	0	No	0	0	2 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks
2	ECR-A-135	A	ECR-A-135-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Inferred fauna	None	0	25	0	No	0	0	0	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, feeding depressions, Squilla burrow, fecal cast mounds
2	ECR-A-135	B	ECR-A-135-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	1 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, feeding depressions, Squilla burrow
2	ECR-B-136	A	ECR-B-136-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	3 gastropod (Ilyanassa)	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	3 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod tracks, fecal cast mounds
2	ECR-B-136	C	ECR-B-136-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes, 2 gastropod (Ilyanassa)	Inferred fauna	Tracks and trails	0	0	0	No	polychaete tubes	0	2 gastropod (Ilyanassa)	0	0	Muddy sandy bottom, high Lebenspurren of gastropod and crab tracks, feeding depressions, Squilla burrow, fecal cast mounds
2	ECR-A-137	B	ECR-A-137-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depressions, burrow
2	ECR-A-137	E	ECR-A-137-E-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depressions, burrows, shell fragments

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
2	ECR-B-138	A	ECR-B-138-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depressions, Squilla burrow, polychaete tubes, shell fragments
2	ECR-B-138	E	ECR-B-138-E-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depressions, clayish-like debris on bottom surface
2	ECR-A-139	A	ECR-A-139-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal casts
2	ECR-A-139	B	ECR-A-139-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal casts
2	ECR-B-140	B	ECR-B-140-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal casts, crab tracks
2	ECR-B-140	C	ECR-B-140-C-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, Squilla burrow, polychaete tubes, shell fragments
2	ECR-A-141	A	ECR-A-141-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, Squilla burrow, burrow, shell fragments
2	ECR-A-141	B	ECR-A-141-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal casts shell fragments
2	ECR-B-142	A	ECR-B-142-A-PV.jpg	Gravelly	Gravelly Sand	Gravel and shell hash	None	Biological	IND	IND	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell hash, poor image quality due to suspended particles
2	ECR-B-142	B	ECR-B-142-B-DC.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube	Soft sediment fauna	Chaetopterus	0.1	0.1	0	No	1 Chaetopterus tube	0	0	0	0	Muddy sandy bottom, burrows, 1 Chaetopterus worm
2	ECR-A-143	A	ECR-A-143-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, shell fragments
2	ECR-A-143	B	ECR-A-143-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, Cerianthiaria burrows, shell fragments, gastropod tracks
2	ECR-B-144	A	ECR-B-144-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrows, fecal casts shell fragments
2	ECR-B-144	B	ECR-B-144-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrows, fecal casts shell fragments
2	ECR-A-145	B	ECR-A-145-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, fecal casts
2	ECR-A-145	C	ECR-A-145-C-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	8 polychaete tubes, 1 Cerianthiaria	Soft sediment fauna	None	0	0	0	No	8 polychaete tubes, 1 Cerianthiaria	0	0	0	0	Muddy sandy bottom, Cerianthiaria, shell fragments, exposed polychaete tubes in feeding depression
2	ECR-B-146	A	ECR-B-146-A-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	1 gastropod, 1 Northern Triglidae	Inferred fauna	Fecal mounds	0	0	0	No	0	0	1 gastropod	0	1 Northern Triglidae,	Muddy sandy bottom, shell fragments, fecal casts
2	ECR-B-146	B	ECR-B-146-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, fecal casts
2	ECR-A-147	A	ECR-A-147-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes, 2 gastropod	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	2 gastropod	0	0	Muddy sandy bottom, shell fragments, fecal casts heavily bioturbated by gastropod
2	ECR-A-147	B	ECR-A-147-B-PV.jpg	Muddy Sand			None	Biological	Yes	No	Yes	Yes	None	None	polychaete tubes, 1 gastropod	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	1 gastropod	0	0	Muddy sandy bottom, shell fragments, fecal casts heavily bioturbated by gastropod
2	ECR-B-148	A	ECR-B-148-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	5	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, Squilla burrow,burrow, fecal casts gastropod tracks
2	ECR-B-148	B	ECR-B-148-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes, 5 gastropod	Inferred fauna	Fecal mounds	0	3	0	No	polychaete tubes	0	5 gastropod	0	0	Muddy sandy bottom, shell fragments, polychaete tubes worm tube, heavily bioturbated by gastropod, fecal casts
2	ECR-A-149	A	ECR-A-149-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, polychaete tubes, gastropod tracks, Squilla burrow
2	ECR-A-149	B	ECR-A-149-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube, polychaete tubes	Soft sediment fauna	Chaetopterus	0.1	0.1	0	No	1 Chaetopterus tube, polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, 1 Chaetopterus tubes worm tube,polychaete tubes,gastropod tracks
2	ECR-B-150	A	ECR-B-150-A-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, polychaete tubes, Squilla burrow
2	ECR-B-150	B	ECR-B-150-B-PV.jpg	Muddy Sand			None	Biological	Yes	Yes	No	Yes	None	None	2 gastropod, 1 Squilla	Soft sediment fauna	Squilla	0	0	0	No	0	0	2 gastropod, 1 Squilla	0	0	Muddy sandy bottom, shell fragments, polychaete tubes, gastropod tracks, Squilla burrows
2	ECR-A-151	A	ECR-A-151-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes, 5 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	5 gastropod	0	0	Muddy sandy bottom, shell fragments, polychaete tubes, gastropod tracks, Squilla burrows
2	ECR-A-151	B	ECR-A-151-B-PV.jpg	Muddy Sand			None	Biological	No	No	Yes	Yes	None	None	polychaete tubes, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	1 gastropod	0	0	Muddy sandy bottom, shell fragments, polychaete tubes, gastropod tracks
2	ECR-B-152	A	ECR-B-152-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes, 2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	2 gastropod	0	0	Muddy sandy bottom, gastropod tracks, shell fragments, polychaete tubes tube bottom image,polychaete tubes tuves over mound center of image
2	ECR-B-152	B	ECR-B-152-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, fecal casts gastropod tracks
2	ECR-A-153	A	ECR-A-153-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell hash largely from razor clam shells, ripples evident in sediment
2	ECR-A-153	C	ECR-A-153-C-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell hash largely from razor clam shells, ripples evident in sediment
2	ECR-B-154	A	ECR-B-154-A-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	hydroid	None	134 anemone, 12 hydroid	Attached fauna	Hydroids	8	0	0	No	0	134 anemone, 12 hydroid	0	0	0	Sandy gravel with Crepidula and bivalve shell hash, 134 small anemones and 12 hydroid
2	ECR-B-154	B	ECR-B-154-B-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	Yes	hydroid	None	7 hydroid	Attached fauna	Hydroids	1	1	0	No	0	7 hydroid	0	0	0	Crepidula and bivalve shell hash, 7hydroid attached to shells
2	ECR-A-155	D	ECR-A-155-D-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	Yes	hydroid	None	2 hydroid, 1 fish	Attached fauna	Hydroids	0.1	0	0	No	0	2 hydroid	0	0	1 fish	Gravelly sand with shell hash and2 hydroid, fish, fecal casts
2	ECR-A-155	F	ECR-A-155-F-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	hydroid	None	11 hydroid	Attached fauna	Hydroids	10	0	0	No	0	11 hydroid	0	0	0	Gravelly sand with subrounded pebbles and shell hash, fish, fecal casts, 11 hydroid
2 Alt	ECR-A-1130	A	ECR-A-1130-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	None	Soft sediment fauna	None	0	3	0	No	0	0	0	0	0	Muddy sandy bottom with two Squilla burrows, shell fragments
2 Alt	ECR-A-1130	B	ECR-A-1130-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, gastropod tracks with mucous, fecal casts
2 Alt	ECR-B-1131	G	ECR-B-1131-G-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, fecal casts
2 Alt	ECR-B-1131	I	ECR-B-1131-I-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, poor image quality due to suspended particles
2 Alt	ECR-A-1132	A	ECR-A-1132-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, low Lebenspurren, fecal casts
2 Alt	ECR-A-1132	B	ECR-A-1132-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, low Lebenspurren, fecal casts poor visibility
2 Alt	ECR-B-1133	A	ECR-B-1133-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal casts
2 Alt	ECR-B-1133	B	ECR-B-1133-B-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	Yes	None	None	polychaete tubes, 1 moon snail	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	1 moon snail	0	0	Muddy sandy bottom, moon snail with mucous track, polychaete tubes fecal casts
2 Alt	ECR-A-1134	B	ECR-A-1134-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, polychaete tubes fecal casts, Squilla burrow,gastropod tracks
2 Alt	ECR-A-1134	C	ECR-A-1134-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, fecal casts Paguroidea track, Squilla burrow
2 Alt	ECR-B-1135	A	ECR-B-1135-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, Yoldia shell, polychaete tubes and fecal casts

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
2 Alt	ECR-B-1135	B	ECR-B-1135-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, polychaete tubes fecal casts, snail with tracks
2 Alt	ECR-A-1136	A	ECR-A-1136-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, gastropod track
2 Alt	ECR-A-1136	B	ECR-A-1136-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shell fragments, fecal casts nurrows, 40% surface disturbed
2 Alt	ECR-B-1137	A	ECR-B-1137-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, low Lebenspurren
2 Alt	ECR-B-1137	D	ECR-B-1137-D-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments, low Lebenspurren
2 Alt	ECR-A-1138	A	ECR-A-1138-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 Chaetopterus tubes, 1 gastropod	Inferred fauna	Tracks and trails	0	0	0	No	2 Chaetopterus tubes	0	1 gastropod	0	0	Muddy sandy bottom, shell fragments, low Lebenspurren
2 Alt	ECR-A-1138	B	ECR-A-1138-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 Chaetopterus tubes	Inferred fauna	Tracks and trails	0	0	0	No	2 Chaetopterus tubes	0	0	0	0	Muddy sandy bottom, shell fragments, low Lebenspurren
3	ECR-C-1101	B	ECR-C-1101-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	10	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom with covered with polychaete tubes fecal casts and a polychaete tubes, shell fragments
3	ECR-C-1101	C	ECR-C-1101-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	25	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom with covered with polychaete tubes fecal casts and polychaete tubes, shell fragments, gastropod track with mucuous
3	ECR-C-1215	B	ECR-C-1215-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	50	0	No	polychaete tubes	0	0	0	0	Large concentration of polychaete tubes (50% area), fecal strand mound (Arenicola?),burrows
3	ECR-C-1215	C	ECR-C-1215-C-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Large concentration of polychaete tubes (50% area),burrows,mud clasts scattered on surface
3	ECR-B-201	A	ECR-B-201-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	IND	Yes	None	None	2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	2 gastropod	0	0	Muddy sandy bottom, gastropod tracks
3	ECR-B-201	B	ECR-B-201-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	2 gastropod	0	0	Muddy sandy bottom, gastropod tracks
3	ECR-A-202	A	ECR-A-202-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, burrows,tubes, shell fragments
3	ECR-A-202	C	ECR-A-202-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, burrows,tubes, shell fragments
3	ECR-B-203	B	ECR-B-203-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrows, polychaete tubes, shell fragments
3	ECR-B-203	C	ECR-B-203-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, medium burrows, polychaete tubes, shell fragments
3	ECR-A-204	B	ECR-A-204-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	IND	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, gastropod tracks, burrows, shell fragments, image out of focus
3	ECR-A-204	C	ECR-A-204-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	30	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, polychaete tubes, burrows, shell fragments
3	ECR-B-205	B	ECR-B-205-B-PV.jpg	Muddy Sand			None	Biological	No	No	Yes	Yes	None	None	1 Chaetopterus tube,1 gastropod	Soft sediment fauna	Chaetopterus	0.1	0	0	No	1 Chaetopterus tube	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, 1 Chaetopterus tube, image out of focus
3	ECR-B-205	C	ECR-B-205-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, image out of focus
3	ECR-A-206	B	ECR-A-206-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	No	None	None	polychaete tubes	Soft sediment fauna	None	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrow and polychaete tubes
3	ECR-A-206	C	ECR-A-206-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	No	None	None	2 Chaetopterus tubes	Soft sediment fauna	Chaetopterus	0.1	1	0	No	2 Chaetopterus tubes	0	0	0	0	Muddy sandy bottom, 2 Chaetopterus tube, image out of focus
3	ECR-B-207	B	ECR-B-207-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, gastropod tracks, polychaete tubes,burrow, poor image quality due to suspended particles
3	ECR-B-207	C	ECR-B-207-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, polychaete tubes,burrow, poor image quality due to suspended particles
3	ECR-A-208	B	ECR-A-208-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes, 1 fish	Soft sediment fauna	None	0	IND	0	IND	polychaete tubes	0	0	0	1 fish	Image partially obscured by turbidity caused by fish, polychaete tubes
3	ECR-A-208	C	ECR-A-208-C-PV.jpg	Muddy Sand			IND	Physical	No	IND	IND	IND	None	None	1 fish	Soft sediment fauna	None	IND	IND	IND	IND	0	0	0	0	1 fish	Image partially obscured by turbidity caused by fish
3	ECR-B-209	A	ECR-B-209-A-DC.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes, 2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	polychaete tubes	0	2 gastropod	0	0	Muddy sandy bottom, burrows and polychaete tubes, gastropod tracks
3	ECR-B-209	B	ECR-B-209-B-DC.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, Squilla burrows and polychaete tubes
3	ECR-A-210	B	ECR-A-210-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	IND	IND	None	None	3 gastropod	Soft sediment fauna	Ilyanassa Bed	0	IND	0	No	0	0	3 gastropod	0	0	Muddy sandy bottom, polychaete tubes, gastropod tracks
3	ECR-A-210	C	ECR-A-210-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	IND	IND	None	None	None	Inferred fauna	Tracks and trails	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, burrows and polychaete tubes, gastropod tracks
3	ECR-B-211	A	ECR-B-211-A-PV.jpg	Muddy Sand			IND	IND	No	Yes	IND	Yes	None	None	1 fish	Inferred fauna	Tracks and trails	IND	IND	IND	IND	0	0	0	0	1 fish	Muddy sandy bottom, burrows and gastropod tracks
3	ECR-B-211	B	ECR-B-211-B-PV.jpg	Muddy Sand			None	physical	No	Yes	IND	Yes	None	None	None	Inferred fauna	Tracks and trails	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, Squilla burrows and gastropod tracks
3	ECR-A-212	D	ECR-A-212-D-PV.jpg	Muddy Sand			None	Biological	No	No	Yes	Yes	None	None	polychaete tubes, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	IND	0	No	polychaete tubes	0	1 gastropod	0	0	Muddy sandy bottom, gastropod tracks, image slightly out of focus
3	ECR-A-212	E	ECR-A-212-E-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	50	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrows and gastropod and crab tracks, image slightly out of focus
3	ECR-B-213	A	ECR-B-213-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	IND	IND	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, Squilla burrow and er burrows, image slightly out of focus
3	ECR-B-213	F	ECR-B-213-F-PV.jpg	Muddy Sand			None	Physical	No	Yes	IND	IND	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, image out of focus
3	ECR-A-214	A	ECR-A-214-A-PV.jpg	Muddy Sand			None	Biological	No	No	IND	yes	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks, pimage partially ocluded by air buble on lens
3	ECR-A-214	B	ECR-A-214-B-PV.jpg	Muddy Sand			None	Biological	No	No	IND	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	IND	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks, fecals strands, pimage partially ocluded by air buble on lens
3	ECR-B-215	A	ECR-B-215-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	IND	Yes	None	None	3 gastropod	Inferred fauna	Tracks and trails	0	IND	0	No	0	0	3 gastropod	0	0	Muddy sandy bottom, Squilla burrow, gastropod tracks
3	ECR-B-215	B	ECR-B-215-B-PV.jpg	Muddy Sand			None	Biological	No	Yes	IND	Yes	None	None	2 gastropod	Inferred fauna	Tracks and trails	0	IND	0	No	0	0	2 gastropod	0	0	Muddy sandy bottom, burrow, gastropod tracks
3	ECR-A-216	A	ECR-A-216-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, shellow burrows/depressions,tubes, Paguroidea track
3	ECR-A-216	C	ECR-A-216-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	1	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, burrow, tracks of gastropod
3	ECR-B-217	A	ECR-B-217-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 gastropod	Inferred fauna	Fecal mounds	0	1	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, fecal cast strands, burrow
3	ECR-B-217	B	ECR-B-217-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, fecal cast strands, crescent-shaped indentations on sediment surface
3	ECR-A-218	A	ECR-A-218-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, tubes, fecal casts gastropod track
3	ECR-A-218	C	ECR-A-218-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, tubes, fecal casts

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
3	ECR-B-219	A	ECR-B-219-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, tubes, gastropod tracks, other tracks in sediment
3	ECR-B-219	B	ECR-B-219-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, burrows,tubes, gastropod at end of gastropod track, other depressions in sediment
3	ECR-A-220	A	ECR-A-220-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	3	0	No	0	0	0	0	0	Muddy sandy bottom, medium burrows, tubes, fecal strands
3	ECR-A-220	B	ECR-A-220-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	3	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depression, fecal strands
3	ECR-B-221	A	ECR-B-221-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	No	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal strands
3	ECR-B-221	B	ECR-B-221-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	IND	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrow, gastropod tracks, fecal strands
3	ECR-C-1207	A	ECR-C-1207-A-PV.jpg	Gravel mixes	Muddy Sandy Gravel	Muddy Fine Sand/Cobbles/Granules/Shell Hash	None	Biological	No	No	Yes	Yes	3 Northern star coral (Astrangia poculata), 4 hydroid	None	4 hydroid, 4 Northern star coral (Astrangia poculata)	Attached fauna	Astrangia poculata	2	1	0	No	0	4 hydroid, 4 Northern star coral (Astrangia poculata)	0	0	0	Muddy sandy bottom, tubes, 4 Northern star coral (Astrangia poculata) attached to cobble, 4 hydroid
3	ECR-C-1207	B	ECR-C-1207-B-PV.jpg	Gravel mixes	Muddy Sandy Gravel	Muddy Fine Sand/Cobbles/Granules/Shell Hash	None	Biological	No	No	Yes	Yes	4 Northern star coral (Astrangia poculata), 4 hydroid	None	4 hydroid, 4 Northern star coral (Astrangia poculata)	Attached fauna	Astrangia poculata	2	1	0	No	0	4 hydroid, 4 Northern star coral (Astrangia poculata)	0	0	0	Muddy sandy bottom, tubes, 4 Northern star coral (Astrangia poculata) attached to cobble, 4 hydroid
3	ECR-A-222	B	ECR-A-222-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	Yes	Yes	Yes	6 hydroid	None	6 hydroid, 1 gastropod	Soft sediment fauna	Hydroid	10	1	0	No	0	6 hydroid	1 gastropod	0	0	Gravelly sand (shell hash) bottom, tubes, burrows, fecal casts shell hash, 6 hydroid
3	ECR-A-222	C	ECR-A-222-C-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	Yes	Yes	No	hydroid	None	3 hydroid	Soft sediment fauna	Hydroid	0	1	0	No	0	3 hydroid	0	0	0	Gravelly sand (shell hash) bottom, tubes, burrows, fecal casts shell hash, 3 hydroid
3	ECR-C-1208	B	ECR-C-1208-B-PV.jpg	Gravel mixes	Muddy Sandy Gravel	Muddy Fine Sand/Cobbles/Granules/Shell Hash	None	Physical	No	No	No	No	hydroid	None	2 hydroid	Soft sediment fauna	Hydroid	7	0	0	No	0	2 hydroid	0	0	0	Muddy sandy gravel, bottom littered with cobbles/gravels/shell hash, 2 hydroid
3	ECR-C-1208	C	ECR-C-1208-C-PV.jpg	Gravel mixes	Muddy Sandy Gravel	Muddy Fine Sand/Cobbles/Granules/Shell Hash	None	Physical	No	No	No	No	12 Northern star coral (Astrangia poculata), 8 hydroid	None	8 hydroid, 12 Northern star coral (Astrangia poculata)	Soft sediment fauna	Hydroid	30	0	0	No	0	8 hydroid, 12 Northern star coral (Astrangia poculata)	0	0	0	Muddy sandy gravel with cobbles/gravels/shell hash, 8 hydroid, 12 Northern star coral attached to cobble
3	ECR-B-223	A	ECR-B-223-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	1 Northern star coral (Astrangia poculata), 5 hydroid	None	10 hydroid, 1 northern star coral	Soft sediment fauna	Hydroid	10	1	0	No	0	10 hydroid, 1 northern star coral	0	0	0	Fine mudy sand with shell hash, 10 hydroid attached to shell hash,1 Northern star coral (Astrangia poculata)
3	ECR-B-223	C	ECR-B-223-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 Chaetopterus tube, 1 Triglidae	Soft sediment fauna	Chaetopterus	0.1	1	0	No	1 Chaetopterus tube	0	0	0	1 Triglidae	Fine sand with shell hash and cobbles bottom, 1 Chaetopterus tube
3	ECR-A-224	A	ECR-A-224-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depression, shell fragments
3	ECR-A-224	B	ECR-A-224-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, ripples, shell fragments
3	ECR-B-225	A	ECR-B-225-A-DC.jpg	Muddy Sand			None	Physical	No	No	IND	IND	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, shell fragments
3	ECR-B-225	B	ECR-B-225-B-DC.jpg	Muddy Sand			None	Physical	No	Yes	IND	Yes	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depression, shell fragments
3	ECR-A-226	A	ECR-A-226-A-PV.jpg	Muddy Sand			None	Physical	No	IND	IND	Yes	IND	None	IND	Soft sediment fauna	IND	IND	IND	IND	IND	IND	IND	IND	IND	IND	Muddy sandy bottom
3	ECR-A-226	C	ECR-A-226-C-PV.jpg	Muddy Sand			None	Physical	No	IND	IND	Yes	None	None	None	Soft sediment fauna	None	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, out of focus image, burrows
3	ECR-B-227	A	ECR-B-227-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, medium and burrows, fecal strands
3	ECR-B-227	C	ECR-B-227-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-A-228	A	ECR-A-228-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, and medium burrows, gastropod tracks
3	ECR-A-228	B	ECR-A-228-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-B-229	A	ECR-B-229-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks, fecal strand
3	ECR-B-229	C	ECR-B-229-C-PV.jpg	Muddy Sand			None	Biological	No	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, gastropod track
3	ECR-A-230	A	ECR-A-230-A-PV.jpg	Muddy Sand			None	Biological	No	Yes	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows present, tubes, shell fragments
3	ECR-A-230	C	ECR-A-230-C-PV.jpg	Muddy Sand			None	Biological	No	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks
3	ECR-B-231	B	ECR-B-231-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-B-231	C	ECR-B-231-C-DC.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Inferred fauna	Fecal mounds	0	IND	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-A-232	A	ECR-A-232-A-PV.jpg	Muddy Sand			None	physical	No	Yes	IND	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal cast, tracks in sediment, turbidity right side image
3	ECR-A-232	C	ECR-A-232-C-PV.jpg	Muddy Sand			None	physical	No	Yes	IND	Yes	None	None	1 gastropod, 1 fish	Inferred fauna	Tracks and trails	0	0	0	No	0	0	1 gastropod	0	1 fish	Muddy sandy bottom, burrow, 1 fish, gastropod track, turbidity from fish swimming
3	ECR-B-233	A	ECR-B-233-A-PV.jpg	Muddy Sand			None	physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, fecal strands
3	ECR-B-233	C	ECR-B-233-C-PV.jpg	Muddy Sand			None	physical	No	No	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 gastropod	0	0	Muddy sandy bottom, track from snail right side image
3	ECR-A-234	B	ECR-A-234-B-PV.jpg	Muddy Sand			None	physical	No	yes	IND	yes	None	None	2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	IND	0	No	0	0	2 gastropod	0	0	Muddy sandy bottom with shell hash, two gastropod and tracks in lower left quadrant, poor image quality due to suspended particles
3	ECR-A-234	C	ECR-A-234-C-PV.jpg	Muddy Sand			None	physical	No	yes	IND	yes	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	1 Paguroidea	0	0	Muddy sandy bottom with shell hash,burrows, 1 Paguroidea, poor image quality due to suspended particles
3	ECR-B-235	A	ECR-B-235-A-PV.jpg	Muddy Sand			None	physical	No	Yes	No	Yes	None	None	1 squid	Soft sediment fauna	None	0	0	0	No	0	0	1 squid	0	0	Muddy sandy bottom with shell hash and cobbles, squid right side image, burrows, poor image quality due to suspended particles
3	ECR-B-235	C	ECR-B-235-C-PV.jpg	Muddy Sand			None	physical	No	Yes	IND	Yes	None	None	1 squid, 1 fish	Soft sediment fauna	None	0	IND	0	No	0	0	1 squid	0	1 fish	Muddy sandy bottom with shell hash and cobbles, squid right side image, poor image quality due to suspended particles
3	ECR-A-236	A	ECR-A-236-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	IND	Yes	None	None	2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	2 gastropod	0	0	Muddy sandy bottom, 2 gastropod,gastropod tracks, burrows
3	ECR-A-236	C	ECR-A-236-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	polychaete tubes, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	polychaete tubes	0	1 gastropod	0	0	Muddy sandy bottom, one gastropod, 1 tube structure, gastropod tracks
3	ECR-B-237	A	ECR-B-237-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, tracks
3	ECR-B-237	C	ECR-B-237-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands, gastropod tracks
3	ECR-A-238	D	ECR-A-238-D-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	1 red hake	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	1 red hake	Muddy sandy bottom, red hake, fin marks in sediment, burrows
3	ECR-A-238	E	ECR-A-238-E-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, feeding depressions in sediment, gastropod tracks
3	ECR-B-239	A	ECR-B-239-A-DC.jpg	Muddy Sand			None	Biological	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, Image from video still, fecal casts burrow/depression on left, er depressions throughout, gastropod tracks

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
3	ECR-B-239	B	ECR-B-239-B-DC.jpg	Muddy Sand			None	Biological	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, image from video still, fecal casts depressions in sediment
3	ECR-A-240	A	ECR-A-240-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrow, gastropod tracks, fecal cast
3	ECR-A-240	B	ECR-A-240-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, medium burrows, fecal cast, sediment sitting on sediment surface
3	ECR-B-241	A	ECR-B-241-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, depression in sediment lower left corner, fecal strands
3	ECR-B-241	C	ECR-B-241-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-A-242	B	ECR-A-242-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-A-242	C	ECR-A-242-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fecal strands
3	ECR-B-243	D	ECR-B-243-D-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks
3	ECR-B-243	F	ECR-B-243-F-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	1 fish	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	1 fish	Muddy sandy bottom, burrow, fecal cast, gastropod tracks, sediment ; fish
3	ECR-A-244	G	ECR-A-244-G-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, Squilla burrow, tubes, gastropod tracks, sediment
3	ECR-A-244	H	ECR-A-244-H-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, sediment , fecal cast, gastropod tracks, tubes
3	ECR-B-245	B	ECR-B-245-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, feeding depressions, fecal cast
3	ECR-B-245	C	ECR-B-245-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, burrows, gastropod tracks, patch of gray sediment
3	ECR-A-246	A	ECR-A-246-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, medium burrow, polychaete tubes, feeding depression in sediment, other tracks visible
3	ECR-A-246	B	ECR-A-246-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	Muddy sandy bottom, medium burrow, polychaete tubes, feeding depression in sediment, gastropod tracks, fecal strands
3	ECR-B-247	A	ECR-B-247-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, medium burrow, gastropod tracks, fecal strands
3	ECR-B-247	B	ECR-B-247-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, medium burrow, tracks, fecal strands
3	ECR-A-301	B	ECR-A-301-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Decapod tracks, burrows, fecal casts
3	ECR-A-301	C	ECR-A-301-C-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Burrows, fecal cast
3	ECR-B-302	A	ECR-B-302-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Mud clast rom SPI/PV frame deposited on surface, burrows, tracks in sediment from fish swimming over sediment
3	ECR-B-302	B	ECR-B-302-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Burrows, depressions in sediment, fecal casts
3	ECR-A-303	B	ECR-A-303-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Amphipod tubes, burrows, fecal casts
3	ECR-A-303	C	ECR-A-303-C-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Burrows, mud clast from SPI/PV frame deposited on surface, gastropod track traversing image
3	ECR-B-304	A	ECR-B-304-A-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	burrows, gastropod tracks
3	ECR-B-304	B	ECR-B-304-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	1 Terebellidae worm	Inferred fauna	Fecal mounds	0	5	0	No	1 Terebellidae worm	0	0	0	0	burrows, couple depressions in sediment, burrow opening of 1 Terebellidae worm with fecal strings adjacent to burrow opening
3	ECR-A-305	B	ECR-A-305-B-PV.jpg	Muddy Sand			IND	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	1 Squilla burrow, burrows, fecal casts
3	ECR-A-305	C	ECR-A-305-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	depressions in sediment, couple burrows, gastropod track upper right, mounds of fecal casts
3	ECR-B-306	B	ECR-B-306-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Burrows, fecal casts
3	ECR-B-306	C	ECR-B-306-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Burrows, fecal casts shell hash
3	ECR-A-307	A	ECR-A-307-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Fecal casts shell hash, gastropod tracks
3	ECR-A-307	B	ECR-A-307-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	2	0	No	0	0	0	0	0	Burrows, fecal casts, shell hash, gastropod tracks
3	ECR-B-308	A	ECR-B-308-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube	Soft sediment fauna	Chaetopterus	0.1	0	0	No	1 Chaetopterus tube	0	0	0	0	Burrows, shell fragments
3	ECR-B-308	C	ECR-B-308-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Burrows, shell hash, burrow, fecal cast stands, crab tracks
3	ECR-A-309	B	ECR-A-309-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	5	0	No	0	0	0	0	0	Fecal mounds and 1 burrow
3	ECR-A-309	C	ECR-A-309-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	5	0	No	0	0	0	0	0	Burrows, fecal casts, shell hash
3	ECR-B-310	A	ECR-B-310-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	Burrows, gastropod tracks, shell hash
3	ECR-B-310	C	ECR-B-310-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	5	0	No	0	0	0	0	0	Burrows, fecal casts, gastropod tracks
3	ECR-A-311	B	ECR-A-311-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	2 squid	Inferred fauna	Fecal mounds	0	5	0	No	0	0	2 squid	0	2 Menidia	Fecal casts, gastropod tracks, shell hash, 2 Menidia
3	ECR-A-311	C	ECR-A-311-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	3 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	3 gastropod	0	0	Polychaete tubes and fecal casts, burrows, gastropod tracks
3	ECR-B-312	A	ECR-B-312-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	2 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	2 gastropod	0	0	Polychaete tubes, medium burrows, fecal casts shell hash
3	ECR-B-312	B	ECR-B-312-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube, 3 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	1 Chaetopterus tube	0	3 gastropod	0	0	Polychaee tubes, burrows, fecal casts shell hash, gastropod tracks, Chaetopterus tube
3	ECR-A-313	B	ECR-A-313-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	4 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	4 gastropod	0	0	Polychaete tubes and burrows, shell hash, gastropod tracks, depression
3	ECR-A-313	C	ECR-A-313-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Squilla, 3 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	1 Squilla, 3 gastropod	0	0	Polychaete tubes, burrows, gastropod tracks,shell hash, rope/line lying on sediment
3	ECR-B-314	A	ECR-B-314-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	1 Ceriantharia	None	1 Ceriantharia, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	1 Ceriantharia	0	1 gastropod	0	0	Amphipod tubes, gastropod tracks, shell hash, burrows
3	ECR-B-314	C	ECR-B-314-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 polychaete tubes, 1 Channeled whelk (Busycotypus canaliculatus)	Inferred fauna	Tracks and trails	0	0	0	No	swimming polychaete tubes	0	1 Channeled whelk (Busycotypus canaliculatus)	0	0	Fine muddy sandy bottom with shell hash with shell fragments, gastropod tracks, burrows
3	ECR-A-315	A	ECR-A-315-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube	Soft sediment fauna	Chaetopterus	0.1	1	0	No	1 Chaetopterus tube	0	0	0	0	1 Chaetopterus tube, burrows, shell hash, gastropod tracks

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
3	ECR-A-315	C	ECR-A-315-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	1 gastropod	0	0	Amphipod tubes, burrows, shell hash, one shell fragment, gastropod tracks
3	ECR-B-316	B	ECR-B-316-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Northern Triglidae	Soft sediment fauna	None	0	1	0	No	0	0	0	0	1 Northern Triglidae	Disturbed sediment obscures image, Amphipod tubes, burrows, shell hash
3	ECR-B-316	C	ECR-B-316-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	1	0	No	0	0	1 gastropod	0	0	Amphipod tubes and burrows, shell hash, gastropod tracks
3	ECR-A-317	A	ECR-A-317-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	No	None	None	2 Chaetopterus tube, 1 Paguroidea	Soft sediment fauna	Chaetopterus	0.2	1	0	No	2 Chaetopterus tube	0	1 Paguroidea	0	0	2 Chaetopterus tubes, half shell of bivalve,shell hash, tube structures, burrows
3	ECR-A-317	B	ECR-A-317-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	IND	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	1 Paguroidea	0	0	Amphipod tubes, burrows,shell hash,
3	ECR-B-318	A	ECR-B-318-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	No	None	None	3 Crepidula	Soft sediment fauna	Crepidula fornicata	0	1	0	No	0	3 Crepidula	0	0	0	3 Crepidula and burrows, shell hash
3	ECR-B-318	C	ECR-B-318-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	3 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	3 Paguroidea	0	0	Amphipod tubes and burrows, shell hash, one shell fragment
3	ECR-A-319	B	ECR-A-319-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube, 4 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	1 Chaetopterus tube	0	4 Paguroidea	0	0	Track in sediment, Chaetopterus tube, cobble on right
3	ECR-A-319	C	ECR-A-319-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	6 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	6 Paguroidea	0	0	Amphipod tubes and burrows, shell hash, gastropod shell, fecal casts
3	ECR-B-320	B	ECR-B-320-B-PV.jpg	Muddy Sand			None	Physical	Yes	No	Yes	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	1 Paguroidea	0	0	Amphipod tubes, shell hash, looser sediment collected in troughs
3	ECR-B-320	C	ECR-B-320-C-PV.jpg	Muddy Sand			None	Physical	Yes	No	Yes	No	None	None	3 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	3 Paguroidea	0	0	Amphipod tubes, shell hash, fragments
3	ECR-A-321	A	ECR-A-321-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	Yes	No	2 Northern star coral (Astrangia poculata), 5 hydroid	None	5 hydroid, 2 Northern star coral (Astrangia poculata), 1 Paguroidea	Soft sediment fauna	Hydroid	25	1	0	No	0	5 hydroid, 2 Northern star coral (Astrangia poculata)	1 Paguroidea	0	0	Muddy fine sandy bottom, Crepidula stack, 2 Northern star coral (Astrangia poculata), 5 hydroid
3	ECR-A-321	C	ECR-A-321-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	hydroid	None	2 hydroid, 1 snail	Soft sediment fauna	Hydroid	5	0	0	No	0	2 hydroid	1 snail	0	0	Fine muddy sand with shell hash, Crepidula fornicata and hydroid on shells
3	ECR-B-322	A	ECR-B-322-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	4 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	4 Paguroidea	0	0	shell hash, shell fragments, one Crepidula shell
3	ECR-B-322	C	ECR-B-322-C-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	Yes	None	None	5 Paguroidea	Soft sediment fauna	Paguroidea	0	1	0	No	0	0	5 Paguroidea	0	0	shell hash, shell fragments, Paguroidea tracks
3	ECR-A-323	B	ECR-A-323-B-PV.jpg	0			None	Biological	No	No	No	No	hydroid	None	3 hydroid	Soft sediment fauna	Hydroid	5	0	0	No	0	3 hydroid	0	0	0	Shell cover 50% of substrate
3	ECR-A-323	C	ECR-A-323-C-PV.jpg	Gravelly	Gravelly Sand	Fine sand with gravel	None	Physical	Yes	No	No	No	2 Northern star coral (Astrangia poculata)	None	48 Crepidula fornicata, 2 Northern star coral (Astrangia poculata), 1 Paguroidea	Attached fauna	Crepidula fornicata	25	0	0	No	0	48 Crepidula fornicata, 2 Northern star coral (Astrangia poculata)	1 Paguroidea	0	0	Fine sandy bottom with Crepidula stacks and 2 Northern star coral (Astrangia poculata)
3	ECR-B-324	A	ECR-B-324-A-PV.jpg	Sand	Fine/Very Fine Sand		None	Physical	Yes	No	No	Yes	2 Juvenile black sea bass (Centropristis striata)	None	9 Crepidula fornicata, 1 Paguroidea, 2 juvenile black seabass	Soft sediment fauna	Crepidula fornicata	1	1	0	No	0	9 Crepidula fornicata	1 Paguroidea	0	2 juvenile black seabass	Sandy bottom with riplles, Crepidula fornicata, two juvenile black bass
3	ECR-B-324	C	ECR-B-324-C-PV.jpg	0			None	Biological	No	No	No	Yes	Bryozoan, 1 hydroid	None	hydroid, barnacles, 1 bryozoan, 18 juvenile Crepidula, 1 gastropod, 1 Paguroidea,	Attached fauna	Crepidula fornicata	10	1	0	No	0	hydroid, barnacles, 1 bryozoan, 18 juvenile Crepidula	1 gastropod, 1 Paguroidea,	0	0	Shell hash cover 50% substrate, 1 bryozoan on gravel
3	ECR-A-325	A	ECR-A-325-A-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	No	2 hydroid	None	2 hydroid, 2 fish	Soft sediment fauna	Hydroid	10	0	0	No	0	2 hydroid	0	0	2 fish	Fine sandy bottom with ripples and shell hash, 2 fish, 2 hydroid
3	ECR-A-325	C	ECR-A-325-C-PV.jpg	Muddy Sand			None	Physical	Yes	No	No	No	None	None	3 fish	Soft sediment fauna	None	0	0	0	No	0	0	0	0	3 fish	Fine sandy bottom with shell hash
3	ECR-B-326	B	ECR-B-326-B-PV.jpg	Gravelly	Gravelly Sand	Muddy fine sand, Clay, Gravel and Shell nash	None	Physical	Yes	No	No	No	hydroid	None	1 hydroid, 1 fish	Soft sediment fauna	Hydroid	5	0	0	No	0	1 hydroid	0	0	1 fish	clay with gravel, shell hash and muddy sand, 1 hydroid
3	ECR-B-326	C	ECR-B-326-C-PV.jpg	Gravelly	Gravelly Sand	Muddy fine sand, Clay, Gravel and Shell hash	None	Physical	Yes	No	No	No	hydroid	None	1 polychaete, 4 hydroid	Soft sediment fauna	Hydroid	1	0	0	No	1 polychaete	4 hydroid	0	0	0	Clayish gravel with shell hash, and 4 hydroid, 1 swimming polychaete
4	ECR-A-327	A	ECR-A-327-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	1 gastropod, 3 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	1 gastropod, 3 Paguroidea	0	0	Fine sandy bottom with shell hash and traces of clayish gravel, ripples present
4	ECR-A-327	B	ECR-A-327-B-PV.jpg	Muddy Sand			Ripples	Physical	IND	No	No	Yes	hydroid	None	5 hydroid, 1 red alga (Coccotylus truncatus)	Soft sediment fauna	Hydroid Bed	5	0	1	No	0	5 hydroid	0	1 red alga (Coccotylus truncatus)	0	Muddy sand with ripples and er shell fragments, tracks center image, hydroid attached to shell hash and drifting red alga (Coccotylus truncatus).
4	ECR-B-328	A	ECR-B-328-A-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	hydroid	None	hydroid	Soft sediment fauna	Hydroid Bed	1	0	0	No	0	hydroid	0	0	0	Fine muddy sandy bottom with shell hash andhydroid, dead barnacles on shell fragment
4	ECR-B-328	C	ECR-B-328-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	2 squid, 1 fish, 1 Paguroidea, 1 fish	Soft sediment fauna	None	0.1	0	0	No	0	0	2 squid, 1 fish, 1 Paguroidea	0	1 fish	Fine muddy sandy bottom with shell hash
4	ECR-A-329	B	ECR-A-329-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	hydroid	None	2 hydroid	Soft sediment fauna	Hydroid Bed	0.1	0	0	No	0	2 hydroid	0	0	0	Shell hash with fine sandy bottom, 2 hydroid
4	ECR-A-329	C	ECR-A-329-C-PV.jpg	Muddy Sand			Ripples	Physical	IND	No	No	No	None	None	1 fish	Soft sediment fauna	None	0	0	0	No	0	0	1 fish	0	1 fish	Sandy bottom with ripples and shell hash
4	ECR-B-330	A	ECR-B-330-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Northern star coral (Astrangia poculata), 5 hydroid	None	5 hydroid, barnacles, 1 Northern star coral (Astrangia poculata), 13 Crepidula, 2 Paguroidea, 3 Chaetopterus	Attached fauna	Attached Hydroids	10	0	0	No	3 Chaetopterus	5 hydroid, barnacles, 1 Northern star coral (Astrangia poculata), 13 Crepidula	2 Paguroidea	0	0	1 northen star coral attached to a Crepidula stack of 13 live shell, presence of Chaetopterus and Paguroidea, cobbles amidst muddy sand and shell hash
4	ECR-B-330	C	ECR-B-330-C-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	hydroid	None	2 hydroid	Soft sediment fauna	Hydroid Bed	10	0	0	No	0	2 hydroid	0	0	0	Shell hash bottom with gravels and muddy sand, 2 hydroid
4	ECR-A-331	A	ECR-A-331-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Northern star coral (Astrangia poculata), 5 hydroid	None	5 hydroid, 1 Northern star coral (Astrangia poculata), 13 Crepidula	Soft sediment fauna	Hydroid Bed	10	0	0	No	0	5 hydroid, 1 Northern star coral (Astrangia poculata), 13 Crepidula	0	0	0	Fine muddy sandy bottom with 1 northen star coral attached to a Crepidula stack of 13 live shell, 5 hydroid
4	ECR-A-331	B	ECR-A-331-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	hydroid	None	2 Chaetopterus tube, 7 hydroid, 24 Crepidula	Soft sediment fauna	Hydroid Bed	20	0	0	No	2 Chaetopterus tube	7 hydroid, 24 Crepidula	0	0	0	Fine muddy sandy bottom with Crepidula stacks over shell hash with Chaetopterus and 7 hydroid
4	ECR-B-332	A	ECR-B-332-A-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	1 Northern star coral (Astrangia poculata), 18 hydroid	None	18 hydroid, 1 Northern star coral (Astrangia poculata), 112 Crepidula,1 Paguroidea	Soft sediment fauna	Hydroid Bed	40	0	0	No	0	18 hydroid, 1 Northern star coral (Astrangia poculata), 112 Crepidula,	1 Paguroidea	0	0	Fine muddy sandy bottom with 1 northen star coral attached to a Crepidula stack, of 112 live Crepidula shells, 18 hydroid
4	ECR-B-332	C	ECR-B-332-C-PV.jpg	Gravelly	Gravelly Sand	Fine sand with gravel	Ripples	Physical	Yes	No	No	No	hydroid	None	4 hydroid, 29 Crepidula fornicata	Soft sediment fauna	Hydroid Bed	30	0	0	No	0	4 hydroid, 29 Crepidula fornicata	0	0	0	Fine sandy bottom with Crepidula stacks, 4 hydroid
4	ECR-A-333	B	ECR-A-333-B-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	hydroid	None	5 hydroid, 18 Crepidula	Soft sediment fauna	Hydroid Bed	10	0	0	No	0	5 hydroid, 18 Crepidula	0	0	0	Fine muddy sandy bottom with Crepidula stacks over shell hash and hydroid
4	ECR-A-333	C	ECR-A-333-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	2	0	0	No	0	0	0	0	0	Fine muddy sand with shell hash
4	ECR-C-1302	A	ECR-C-1302-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 fish	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 fish	Muddy sandy bottom, fine/medium sand, ripples and shell fragments
4	ECR-C-1302	B	ECR-C-1302-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy sandy bottom, fine/medium sand, ripples and shell fragments
4	ECR-B-334	B	ECR-B-334-B-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	6 squid, 1 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	6 squid, 1 Paguroidea	0	0	School of squid, shell hash with sand and gravel

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
4	ECR-B-334	C	ECR-B-334-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Shell hash settled in troughs of ripples
4	ECR-A-335	B	ECR-A-335-B-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Bottom sediment barely visible, pieces of dead coral, piece of cobble
4	ECR-A-335	C	ECR-A-335-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	3 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	3 Paguroidea	0	0	Bottom sediment barely visible, shell hash
4	ECR-B-336	A	ECR-B-336-A-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	2 squid	Soft sediment fauna	None	0	0	0	No	0	2 squid	0	0	0	Fine sandy bottom with shell fragments and clayish gravel
4	ECR-B-336	F	ECR-B-336-F-PV.jpg	Gravelly	Gravelly Sand		None	IND	IND	IND	IND	IND	IND	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Poor image quality due to suspended particles
4	ECR-A-337	A	ECR-A-337-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	IND	IND	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Poor image quality due to suspended particles, shell hash visible
4	ECR-A-337	C	ECR-A-337-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	IND	IND	None	None	1 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	1 Paguroidea	0	0	Poor image quality due to suspended particles, sand ripples
4	ECR-B-338	B	ECR-B-338-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	2 Paguroidea, 1 Triglidae	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	2 Paguroidea	0	1 Triglidae	Two Paguroidea, juvenile fish (Triglidae)
4	ECR-B-338	C	ECR-B-338-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	3 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	3 Paguroidea	0	0	tracks (gastropod) right side, three live Paguroidea center image, one Paguroidea burrowed in sediment lower edge of image
4	ECR-A-339	B	ECR-A-339-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	Yes	No	None	None	2 Paguroidea, 1 fish	Soft sediment fauna	Hydroid Bed	1	0	0	No	0	0	2 Paguroidea	0	1 fish	1 polychaete tubes tube bottom center, 1 fish, two Paguroidea, red alga fragment in shell near center
4	ECR-A-339	C	ECR-A-339-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	3 Menidia	Soft sediment fauna	Ilyanassa bed	0	0	0	No	0	0	0	0	3 fish	Muddy sandy bottom with shell hash, 3 fish (Menidia), sand tracks
4	ECR-B-340	D	ECR-B-340-D-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Sandy bottom with ripples and shell hash, polychaete tubes tube
4	ECR-B-340	F	ECR-B-340-F-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	2 Paguroidea,	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	2 Paguroidea,	0	0	ripples in sediment, shell hash
4	ECR-A-341	A	ECR-A-341-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	1 Paguroidea, 1 Triglidae (juvenile)	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	1 Paguroidea	0	1 Triglidae (juvenile)	Sandy bottom with ripples, head of Triglidae
4	ECR-A-341	C	ECR-A-341-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	Yes	None	None	1 Paguroidea, 9 fish	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	1 Paguroidea	0	9 fish	Sediment disturbed by fish, 4 juvenile fish, 2 adult fish (Menidia?)
4	ECR-B-342	A	ECR-B-342-A-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	1 Paguroidea	0	0	Abundant shell hash (pieces)
4	ECR-B-342	B	ECR-B-342-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Large shell pieces, No visible organisms
4	ECR-A-343	A	ECR-A-343-A-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Biological	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Poor image quality due to suspended particles, No visible organisms, 50% shell coverage
4	ECR-A-343	D	ECR-A-343-D-PV.jpg	Gravelly	Gravelly Sand		IND	IND	IND	IND	IND	IND	IND	None	None	Soft sediment fauna	IND	IND	IND	IND	IND	0	0	0	0	0	Poor image quality due to suspended particles, No visible organisms,
4	ECR-B-344	D	ECR-B-344-D-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with shell hash and ripples
4	ECR-B-344	E	ECR-B-344-E-PV.jpg	Gravelly	Gravelly Sand		None	Biological	No	No	No	No	None	None	1 juvenile Triglidae	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 juvenile Triglidae	Abundant shell hash with gravels and sand
4	ECR-A-345	B	ECR-A-345-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	hydroid	None	4 hydroid	Soft sediment fauna	Hydroid Bed	2	0	0	No	0	4 hydroid	0	0	0	Image grainy and bottom obscured, shell pieces and cobbles present
4	ECR-A-345	C	ECR-A-345-C-PV.jpg	Gravelly	Gravelly Sand	Shell hash	Ripples	Physical	Yes	No	No	No	hydroid	None	1 hydroid	Soft sediment fauna	Hydroid Bed	1	0	0	No	0	1 hydroid	0	0	0	Shell hash, ripples in sand
4	ECR-B-346	B	ECR-B-346-B-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Shell hash collected in troughs of ripples in sediment, shell hash
4	ECR-B-346	C	ECR-B-346-C-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples
4	ECR-A-347	B	ECR-A-347-B-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and cobbles accumulated in ripile troughs
4	ECR-A-347	C	ECR-A-347-C-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom shell hash collected in sand troughs, cobbles follow shape of ripples in the sand
4	ECR-B-348	A	ECR-B-348-A-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	1 Black sea bass (Centropristis striata)	None	1 juvenile black sea bass (Centropristis striata), 2 Menidia	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 juvenile black sea bass (Centropristis striata), 2 Menidia	Medium sand and gravel with shell hash, 1 juvenile black sea bass (Centropristis striata), 1 Menidia
4	ECR-B-348	B	ECR-B-348-B-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	2 Black sea bass (Centropristis striata)	None	2 juvenile black sea bass (Centropristis striata), 1 Menidia	Soft sediment fauna	None	0	0	0	No	0	0	0	0	2 juvenile black sea bass (Centropristis striata), 1 Menidia	Medium sand and gravel with shell hash, 2 juvenile black sea bass (Centropristis striata), 1 Menidia
4	ECR-A-349	B	ECR-A-349-B-PV.jpg	Gravelly	Gravelly Sand	Shell hash, pebbles	Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	IND	0	0	0	No	0	0	0	0	0	Fine sandy bottom with gravels and shell fragments
4	ECR-A-349	C	ECR-A-349-C-PV.jpg	Gravelly	Gravelly Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with Shell hash collected in troughs
4	ECR-B-350	A	ECR-B-350-A-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with Shell hash collected in troughs
4	ECR-B-350	C	ECR-B-350-C-PV.jpg	Sand	Fine/Very Fine Sand		Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with Shell hash collected in troughs
4 Alt	ECR-A-401	A	ECR-A-401-A-PV.jpg	Gravelly	Gravelly Sand	Sand with gravel and shell hash	None	Physical	No	No	No	No	hydroid	None	1 hydroid, 8 Crepidula fornicata	Soft sediment fauna	Hydroid Bed	1	0	0	No	0	1 hydroid, 8 Crepidula fornicata	0	0	0	Fine sand with gravel and shell hash and 8 Crepidula fornicata
4 Alt	ECR-A-401	C	ECR-A-401-C-PV.jpg	Gravelly	Gravelly Sand	Sand with gravel and shell hash	None	Physical	No	No	No	No	hydroid	7 Ascidiacea	11 hydroid, 7 Ascidiacea, 3 Crepidula fornicata	Soft sediment fauna	Hydroid Bed	5	0	0	No	0	11 hydroid, 7 Ascidiacea, 3 Crepidula fornicata	0	0	0	Fine sand with gravel and shell hash and Ascidiacea
4 Alt	ECR-B-402	A	ECR-B-402-A-PV.jpg	Gravelly	Gravelly Sand	Fine sandy gravel with shell hash	None	Physical	No	No	No	No	hydroid	None	10 hydroid	Attached fauna	Attached Hydroids	1	1	0	No	0	10 hydroid	0	0	0	Fine sandy gravel with shell hash, 10 hydroid
4 Alt	ECR-B-402	C	ECR-B-402-C-PV.jpg	Gravel mixes	Sandy Gravel	Gravel and shell hash	None	Physical	No	No	No	No	hydroid	9 Ascidiacea	9 Ascidiacea, 11 hydroid	Attached fauna	Attached Tunicates	0	5	0	No	0	9 Ascidiacea, 11 hydroid	0	0	0	Fine sandy gravel with shell hash, 9 Ascidiacea, 11 hydroid
4 Alt	ECR-A-403	B	ECR-A-403-B-PV.jpg	Gravelly	Sandy Gravel	Fine sandy gravel with shell hash	None	Physical	No	No	No	No	hydroid	20 Ascidiacea	20 Ascidiacea, 5 hydroid	Attached fauna	Attached Tunicates	1	1	0	No	0	20 Ascidiacea, 5 hydroid	1 Paguroidea	0	0	Fine sandy gravel with shell hash, 20 Ascidiacea, 5 hydroid
4 Alt	ECR-A-403	C	ECR-A-403-C-PV.jpg	Gravel mixes	Sandy Gravel	Gravel and shell hash	None	Physical	No	No	No	No	1 Northern star coral (Astrangia poculata), 6 hydroid	2 Ascidiacea	6 hydroid, barnacles, 2 Ascidiacea, 1 Northern star coral (Astrangia poculata)	Soft sediment fauna	Hydroid Bed	5	0	0	No	0	6 hydroid, barnacles, 2 Ascidiacea, 1 Northern star coral (Astrangia poculata)	0	0	0	Fine sand with gravel and shell hash and Ascidiacea, 1 Northern star coral (Astrangia poculata) and hydroid bed
4 Alt	ECR-B-404	B	ECR-B-404-B-PV.jpg	Gravelly	Gravelly Sand	Sandy gravel with shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	1	1	0	No	0	0	0	0	0	Sandy gravel with shell hash
4 Alt	ECR-B-404	C	ECR-B-404-C-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash and Crepidula fornicata	None	Physical	No	No	No	No	None	1 Ascidiacea	22 Crepidula fornicata, barnacle, 1 Ascidiacea	Soft sediment fauna	Tunicate Bed	5	0	0	No	0	22 Crepidula fornicata, barnacle, 1 Ascidiacea	0	0	0	Fine sand with gravel and shell hash, Crepidula fornicata and Ascidiacea
4 Alt	ECR-A-405	B	ECR-A-405-B-PV.jpg	Gravelly	Gravelly Sand	Sandy gravel and Crepidula shells	None	Physical	No	No	No	No	1 Northern star coral	4 Ascidiacea	1 Northern star coral, 4 Ascidiacea	Soft sediment fauna	Tunicate Bed	1	0	0	No	0	1 Northern star coral, 4 Ascidiacea	0	0	0	Sandy gravel with Crepidula shells and 1 Northern star coral, 4 Ascidiacea
4 Alt	ECR-A-405	C	ECR-A-405-C-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel	None	Physical	No	No	No	Yes	hydroid	1 Ascidiacea	37 Crepidula fornicata, barnacles, 1 hydroid, 1 Ascidiacea	Soft sediment fauna	Tunicate Bed	2	0	0	No	0	37 Crepidula fornicata, barnacles, 1 hydroid, 1 Ascidiacea	0	0	0	Sandy gravel with Crepidula fornicata stacks, 1 Ascidiacea, multiple fecal casts

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
4 Alt	ECR-B-406	B	ECR-B-406-B-PV.jpg	0			None	Biological	No	No	No	No	None	1 Ascidiacea	1 Ascidiacea	Soft sediment fauna	Tunicate Bed	0	0	0	No	0	1 Ascidiacea	0	0	0	Fine sand with gravel and shell hash, Crepidula fornicata and 1 Ascidiacea
4 Alt	ECR-B-406	C	ECR-B-406-C-PV.jpg	Gravel mixes	Muddy Sandy Gravel	Muddy sandy gravel with Shell hash	None	Biological	No	No	No	No	1 Black sea bass (Centropristis striata)	None	14 juvenile Crepidula fornicata, 1 black sea bass (Centropristis striata), 1 black sea bass (Centropristis striata)	Soft sediment fauna	Crepidula Bed	1	0	0	No	0	14 juvenile Crepidula fornicata	1 black sea bass (Centropristis striata)	0	1 black sea bass (Centropristis striata)	Muddy sandy gravel with shell hash, black sea bass (Centropristis striata), and Crepidula fornicata
4 Alt	ECR-A-407	A	ECR-A-407-A-PV.jpg	0			None	Biological	No	No	No	No	None	None	1 Arbacia punctulata	Attached fauna	Attached Sea Urchins	1	0	0	No	0	1 Arbacia punctulata	0	0	0	Shell hash with one Arbacia punctulata
4 Alt	ECR-A-407	B	ECR-A-407-B-PV.jpg	0			None	Biological	No	No	No	No	None	2 Ascidiacea	2 Ascidiacea, 22 Crepicula fornicata	Attached fauna	Sessile Gastropods	1	0	0	No	0	2 Ascidiacea, 22 Crepicula fornicata	0	0	0	Shell hash with Ascidiacea and Crepidula fornicata
4 Alt	ECR-B-408	A	ECR-B-408-A-PV.jpg	Gravelly	Gravelly Sand	sandy gravel with shell hash	None	Physical	No	No	No	No	None	4 Ascidiacea	4 Ascidiacea	Soft sediment fauna	Tunicate Bed	0	0	0	No	0	4 Ascidiacea	0	0	0	Sandy gravel with shell hash and 4 Ascidiacea
4 Alt	ECR-B-408	B	ECR-B-408-B-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash and Crepidula fornicata	None	Physical	No	No	No	No	None	5 Ascidiacea	5 Ascidiacea	Attached fauna	Attached Tunicates	0	0	0	No	0	5 Ascidiacea	0	0	0	Shell hash and 5 Ascidiacea
4 Alt	ECR-A-409	A	ECR-A-409-A-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sand with gravel and shell hash
4 Alt	ECR-A-409	B	ECR-A-409-B-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sand with gravel and shell hash
4 Alt	ECR-B-410	B	ECR-B-410-B-PV.jpg	0			None	Biological	No	No	No	No	None	None	1 moon snail, 220 Crepidula fornicata	Attached fauna	Sessile Gastropods	50	0	0	No	0	1 moon snail, 220 Crepidula fornicata	0	0	0	Shall hash with Crepidula fornicata live shell bed, and dead clam shell hash, 1 moon snail
4 Alt	ECR-B-410	C	ECR-B-410-C-PV.jpg	Gravel mixes	Muddy Gravel	Gravel, Shell hash	None	Physical	No	No	No	No	1 Northern star coral (Astrangia poculata)	17 Ascidiacea	4 Crepidula fornicata, 17 Ascidiacea, 1 Northern star coral	Attached fauna	Attached Tunicates	1	0	0	No	0	4 Crepidula fornicata, 17 Ascidiacea, 1 northern star coral	0	0	0	Muddy gravel bottom with 4 Crepidula fornicata, 17 Ascidiacea, 1 northern star coral
4 Alt	ECR-A-411	A	ECR-A-411-A-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash	None	Physical	No	No	Yes	No	None	13 Ascidiace	1 Chaetopterus tube, 3 Arbacia punctulatas, 1 spider crab, 13 Ascidiacea	Attached fauna	Attached Tunicates	5	0	0	No	1 Chaetopterus tube	13 Ascidiace	1 spider crab, 3 Arbacia punctulatas	0	0	Fine sand with gravel and shell hash with 13 Ascidiacea, a spider crab and 3 Arbacia punctulatas
4 Alt	ECR-A-411	B	ECR-A-411-B-PV.jpg	Gravel mixes	Sandy Gravel	Gravel, Shell hash	None	Physical	No	No	No	No	None	6 Ascidiacea	6 Ascidiacea, 11 Crepidula fornicata	Attached fauna	Attached Tunicates	5	0	0	No	0	6 Ascidiacea and 11 Crepidula fornicata	0	0	0	Fine sand with gravel and shell hash with 6 Ascidiacea and 11 Crepidula fornicata
4 Alt	ECR-B-412	A	ECR-B-412-A-PV.jpg	Gravelly	Gravelly Sand	Gravel, Shell hash	None	Physical	No	No	No	No	hydroid	4 Ascidiacea	4 Ascidiacea, 1 hydroid, 1 Paguroidea	Attached fauna	Attached Tunicates	1	0	0	No	0	4 Ascidiacea, 1 hydroid	1 Paguroidea	0	0	Fine sand with gravel and shell hash with 4 Ascidiacea, 1 hydroid, 1 Paguroidea
4 Alt	ECR-B-412	B	ECR-B-412-B-PV.jpg	Gravelly	Gravelly Sand	Gravel, Shell hash	None	Physical	No	No	No	No	hydroid	3 Ascidiacea	3 Ascidiacea, 4 hydroid, 11 Crepidula	Attached fauna	Attached Tunicates	2	1	0	No	0	3 Ascidiacea, 4 hydroid, 11 Crepidula	0	0	0	Fine sand with gravel and shell hash with Ascidiacea and hydroid
4	ECR-A-413	A	ECR-A-413-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with thin layer of silt, shell hash and cobble
4	ECR-A-413	C	ECR-A-413-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	3 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0.1	0	No	0	3 gastropod	0	0	0	Fine sandy bottom with thin layer of silt, shell hash and cobble
4	ECR-B-414	D	ECR-B-414-D-PV.jpg	Muddy Sand			IND	IND	IND	IND	IND	IND	IND	IND	IND	Soft sediment fauna	IND	0	0	0	IND	IND	IND	0	IND	IND	Poor image quality due to suspended particles
4	ECR-B-414	F	ECR-B-414-F-PV.jpg	Muddy Sand			IND	IND	IND	IND	IND	IND	None	None	None	Attached fauna	Attached Tunicates	0	0	0	No	0	0	0	0	0	shell hash visible, poor image quality due to suspended particles
4	ECR-A-415	B	ECR-A-415-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	shell hash
4	ECR-A-415	C	ECR-A-415-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	shell hash
4	ECR-B-416	B	ECR-B-416-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	shell hash
4	ECR-B-416	C	ECR-B-416-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Muddy Sandy bottom with shell hash, ripples and dead Echinarachnius parma
4	ECR-A-417	A	ECR-A-417-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Burrowing anemone	None	1 Chondrus crispus	Soft sediment fauna	None	1	0	1	No	0	0	0	1 Chondrus crispus	0	Muddy sandy bottom with 1 Chodrus crispus red alga, shell hash,orange anemone
4	ECR-A-417	C	ECR-A-417-C-PV.jpg	0			None	Biological	No	No	No	No	1 Black sea bass (Centropristis striata)	None	2 black sea bass	Soft sediment fauna	None	1	0	0	No	0	0	0	0	2 black sea bass	Coarse sand with shell hash and 2 black sea bass
4	ECR-B-418	A	ECR-B-418-A-PV.jpg	Gravel mixes	Sandy Gravel	Gravel and cobble with sand	None	Physical	No	No	No	No	hydroid	5 Ascidiacea	5 Ascidiacea, 4 hydroid	Attached fauna	Attached Tunicates	5	0	0	No	0	5 Ascidiacea, 4 hydroid	0	0	0	Gravel with cobble, 5 Ascidiacea, 4 hydroid
4	ECR-B-418	C	ECR-B-418-C-PV.jpg	Gravel mixes	Sandy Gravel	Gravel and Cobble with sand	None	Physical	No	No	No	No	IND	10 Ascidiacea	10 Ascidiacea, 2 serpulid worms, barnacles, 1 gastrooid	Attached fauna	Attached Tunicates	3	0	0	No	0	10 Ascidiacea, barnacles	1 gastropod	0	0	Gravel with cobble, tunicates, calciferous worm casts, and barnacle are visible
4	ECR-A-419	A	ECR-A-419-A-PV.jpg	Gravel mixes	Sandy Gravel	Cobble, Gravel, Shell hash	None	Physical	No	No	No	No	1 Black sea bass (Centropristis striata), 5 Northern star coral (Astrangia poculata), 1 bryozoan	None	12 gastropods (1 Illianassa trivittata, 2 Urosalpinx sp., 9 unidentified), 1 Chondrus crispus, 1 black sea bass (Centropristis striata), 5 Northern star coral	Attached fauna	Northern star coral (Astrangia poculata)	5	0	1	No	0	12 gastropods (1 Illianassa trivittata, 2 Urosalpinx sp., 9 unidentified), 5 Northern star coral	0	1 Chondrus crispus	1 black sea bass (Centropristis striata)	Sandy gravel with cobble, with red algae, 5 Northern star coral (Astrangia poculata), bryozoans and serpulid polychaete tubes attached to cobble
4	ECR-A-419	C	ECR-A-419-C-PV.jpg	Gravel mixes	Sandy Gravel	Cobble, Gravel, Shell hash	None	Physical	No	No	No	No	21 Northern star coral (Astrangia poculata), 1 bryozoan	None	17 gastropods (unidentified)	Attached fauna	Northern star coral (Astrangia poculata)	10	0	0	No	0	17 gastropods, 21 Northern star coral	0	0	0	Sandy gravel with cobble, 21 \Northern star coral (Astrangia poculata), bryozoans and serpulid polychaete tubes attached to cobble
4	ECR-B-420	A	ECR-B-420-A-PV.jpg	Gravel mixes	Sandy Gravel	Cobble, Gravel, Shell hash	Ripples	Physical	Yes	No	No	No	None	None	7 gastropod (Ilyanassa trivittata), 1 Paguroidea, 1 Trigliidae	Soft sediment fauna	Ilyanassa Bed	1	1	0	No	0	0	7 gastropod (Ilyanassa trivittata), 1 Paguroidea	0	1 Triglidae	Sandy gravel with barnacles attached to cobble and gastropod
4	ECR-B-420	C	ECR-B-420-C-PV.jpg	Gravel mixes	Sandy Gravel	Cobble, Gravel, Shell hash	Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	1	0	0	No	0	0	0	0	0	Sandy gravel with barnacles attached to cobble and gastropod
4	ECR-A-421	B	ECR-A-421-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 fish	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 fish	Fine sandy bottom with ripples
4	ECR-A-421	C	ECR-A-421-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	2 Paguroidea	Soft sediment fauna	Pagurus Bed	0	0.1	0	No	0	0	2 Paguroidea	0	0	Fine sandy bottom with shell hash in ripple troughs, 2 Paguroidea
4	ECR-B-456	B	ECR-B-456-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash in ripple troughs
4	ECR-B-456	C	ECR-B-456-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash in ripple troughs
4	ECR-A-457	D	ECR-A-457-D-PV.jpg	Gravel Mixes	Sandy Gravel	sandy gravel	None	Physical	No	No	No	No	hydroid	6 Ascidiacea	barnacles, 6 Ascidiacea, 1 hydroid	Attached fauna	Ascidiacea	1	1	0	No	0	barnacles, 6 Ascidiacea, 1 hydroid	1 gastropod	0	0	sandy gravel bottom with barnacles, 6 Ascidiacea, 1 hydroid
4	ECR-A-457	F	ECR-A-457-F-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	81 Crepidula fornicata, 5 gastropod, 1 fish, barnacles, 29 gastropods (unidentified), 1 juvenile black sea bass	Attached fauna	Crepidula fornicata	50	0	0	No	0	81 Crepidula fornicata	5 gastropod	0	1 juvenile black sea bass (Centropristis striata)	Fine sandy bottom with shell hash, 81 Crepidula fornicata, barnacles, 29 gastropods (unidentified), 1 juvenile black sea bass
4	ECR-B-458	A	ECR-B-458-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	8 Crepidula fornicata	Soft sediment fauna	Crepidula fornicata	0	0	0	No	0	8 Crepidula fornicata	0	0	0	Fine sandy bottom with shell hash and 8 Crepidula fornicata
4	ECR-B-458	B	ECR-B-458-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	hydroid	9 Ascidiacea	9 Ascidiacea, 3 hydroid	Soft sediment fauna	Ascidiacea	5	0	0	No	0	9 Ascidiacea, 3 hydroid	0	0	0	Muddy sandy gravel with 9 Ascidiacea, 3 hydroid

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
4	ECR-A-459	A	ECR-A-459-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	hydroid	None	5 Crepidula fornicata, 1 Trigliidae, 3 hydroid	Soft sediment fauna	Hydroids	1	0	0	No	0	5 Crepidula fornicata, 3 hydroid	0	0	1 Trigliidae	Medium sandy bottom with shell hash and 1 Trigliidae, 5 Crepidula fornicata, 3 hydroid
4	ECR-A-459	C	ECR-A-459-C-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel with shell hash	None	Physical	No	No	No	No	None	None	1 Crepidula	Soft sediment fauna	Crepidula fornicata	0	0	0	No	0	1 Crepidula	0	0	0	Sandy gravel with shell hash
4	ECR-B-460	A	ECR-B-460-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	Hydroids	0	0	0	No	0	0	0	0	0	Medium muddy sand with gravel and shell hash and hydroid
4	ECR-B-460	C	ECR-B-460-C-PV.jpg	Gravel Mixes	Gravelly Sand	Gravel with sand	None	Physical	No	No	No	No	hydroid	4 Ascidiacea	4 Ascidiacea and 1 hydroid	Soft sediment fauna	Ascidiacea	0	0	0	No	0	4 Ascidiacea and 1 hydroid	0	0	0	Gravely sandy bottom with shell hash, 4 Ascidiacea and 1 hydroid
4	ECR-A-461	A	ECR-A-461-A-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel with shell hash	None	Physical	No	No	No	No	None	3 Ascidiacea	3 Ascidiacea	Soft sediment fauna	Ascidiacea	0	0	0	No	0	3 Ascidiacea	0	0	0	Sandy gravel with shell hash with 3 Ascidiacea
4	ECR-A-461	C	ECR-A-461-C-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel with shell hash	None	Physical	No	No	No	No	None	8 Ascidiacea	8 Ascidiacea	Soft sediment fauna	Ascidiacea	0	0	0	No	0	8 Ascidiacea	0	0	0	Sandy gravel with shell hash with 8 Ascidiacea
4	ECR-B-462	A	ECR-B-462-A-PV.jpg	Gravel Mixes	Sandy Gravel	Fine sand with gravel and shell hash	None	Physical	No	No	No	No	None	None	None	Soft Sediment Fauna	None	0	0	0	No	0	0	0	0	0	Fine sand with gravel and shell hash with live Crepidula stacks
4	ECR-B-462	C	ECR-B-462-C-PV.jpg	Gravelly	Gravelly Sand	Gravel and shell hash	None	Physical	No	No	No	No	None	5 Ascidiacea	12 Crepidula, 5 Ascidiacea	Attached fauna	Ascidiacea	5	0	0	No	0	12 Crepidula, 5 Ascidiacea	0	0	0	Gravelly sand and shell hash, 12 Crepidula fornicata and 2 Ascidiacea
4	ECR-A-463	E	ECR-A-463-E-PV.jpg	Gravel Mixes	Sandy Gravel	Gravel with sand	None	Physical	No	No	No	No	None	IND	1 fish	Soft Sediment Fauna	None	0	0	0	No	IND	IND	0	IND	1 fish	Sandy gravel with shell hash, poor image quality due to suspended particles
4	ECR-A-463	F	ECR-A-463-F-PV.jpg	Gravel Mixes	Sandy Gravel	Muddy gravel and shell hash	None	Physical	No	No	No	No	None	None	4 juvenile crepidula	Attached fauna	Crepidula fornicata	0	0	0	No	0	4 juvenile crepidula	0	0	0	Muddy gravel bottom with 4 juvenile Crepidula
4	ECR-B-464	B	ECR-B-464-B-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel with shell hash	None	Physical	No	No	No	No	None	8 Ascidiacea	8 Ascidiacea	Soft sediment fauna	Ascidiacea	0	0	0	No	0	8 Ascidiacea	0	0	0	Sandy gravel with shell hash with 8 Ascidiacea
4	ECR-B-464	C	ECR-B-464-C-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	20 Ascidiacea	20 Ascidiacea	Attached fauna	Ascidiacea	0	0	0	No	0	20 Ascidiacea	0	0	0	Sandy gravel with 20 Ascidiacea
4	ECR-A-465	A	ECR-A-465-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft Sediment Fauna	None	0	0	0	No	0	0	0	0	0	Medium sandy bottom with shell hash
4	ECR-A-465	C	ECR-A-465-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft Sediment Fauna	Ascidiacea	0	0	0	No	0	0	0	0	0	Medium sandy bottom with shell hash
4 Alt	ECR-B-466	A	ECR-B-466-A-PV.jpg	Gravel Mixes	Gravelly Sand	Fine/Medium sand with gravel and shell hash	None	Physical	No	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	1 Paguroidea	0	0	0	Gravely sandy bottom with shell hash
4 Alt	ECR-B-466	B	ECR-B-466-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft Sediment Fauna	Ascidiacea	0	0	0	No	0	0	0	0	0	Pieces of eelgrass leaf blades on sediment surface
4 Alt	ECR-A-467	A	ECR-A-467-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	1 squid	Soft sediment fauna	Paguroidea	0	0	0	No	0	1 squid	0	0	0	Fine sandy bottom with ripples and shell hash
4 Alt	ECR-A-467	B	ECR-A-467-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	2 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	2 Paguroidea	0	0	Fine sand with shell hash in ripple troughs, 2 Paguroidea
4 Alt	ECR-B-468	A	ECR-B-468-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom mized with shell hash and fine silt
4 Alt	ECR-B-468	B	ECR-B-468-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom mized with shell hash and fine silt
5 Alt	ECR-B-480	B	ECR-B-480-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	2 gastropod, green algae, phytoplankton mat	Soft Sediment Fauna	Ilyanassa Bed	0	1	1	No	0	0	2 gastropod	green algae, phytoplankton mat	0	3 gastropod fecal casts thin layer of phytoplankton matt over sandy sediment
5 Alt	ECR-B-480	C	ECR-B-480-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	1 Chaetopterus tube, Phytoplankton mat	Inferred fauna	Tracks and trails	0	1	0	No	1 Chaetopterus tube	0	0	Phytoplankton mat	0	6 burrows, gastropod track across sediment, phytoplankton thin mat over sediment surface
5 Alt	ECR-A-479	A	ECR-A-479-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	Red alga (Agardhiella subulata), green alga (Ulva sp.)	Soft sediment fauna	None	0	1	10	No	0	0	0	Red alga (Agardhiella subulata), green alga (Ulva sp.)	0	Fine muddy sand with red and green algae and barnacles attached to stacks of Crepidula fornicata. Red alga (Agardhiella subulata), green alga (Ulva sp.)
5 Alt	ECR-A-479	C	ECR-A-479-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	3 Crepidula fornicata, Red alga (Grinnellia americana)	Soft Sediment Fauna	Crepidula fornicata	0	1	1	No	0	3 Crepidula fornicata	0	Red alga (Grinnellia americana)	0	Fine muddy sand with 8 burrows, fecal casts gastropod tracks, red alga (Grinnellia americana) attached to Crepidula fornicata stack of 3 live shells
5	ECR-B-478	A	ECR-B-478-A-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel and cobble	None	Physical	No	No	No	No	hydroid	None	9 hydroid, 1 red algae, 1 calcareous alga	Soft sediment fauna	Hydroid	30	0	1	No	0	9 hydroid	0	1 red algae, 1 calcareous alga	0	Sandy gravel with cobble bottom, Red algae and hydroid attached to cobble, calcareous alga on cobble, image out of focus
5	ECR-B-478	B	ECR-B-478-B-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel and cobble	None	Physical	No	No	Yes	No	None	None	1 Rhizoclonium riparium, 1 Agardhiella subulata, 1 Grinnellia americana	Soft sediment fauna	None	0	0	5	No	0	0	0	1 Rhizoclonium riparium, 1 Agardhiella subulata, 1 Grinnellia americana)	0	Sandy gravel with cobble bottom, green algae (Rhizoclonium riparium), and red algae (Agardhiella subulata and Grinnellia americana)
5	ECR-C-1437	B	ECR-C-1437-B-PV.jpg	Muddy sand			Ripples	Physical	Yes	Yes	Yes	Yes	hydroid	None	red alga, green alga, 1 Paguroidea, 2 gastropod, 1 hydroid	Soft sediment fauna	Hydroid	1	1	1	No	0	1 hydroid	1 Paguroidea, 2 gastropod	green alga, red alga	0	Tubes present, visible tracks (gastropod and other), piles of fecal casts burrows, unidentified green and red alga visible with hydroid and blades of eel grass, also appears to be a maple leaf
5	ECR-C-1437	C	ECR-C-1437-C-PV.jpg	Muddy sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	red alga, barnacles, 4 Crepidula fornicata, 1 Paguroidea	Soft sediment fauna	Crepidula fornicata	1	1	1	No	1 clam	1 clam, barnacles, 4 Crepidula fornicata	1 Paguroidea	red alga	0	Muddy fine sandy bottom, visible tracks, unidentified red alga attached to Crepidula fornicata shells, empty shells with barnacles, Paguroidea left of center, fecal casts 1 clam siphons
5	ECR-A-477	A	ECR-A-477-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	1	0	No	0	0	0	0	0	40 burrows, stringgy fecal casts, gastropod tracks across sediment
5	ECR-A-477	C	ECR-A-477-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	red algae fragment	0	22 burrows, gastropod track across sediment, fecal casts, piece of floating red alga,
5	ECR-B-476	A	ECR-B-476-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	None	None	4 Chaetopterus tubes	Soft sediment fauna	Chaetopterus	0	0.1	0	No	4 Chaetopterus tubes	0	0	0	0	Muddy sandy bottom with 25 burrows, 4 Chaetopterus tubes and fecal casts
5	ECR-B-476	C	ECR-B-476-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	hydroid	None	4 Chaetopterus tube, 4 Paguroidea, 1 hydroid, 2 gastropod,red algae (Ceramium rubrum), kelp fragment	Soft sediment fauna	Chaetopterus	0	3	10	No	4 Chaetopterus tubes	4 Paguroidea, 1 hydroid	2 gastropod	red algae (Ceramium rubrum), kelp fragment	0	13 burrows, gastropod track across sediment, fecal casts Cahetopterus tubes, red algae (Ceramium rubrum), kelp fragment, 1 hydroid
5	ECR-A-475	A	ECR-A-475-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	8 Chaetopterus	Soft sediment fauna	Chaetopterus	0	0	0	No	8 Chaetopterus	0	0	0	0	fine sandy bottom with silt in ripple troughs, 3 burrows, 8 Chaetopterus, gastropod track across sediment
5	ECR-A-475	B	ECR-A-475-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	5 Chaetopterus	Soft sediment fauna	Chaetopterus	0	0	0	No	5 Chaetopterus	0	0	0	0	5 Chaetopterus tubes, fecal casts across sediment, unidentified yellow debris
5	ECR-B-474	A	ECR-B-474-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	hydroid	1 Ascidiacea	1 Ascidiacea, 1 hydroid	Soft sediment fauna	Tunicate Bed	5	0	0	No	0	1 Ascidiacea, 1 hydroid	0	0	0	Fine sandy bottom with ripples and shell hash, Ascidiacea growing on shell hash, 1 hydroid
5	ECR-B-474	B	ECR-B-474-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	No	Yes	hydroid	None	4 hydroid, 2 Paguroidea	Soft sediment fauna	Hydroid	1	0	0	No	0	4 hydroid	2 Paguroidea	0	0	1 burrows, 4 hydroid, 2 Paguroidea, decapod tracks across sediment
5	ECR-A-473	E	ECR-A-473-E-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	hydroid	None	1 hydroid, 3 Paguroidea	Soft sediment fauna	Hydroid	1	0	0	No	0	1 hydroid	3 Paguroidea	0	0	Muddy medium sand with shell hash, 2 hydroid, 3 Paguroidea
5	ECR-A-473	F	ECR-A-473-F-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	hydroid	None	1 hydroid, 2 gastropod, 2 fish	Soft sediment fauna	Hydroid	0	0	0	No	0	1 hydroid	2 gastropod	0	2 fish	Muddy medium sand with shell hash, 2 gastropod and 2 fish
5	ECR-B-472	B	ECR-B-472-B-PV.jpg	Muddy Sand			None	Biological	No	No	No	No	hydroid	2 Ascidiacea	4 hydroid, 2 Ascidiacea, 1 Paguroidea	Soft sediment fauna	Hydroid	15	0	0	No	0	4 hydroid, 2 Ascidiacea	1 Paguroidea	0	0	Muddy medium sand with shell hash, 4 hydroid, 2 Ascidiacea, 1 Paguroidea
5	ECR-B-472	C	ECR-B-472-C-PV.jpg	Muddy Sand			None	Biological	No	No	No	No	hydroid	6 Ascidiacea	6 Ascidiacea, 5 Crepidula fornicata, 3 Chetopterus, 2 hydroid	Soft sediment fauna	Tunicate Bed	1	0	0	No	0	6 Ascidiacea, 5 Crepidula fornicata, 3 Chetopterus, 2 hydroid	0	0	0	Muddy sand with shell hash, 6 Ascidiacea, 5 Crepidula fornicata, 3 Chetopterus, 2 hydroid

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
5	ECR-B-471	A	ECR-B-471-A-PV.jpg	Gravel Mixes	Sandy Gravel	Gravel and shell hash	None	Physical	No	No	No	No	1 Northern star coral (Astrangia poculata)	16 Ascidiacea	16 Ascidiacea, 1 Northen star coral , 2 purple sea urchins (Arbacia punctulata)	Attached fauna	Attached Tunicates	15	0	0	No	0	16 Ascidiacea, 1 Northen star coral	2 purple sea urchins (Arbacia punctulata)	0	0	Gravel with shell hash, 16 Ascidiacea, 2 Arbacia punctulata and 1 Northern star coral (Astrangia poculata)
5	ECR-B-471	C	ECR-B-471-C-PV.jpg	Gravel Mixes	Sandy Gravel	Gravel and shell hash	None	Physical	No	No	Yes	No	3 Northern star coral (Astrangia poculata)	17 Ascidiacea	3 Northern star coral (Astrangia poculata), 17 Ascidiacea, 1 gastropod, 1 Chaetopterus tube	Attached fauna	Attached Tunicates	15	0	0	No	1 Chaetopterus tube	3 Northern star , 17 Ascidiacea	1 gastropod	0	0	Gravel with shell hash, 17 Ascidiacea with 3 Northern star coral (Astrangia poculata)
5	ECR-B-470	A	ECR-B-470-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	7 Ascidiacea	25 Crepidula, 7 Ascidiacea	Soft sediment fauna	Crepidula	5	0	0	No	0	25 Crepidula, 7 Ascidiacea	0	0	0	Medium sandy bottom with shell hash, ripples, 25 Crepidula, 7 Ascidiacea
5	ECR-B-470	C	ECR-B-470-C-PV.jpg	0			None	Biological	No	No	No	No	None	2 Ascidiacea	24 Crepidula, 2 Ascidiacea	Attached fauna	Crepidula fornicata	5	0	0	No	0	24 Crepidula, 2 Ascidiacea	0	0	0	Shell rubble with Crepidula fornicata and Ascidiacea
5	ECR-A-469	A	ECR-A-469-A-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	5 Ascidiacea	5 Ascidiacea	Attached fauna	Attached Tunicates	0	0	0	No	0	5 Ascidiacea	0	0	0	Sandy gravel bottom with shell hash and Ascidiacea
5	ECR-A-469	C	ECR-A-469-C-PV.jpg	Gravelly	Gravelly Sand	Gravel and shell hash	None	Physical	No	No	No	No	None	5 Ascidiacea	5 Ascidiacea	Attached fauna	Attached Tunicates	5	0	0	No	0	5 Ascidiacea	0	0	0	Gravelly sand and shell hash with Ascidiacea
5 Alt 2	ECR-B-488	B	ECR-B-488-B-PV.jpg	Gravel Mixes	Muddy Sandy Gravel	Muddy Fine Sand/Cobbles/Granules/Shell Hash	None	Physical	No	No	Yes	No	None	None	2 Chaetopterus tubes, 1 fish, red alga, phytoplankton mat	Soft sediment fauna	Chaetopterus	0	1	10	No	2 Chaetopterus tubes	0	1 fish	red alga, phytoplankton matt	0	Muddy sandy gravel with cobbles/gravels/shell hash, Chaetopterus tubes, red alga, 1 fish, substrate covered with thin veneer of phytoplankton matt covering much of the sediment
5 Alt 2	ECR-B-488	C	ECR-B-488-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	2 Paguroidea	Inferred fauna	Fecal Mounds	0	1	0	No	0	0	2 Paguroidea	0	0	2 Paguroidea, phytoplankton mat covering of sediment surface,fecal casts gravel and shell hash
5 Alt 2	ECR-A-487	A	ECR-A-487-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Fecal Mounds	0	1	0	No	0	0	0	0	0	8 burrows, piles of fecals casts, Paguroidea tracks
5 Alt 2	ECR-A-487	B	ECR-A-487-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 shrimp, 2 gastropod	Inferred fauna	Fecal Mounds	0	1	0	No	0	0	1 shrimp, 2 gastropod	0	0	tubes, burrows, tracks from gastropod, 2 gastropod, piles of fecal casts, shrimp
5 Alt 2	ECR-B-486	A	ECR-B-486-A-PV.jpg	Gravel Mixes	Sandy Gravel	Fine/Medium sand with gravel and shell hash	Ripples	Physical	Yes	No	Yes	No	None	None	4 Crepidula fornicata, red alga	Inferred fauna	Tracks and trails	1	1	1	No	0	4 Crepidula fornicata	0	red alga	0	Fine/medium sand with gravel and shell hash, ripples, leaf blades of dead eel grass and one unidentified red alga
5 Alt 2	ECR-B-486	C	ECR-B-486-C-PV.jpg	Gravel Mixes	Sandy Gravel		Ripples	Physical	Yes	No	Yes	No	None	None	polychaete tubes tube, eel grass, barnacles, Crepidula convexa	Attached fauna	Crepidula fornicata	1	1	0	No	polychaete tubes tube	eel grass, barnacles, Crepidula convexa	0	0	0	Leaf blades of eel grass, Crepidula convexa and barnacles on Crepidula rubble, pink polychaete tubes tube upper right corner
5 Alt 2	ECR-A-485	A	ECR-A-485-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	Yes	Yes	None	None	2 Paguroidea, red alga (Gracilaria tikvahiae)	Inferred fauna	Tracks and trails	0	1	1	No	0	0	2 Paguroidea	red alga (Gracilaria tikvahiae)	0	tubes present, tracks from Paguroidea, one red algae (Gracilaria tikvahiae), fecal casts (coiled), eel grass leaf blade
5 Alt 2	ECR-A-485	B	ECR-A-485-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	Yes	Yes	None	None	polychaete tubes	Inferred fauna	Tracks and trails	0	1	0	No	polychaete tubes	0	0	0	0	Fine muddy sand with ripples, with polychaete tubes present, tracks visible in sediment, yellowish debris scattered over sediment
5 Alt 2	ECR-B-484	A	ECR-B-484-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	Yes	Yes	None	None	Ampelisca tubes	Soft Sediment Fauna	Ampelisca	0	10	0	No	0	Ampelisca tubes	0	0	0	Amphipod tubes, burrows
5 Alt 2	ECR-B-484	B	ECR-B-484-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	7 burrows, gastropod track across sediment
5 Alt 2	ECR-A-483	B	ECR-A-483-B-PV.jpg	Muddy Sand			Ripples	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples and shell hash
5 Alt 2	ECR-A-483	C	ECR-A-483-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples and shell hash, red alga debris
5 Alt 2	ECR-B-482	A	ECR-B-482-A-PV.jpg	Muddy Sand			Ripples	Physical	No	No	No	No	None	None	1 Triglidae	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 Triglidae	Medium sandy bottom with ripples and shell hash
5 Alt 2	ECR-B-482	B	ECR-B-482-B-PV.jpg	Muddy Sand			Ripples	Physical	No	No	No	No	2 Black sea bass (Centropristis striata)	None	2 black sea bass	Soft sediment fauna	None	0	0	0	No	0	0	0	0	2 black sea bass	Fine sand with blue mussel shell hash
5 Alt 2	ECR-A-481	A	ECR-A-481-A-PV.jpg	0			None	Biological	No	No	No	No	None	13 Ascidiacea	13 Ascidiacea	Attached fauna	Ascidiacea	3	0	0	No	0	13 Ascidiacea	0	0	0	Shell rubble with Ascidiacea, 2 pieces of eelgrass blades
5 Alt 2	ECR-A-481	B	ECR-A-481-B-PV.jpg	0			None	Biological	No	No	Yes	No	m star coral (Astrangia	10 Ascidiacea	10 Ascidiacea, 2 Northern star coral (Astrangia poculata)	Attached fauna	Ascidiacea	15	0	0	No	2 Chaetopterus tubes	10 Ascidiacea, 2 Northern star coral (Astrangia poculata)s	0	0	0	Shell rubble with Ascidiacea, 2 Northern star coral (Astrangia pocula
6	ECR-B-422	A	ECR-B-422-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	5 burrows, gastropod track across sediment
6	ECR-B-422	B	ECR-B-422-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	4 burrows, gastropod track across sediment, Arenicola casting
6	ECR-A-423	B	ECR-A-423-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	4 burrows, gastropod track across sediment
6	ECR-A-423	C	ECR-A-423-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	Barnacles, 1 Paguroidea	Inferred fauna	Tracks and trails	0	0	0	No	0	Barnacles	1 Paguroidea	0	0	Fine sandy bottom with ripples, shell fragments and larger shell with barnacles, 1 hermit crab and decapod tracls
6	ECR-B-424	A	ECR-B-424-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes	Soft sediment fauna	None	0	0	0	No	polychaete tubes	0	0	0	0	15 burrows, gastropod track across sediment
6	ECR-B-424	B	ECR-B-424-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes, 1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	polychaete tubes	0	1 Paguroidea	0	0	Fine sandy bottom with ripples, Arenicola casting and polychaete tubes, 1 Paguroidea
6	ECR-A-425	A	ECR-A-425-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	2 polychaete tubes	Soft sediment fauna	None	0	1	0	No	2 polychaete tubes	0	0	0	0	Fine sandy bottom with ripples, 21 burrows, 2 polychaete tubes
6	ECR-A-425	B	ECR-A-425-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	polychaete tubes	Inferred fauna	Fecal mounds	0	0	0	No	polychaete tubes	0	0	0	0	20 burrows, gastropod track across sediment, Arenicola casting
6	ECR-B-426	A	ECR-B-426-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Black sea bass (Centropristis striata)	None	1 black sea bass	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 black sea bass	Fine muddy sand with ripples, 1 black sea bass disturbed sediment surface
6	ECR-B-426	B	ECR-B-426-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	1 gastropod, 1 isopod	Inferred fauna	Tracks and trails	0	0	0	No	0	0	1 gastropod, 1 isopod	0	0	1 burrow, gastropod track across sediment
6	ECR-A-427	A	ECR-A-427-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	8 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	8 Paguroidea	0	0	Fine muddy sand with silt accumulating in ripple troughs
6	ECR-A-427	B	ECR-A-427-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	4 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	4 gastropod	0	0	Fine muddy sand with silt accumulating in ripple troughs
6	ECR-B-428	A	ECR-B-428-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	None	None	1 squid, 1 Triglidae	Inferred fauna	Fecal mounds	0	0	0	No	0	0	1 squid	0	1 Triglidae	Fine sandy bottom with ripples and shell hash and stringy fecal casts
6	ECR-B-428	C	ECR-B-428-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	1 Black sea bass (Centropristis striata)	None	Barnacles, 1 snail, 4 Paguroidea, 1 black sea bass	Soft sediment fauna	Paguroidea	0.1	0	0	No	0	Barnacles	1 snail, 4 Paguroidea	0	1 black sea bass	Fine sandy bottom with ripples and shell hash
6	ECR-A-429	A	ECR-A-429-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Black sea bass (Centropristis striata)	None	2 gastropod, 1 black sea bass	Soft sediment fauna	Paguroidea	0.1	0	0	No	0	0	2 gastropod, 1 black sea bass	0	1 black sea bass	Fine muddy sand with ripples
6	ECR-A-429	C	ECR-A-429-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0.1	0	0	No	0	0	1 Paguroidea	0	0	Fine muddy sand with ripples
6	ECR-B-430	B	ECR-B-430-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0.1	0	0	No	0	0	1 Paguroidea	0	0	Fine muddy sand with silt accumulating in ripple troughs
6	ECR-B-430	C	ECR-B-430-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	2 Paguroidea	Soft sediment fauna	Paguroidea	0.1	0	0	No	0	0	2 Paguroidea	0	0	Fine muddy sand with silt accumulating in ripple troughs
6	ECR-A-431	A	ECR-A-431-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with thin layer of silt and shell hash in ripple troughs
6	ECR-A-431	C	ECR-A-431-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-B-432	A	ECR-B-432-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	3 Triglidae	Soft sediment fauna	None	0	0	0	No	0	0	0	0	3 Triglidae	Fine sandy bottom with ripples and shell hash

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
6	ECR-B-432	B	ECR-B-432-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-A-433	A	ECR-A-433-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Black sea bass (Centropristis striata), 1 hydroid	None	Barnacles, 1 hydroid, 1 Paguroidea, 1 black sea bass	Soft sediment fauna	Hydroids	0	1	0	No	0	Barnacles, 1 hydroid	1 Paguroidea	0	1 black sea bass	Fine sandy bottom with gravel and cobble and shell hash, 1 hydroid and juvenile black sea bass
6	ECR-A-433	B	ECR-A-433-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	No	Yes	1 Black sea bass (Centropristis striata)	None	1 black sea bass	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 black sea bass	Fine sandy bottom with ripples and shell hash, burrow
6	ECR-B-434	A	ECR-B-434-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hydroid	None	Barnacles, 3 Crepidula, 6 hydroid, 4 gastropod	Soft sediment fauna	Hydroids	0	1	0	Yes	0	Barnacles, 3 Crepidula, 6 hydroid	4 gastropod	0	0	Fine muddy sandy bottom with 1 skate egg case, hydroid, Crepidula fornicata stacks
6	ECR-B-434	B	ECR-B-434-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	hydroid	None	Barnacles, 5 Hydroid	Soft sediment fauna	Hydroids	20	1	0	No	0	Barnacles, 5 Hydroid	0	0	0	Fine muddy sandy bottom with hydroid, Crepidula fornicata stacks
6	ECR-A-435	A	ECR-A-435-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Barren fine sandy bottom with ripples
6	ECR-A-435	B	ECR-A-435-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples with one Paguroidea
6	ECR-B-436	B	ECR-B-436-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	1 Black sea bass (Centropristis striata)	None	2 gastropod, 1 black sea bass	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	2 gastropod	0	1 black sea bass	Fine sandy bottom with riplles and shell hash
6	ECR-B-436	C	ECR-B-436-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	15 burrows, gastropod track across sediment, shell hash
6	ECR-A-437	B	ECR-A-437-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with riplles and shell hash
6	ECR-A-437	C	ECR-A-437-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-B-438	B	ECR-B-438-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-B-438	C	ECR-B-438-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-A-439	A	ECR-A-439-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples and shell hash
6	ECR-A-439	B	ECR-A-439-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Inferred fauna	Fecal mounds	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples and shell hash, stringy feacl casts
6	ECR-B-440	B	ECR-B-440-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and coarse sand in ripple troughs
6	ECR-B-440	C	ECR-B-440-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	1 shrimp, 1 gastropod	Soft sediment fauna	Ilyanassa Bed	0	0	0	No	0	0	1 shrimp, 1 gastropod	0	0	Fine sandy bottom with shell hash and coarse sand in ripple troughs
6	ECR-A-441	A	ECR-A-441-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	2 Paguroidea	Soft sediment fauna	Paguroidea	0	0	0	No	0	0	2 Paguroidea	0	0	Fine sandy bottom with shell hash and coarse sand in ripple troughs
6	ECR-A-441	B	ECR-A-441-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and coarse sand in ripple troughs
6	ECR-B-442	A	ECR-B-442-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples, shell fragments
6	ECR-B-442	C	ECR-B-442-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and coarse sand in ripple troughs
6	ECR-A-443	A	ECR-A-443-A-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	1 Northern star coral (Astrangia poculata)	None	Barnacles, 80 Crepidula, 1 Northern star coral (Astrangia poculata)	Attached fauna	Crepidula fornicata	1	0	0	No	0	Barnacles, 80 Crepidula, 1 Northern star coral (Astrangia poculata)	0	0	0	Live Crepidula fornicata bed, with 1 Northern star coral
6	ECR-A-443	B	ECR-A-443-B-PV.jpg	Gravel Mixes	Sandy Gravel	Cobble	None	Physical	No	No	No	No	3 Northern star coral (Astrangia poculata)	None	Barnacles, 30 Crepidula, 1 Northern star coral (Astrangia poculata)	Attached fauna	Northern star coral (Astrangia poculata)	1	0	0	No	0	Barnacles, 30 Crepidula, 3 Northern star coral (Astrangia poculata)	0	0	0	Medium to coarse sand with cobble. 3 Northern star coral (Astrangia poculata), 30 Crepidula fornicata and barnacles, 1 juvenile flounder
6	ECR-B-444	B	ECR-B-444-B-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	None	None	Barnacles, 97 Crepidula, 1 juvenile flounder	Attached fauna	Crepidula fornicata	20	0	0	No	0	Barnacles, 97 Crepidula	0	0	1 juvenile flounder	Medium to coarse sandy bottom with cobble. 3 Northern star coral (Astrangia poculata), 97 Crepidula fornicata and barnacles, 1 juvenile flounder
6	ECR-B-444	C	ECR-B-444-C-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	Barnacles, 2 Paguroidea	Attached fauna	Crepidula fornicata	0	0	0	No	0	Barnacles	2 Paguroidea	0	0	Sandy gravel bottom with cobble and juvelie Crepidula on cobble
6	ECR-A-445	A	ECR-A-445-A-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	None	None	Barnacles, 120 Crepidula	Attached fauna	Crepidula fornicata	0	0	0	No	0	Barnacles, 120 Crepidula	0	0	0	Medium to coarse sandy bottom with cobble. 3 Northern star coral (Astrangia poculata), 97 Crepidula fornicata and barnacles, 1 juvenile flounder
6	ECR-A-445	B	ECR-A-445-B-PV.jpg	Gravelly	Gravelly Sand		None	Physical	No	No	No	No	None	None	None	Attached fauna	Crepidula fornicata	0	0	0	No	0	0	0	0	0	Sandy gravel with juvenile Crepidula, one anemone and one Triglidae
6	ECR-B-446	A	ECR-B-446-A-PV.jpg	Gravel Mixes	Sandy Gravel	Cobble, Crepidula fornicata	None	Physical	No	No	No	No	1 Northern star coral (Astrangia poculata)	None	Barnacles, 24 Crepidula, 1 Northern star coral (Astrangia poculata)	Attached fauna	Crepidula fornicata	40	0	0	No	0	Barnacles, 24 Crepidula, 1 Northern star coral (Astrangia poculata)	0	0	0	1 Northern star coral, barnacles attached to cobble and 24 Crepidula fornicata
6	ECR-B-446	C	ECR-B-446-C-PV.jpg	Gravel Mixes	Sandy Gravel	Cobble, Crepidula fornicata	None	Physical	No	No	No	No	None	None	Barnacles, 56 Crepidula	Attached fauna	Crepidula fornicata	40	0	0	No	0	Barnacles, 56 Crepidula	0	0	0	barnacles attached to cobble and 56 Crepidula fornicata
6	ECR-A-447	D	ECR-A-447-D-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	1 Triglidae, 1 Paguroidea, 29 Crepidula, 1 Triglidae	Soft sediment fauna	Crepidula fornicata	2	0	0	No	0	1 Triglidae, 1 Paguroidea, 29 Crepidula	1 Paguroidea	0	1 Triglidae	Sandy gravel with Crepidula
6	ECR-A-447	F	ECR-A-447-F-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	1 Black sea bass (Centropristis striata)	None	1 Triglidae, 1 black sea bass	Attached fauna	Crepidula fornicata	0	0	0	No	0	0	0	0	1 Triglidae, 1 black sea bass	Sandy gravel bottom with cobble and juvelie Crepidula on cobble
7	ECR-B-448	E	ECR-B-448-E-PV.jpg	Gravelly	Gravelly Sand	Gravel with sand	Ripples	Physical	Yes	No	No	No	None	None	20 Crepidula fornicata	Soft sediment fauna	Crepidula fornicata	20	0	0	No	0	20 Crepidula fornicata	0	0	0	Fine sandy bottom with ripple and Crepidula stacks
7	ECR-B-448	F	ECR-B-448-F-PV.jpg	Gravelly	Gravelly Sand	Gravel with sand	None	Physical	No	No	No	No	None	None	11 Crepidula fornicata	Soft sediment fauna	Crepidula fornicata	0	0	0	No	0	11 Crepidula fornicata	0	0	0	Gravely sandy bottom with Crepidula fornicata stacks
7	ECR-A-449	B	ECR-A-449-B-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	None	None	440 Crepidula	Soft sediment fauna	Crepidula fornicata	80	0	0	No	0	440 Crepidula	0	0	0	Crepidula fornicata reef with live shells and sandy mud
7	ECR-A-449	C	ECR-A-449-C-PV.jpg	Crepidula Reef Substrate			None	Biological	No	No	No	No	None	None	244 Crepidula fornicata	Attached fauna	Crepidula fornicata	50	0	0	No	0	244 Crepidula	1 snail	0	0	244 Crepidula reef substrate with hydroid and red alga fragment
7	ECR-C-1429	B	ECR-C-1429-B-PV.jpg	Gravel Mixes	Sandy Gravel	Sandy gravel with live Crepidula fornicata	None	Physical	No	No	No	No	None	None	29 Crepidula fornicata, barnacles, 2 fish	Soft sediment fauna	Crepidula fornicata	20	0	0	No	0	29 Crepidula fornicata, barnacles	2 fish	0	2 fish	Sandy gravel with 29 Crepidula fornicata live shells
7	ECR-C-1429	C	ECR-C-1429-C-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	Barnacles, 5 Crepidua fornicata, 1 Paguroidea	Soft sediment fauna	Crepidula fornicata	1	0	0	No	0	Barnacles, 5 Crepidua fornicata	1 Paguroidea	0	0	Sandy gravel bottom with Crepidula fornicata shells and a Paguroidea
7	ECR-C-1430	B	ECR-C-1430-B-PV.jpg	Gravel Mixes	Sandy Gravel	Fine sandy gravel with shell hash	None	Physical	No	No	No	No	None	None	2 fish, 1 Triglidae, 1 Paguroides, 5 juvenile Crepidula	Attached fauna	Crepidula fornicata	0	0	0	No	0	4 Crepidula	1 Paguroidea	0	2 fish, 1 Triglidae	Fine sandy gravel with shell hash, 2 fish, 1 Triglidae and 1 Paguroidea
7	ECR-C-1430	C	ECR-C-1430-C-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	Yes	No	Yes	None	None	24 Crepidula, barnacles	Soft sediment fauna	Crepidula fornicata	20	0	0	No	0	24 Crepidula, barnacles	0	0	0	Sandy gravel and shell hash
7	ECR-C-1431	B	ECR-C-1431-B-PV.jpg	Gravelly	Gravelly Sand	Gravelly sand with cobble	None	Physical	No	No	No	No	2 Northern star coral (Astrangia poculata), 1 hydroid	None	2 Northern star coral (Astrangia poculata), 1 Crepidula fornicata, 1 hydroid, 1 gastropod	Attached fauna	Northern star coral (Astrangia poculata)	5	0	0	No	0	2 Northern star coral (Astrangia poculata), 1 Crepidula fornicata, 1 hydroid	1 gastropod	0	0	Gravelly sand with cobble, 2 Northern star coral (Astrangia poculata) and hydroid attached to cobble, 1 gastropod and 1 Crepidula fornicata
7	ECR-C-1431	C	ECR-C-1431-C-PV.jpg	Gravelly	Gravelly Sand	Gravelly sand with cobble	None	Physical	No	No	No	No	15 Northern star coral (Astrangia poculata)	None	15 Northern star coral (Astrangia poculata), 1 gastropod	Attached fauna	Northern star coral (Astrangia poculata)	25	0	0	No	0	15 Northern star coral (Astrangia poculata)	1 gastropod	0	0	Gravelly sand with cobble, 15 Northern star coral (Astrangia poculata) attached to cobble, 1 gastropod

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
7	ECR-B-450	A	ECR-B-450-A-PV.jpg	Gravelly	Gravelly Sand	Gravel with sand	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravely sandy bottom, image is out of focus
7	ECR-B-450	B	ECR-B-450-B-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	Coarse sandy bottom with gracel, 1 Paguroidea
7	ECR-A-451	A	ECR-A-451-A-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	4 Crepidula, 1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	4 Crepidula	1 Paguroidea	0	0	Coarse sandy bottom with gravel, 1 Paguroidea, 4 Crepidula
7	ECR-A-451	C	ECR-A-451-C-PV.jpg	Gravel Mixes	Sandy Gravel		None	Physical	No	No	No	No	None	None	16 Crepidula	Soft sediment fauna	Hydroids	5	0	0	No	0	16 Crepidula	0	0	0	Coarse sand with gravel and Crepidula stack with hydroid attached
7	ECR-B-452	A	ECR-B-452-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine to medium sandy bottom with gravel accumulating in ripple troughs
7	ECR-B-452	C	ECR-B-452-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	decapod tracks across image
7	ECR-A-453	A	ECR-A-453-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	15 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	10	0	No	0	15 Echinarachnius parma	0	0	0	Fine sandy bottom with 15 Echinarachnius parma
7	ECR-A-453	C	ECR-A-453-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	No	None	None	13 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	3	0	No	0	13 Echinarachnius parma	0	0	0	Fine sandy bottom with 13 Echinarachnius parma, stringy fecal casts
7	ECR-B-454	E	ECR-B-454-E-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	20 burrows, gastropod track across sediment
7	ECR-B-454	F	ECR-B-454-F-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	No	Yes	None	None	1 sea pen	Soft sediment fauna	Pennatulid Bed	0	0.1	0	No	0	0	1 sea pen	0	0	crab tracks across image, 3 burrows
7	ECR-A-455	B	ECR-A-455-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Ampelisca tubes, 4 sea pen	Soft sediment fauna	Ampelisca	1	20	0	No	0	Ampelisca tubes	4 sea pen	0	0	Amphipod tubes, burrows
7	ECR-A-455	C	ECR-A-455-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Ampelisca tubes, 4 Paguroidea	Soft sediment fauna	Ampelisca	0	25	0	No	0	Ampelisca tubes	4 Paguroidea	0	0	Amphipod tubes, burrows
7	ECR-A-501	A	ECR-A-501-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	Yes	No	None	None	None	Soft Sediment Fauna	None	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples, gastropod tracks
7	ECR-A-501	B	ECR-A-501-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	Fine/medium sandy bottom with ripples and shell hash, 1 Paguroidea
7	ECR-B-502	B	ECR-B-502-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	1 Paguroidea	Inferred fauna	Tracks and trails	0	0	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with ripples, 1 Paguroidea, gastropod tracks
7	ECR-B-502	C	ECR-B-502-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	1	0	No	0	0	0	0	0	Fine sandy bottom with ripples, gastropod tracks
7	ECR-A-503	B	ECR-A-503-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	shell hash, tracks in sediment, fecal cast next to Paguroidea
7	ECR-A-503	C	ECR-A-503-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples, gastropod tracks
7	ECR-B-504	B	ECR-B-504-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	Amphipod tubess, shell hash
7	ECR-B-504	C	ECR-B-504-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	Amphipod tubess, tracks in sediment
7	ECR-A-505	B	ECR-A-505-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples, gastropod tracks
7	ECR-A-505	C	ECR-A-505-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Fine sandy bottom with ripples, gastropod tracks
7	ECR-A-506	B	ECR-A-506-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Amphipod tubess, reddish sand deposited over bottom, shell hash
7	ECR-A-506	C	ECR-A-506-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Amphipod tubess, reddish sand deposited over bottom, shell hash
7	ECR-A-507	A	ECR-A-507-A-PV.jpg	Sand	Fine/ Fine Sand		None	Physical	No	Yes	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Coarse sand with fine silt in ripple troughs, clam siphons, tubes covered in sand, shell hash, visible tracks
7	ECR-A-507	C	ECR-A-507-C-PV.jpg	Sand	Fine/ Fine Sand		None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Fecal Mounds	0	0	0	No	0	0	0	0	0	Fecal casts tubes covered in sand, shell hash, reddish sand with silt deposited over bottom
7	ECR-B-508	B	ECR-B-508-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Gastropod tracks in sand, shell hash
7	ECR-B-508	C	ECR-B-508-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Gastropod tracks in sand, shell hash
7	ECR-B-509	A	ECR-B-509-A-PV.jpg	Sand	Medium Sand		None	Physical	No	No	Yes	No	None	None	1 red hake	Soft sediment fauna	None	0	0	0	No	0	0	0	0	1 red hake	Medium to coarse sand with ripples and red hake
7	ECR-B-509	C	ECR-B-509-C-PV.jpg	Gravelly	Gravelly Sand	Fine to coarse sand with gravel and shell hash	None	Physical	No	No	Yes	No	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Gravelly sand with shell hash
7	ECR-B-510	A	ECR-B-510-A-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	1 squid	Inferred fauna	Tracks and trails	0	0	0	No	0	0	1 squid	0	0	Medium sand with fine silt layer, one small squid
7	ECR-B-510	C	ECR-B-510-C-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Gastropod tracks/marks in sediment
7	ECR-B-511	A	ECR-B-511-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	No	No	No	None	None	None	Inferred Fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Muddy sandy bottom with ripples and shell hash, gastropod tracks
7	ECR-B-511	C	ECR-B-511-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Soft sediment fauna	None	0	0	0	No	0	0	0	0	0	Fine sand with silt deposit on ripple troughs, tube structures
7	ECR-B-512	B	ECR-B-512-B-PV.jpg	Muddy Sand			None	Physical	No	No	No	Yes	None	None	3 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	10	0	No	0	0	3 Echinarachnius parma	0	0	medium sandy bottom with ripple and shell hash, 3 Echinarachnius parma
7	ECR-B-512	C	ECR-B-512-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	1 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	0	0	No	0	0	1 Echinarachnius parma	0	0	shell hash, tubes, disturbance in sediment upper right corner, Echinarachnius parma tracks
7	ECR-A-513	B	ECR-A-513-B-PV.jpg	Gravel Mixes	Sandy Gravel	Shell hash	None	Physical	No	No	No	No	None	None	None	Soft sediment fauna	Chaetopterus	0	0	0	No	0	0	0	0	0	2 Chaetopterus tubes, gravels and shell hash (50% coverage)
7	ECR-A-513	C	ECR-A-513-C-PV.jpg	Sand	Medium Sand		Ripples	Physical	Yes	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Medium to coarse sandy bottom with fine silt deposits in ripple troughs
7	ECR-B-514	D	ECR-B-514-D-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	1 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	1	0	No	0	0	1 Echinarachnius parma	0	0	Echinarachnius parma track, shell hash, short tubes
7	ECR-B-514	F	ECR-B-514-F-PV.jpg	Gravelly	Gravelly Sand	Shell hash	None	Physical	No	No	No	No	None	None	None	Soft Sediment Fauna	None	0	0	0	No	0	0	0	0	0	gravels and shell hash (15% coverage)
8	ECR-A-515	A	ECR-A-515-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	1	0	No	0	0	0	0	0	tubes, gastropod tracks, depressions in sediment
8	ECR-A-515	C	ECR-A-515-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	None	Inferred fauna	Tracks and trails	0	1	0	No	0	0	0	0	0	tubes, gastropod tracks, depressions in sediment
8	ECR-B-516	A	ECR-B-516-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Soft Sediment Fauna	Ampelisca	0	1	0	No	0	0	0	0	0	Amphipod tubes, shell hash
8	ECR-B-516	C	ECR-B-516-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	None	Soft Sediment Fauna	Ampelisca	0	1	0	No	0	0	0	0	0	Amphipod tubes, shell hash
8	ECR-C-1516	A	ECR-C-1516-A-PV.jpg	Sand	Fine/Very Fine Sand		IND	Physical	IND	No	No	No	None	None	2 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	2 Paguroidea	0	0	Fine sandy bottom with shell fragments, image taken too close to bottom to detect presence of sand ripples
8	ECR-C-1516	B	ECR-C-1516-B-PV.jpg	Sand	Fine/Very Fine Sand		IND	Physical	IND	No	No	No	None	None	1 Paguroidea	Soft sediment fauna	Paguroidea	0	0.1	0	No	0	0	1 Paguroidea	0	0	Fine sandy bottom with shell fragments, image taken too close to bottom to detect presence of sand ripples
8	ECR-A-517	A	ECR-A-517-A-PV.jpg	Sand	Medium Sand		None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and decapod tracks

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
8	ECR-A-517	B	ECR-A-517-B-PV.jpg	Sand	Medium Sand		None	Physical	No	No	Yes	No	None	None	None	Inferred fauna	Tracks and trails	0	0	0	No	0	0	0	0	0	Fine sandy bottom with shell hash and decapod tracks
8	ECR-B-518	B	ECR-B-518-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	3	0	No	0	0	1 sea star	0	0	tubes, shell hash, depression in sediment
8	ECR-B-518	C	ECR-B-518-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star	Soft sediment fauna	Astropecten	0	3	0	No	0	0	1 sea star	0	0	tubes, fine shell hash
8	ECR-A-519	A	ECR-A-519-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	1 sea star, 1 Ceriantharia, Ampelisca tubes	Soft sediment fauna	Astropecten	0	5	0	No	1 Ceriantharia	Ampelisca tube	1 sea star	0	0	Amphipod tubes, burrows, two seastar depressions in sediment, one sea star (Astropecten)
8	ECR-A-519	B	ECR-A-519-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	1 Ceriantharia	None	1 Ceriantharia, 3 sea star, Ampelisca tubes	Soft sediment fauna	Astropecten	0	5	0	No	1 Ceriantharia	Ampelisca tube	3 sea star	0	0	Amphipod tubes, 3 sea star, 1 Ceriantharia, fine shell hash
8	ECR-B-520	A	ECR-B-520-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star	0	0	Amphipod tubes, fine shell hash
8	ECR-B-520	B	ECR-B-520-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star	0	0	Amphipod tubes, 3 sea star tracks, fine shell hash
8	ECR-A-521	A	ECR-A-521-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	3	0	No	0	0	1 sea star	0	0	Amphipod tubes, sea star tracks
8	ECR-A-521	B	ECR-A-521-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	5 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	5 sea star	0	0	Amphipod tubes, 5 sea star, 2 sea star tracks
8	ECR-B-522	A	ECR-B-522-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	1	0	No	0	0	1 sea star	0	0	Amphipod tubes, 1 sea star, sea star track, fine shell hash
8	ECR-B-522	B	ECR-B-522-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 sea star	Soft sediment fauna	Astropecten	0	1	0	No	0	0	2 sea star	0	0	Amphipod tubes, 2 sea star, fine shell hash
8	ECR-A-523	A	ECR-A-523-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	1 Ceriantharia, 3 sea star	Soft sediment fauna	Astropecten	0	2	0	No	1 Ceriantharia	Ampelisca tube	3 sea star	0	0	Amphipod tubes, 3 sea star, sea star track, fine shell hash, one white Ceriantharia
8	ECR-A-523	B	ECR-A-523-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	1	0	No	0	0	1 sea star	0	0	Amphipod tubes, 1 sea star, burrow holes, tracks in sediment upper left quadrant, fine shell hash
8	ECR-B-524	A	ECR-B-524-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 sea star	Soft sediment fauna	Astropecten	0	1	0	No	0	0	2 sea star	0	0	tubes, 2 sea star, 1 sea star track, round depression in sediment, fine shell hash
8	ECR-B-524	C	ECR-B-524-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star	Soft sediment fauna	Astropecten	0	1	0	No	0	0	1 sea star	0	0	tubes, fine shell hash
8	ECR-A-525	A	ECR-A-525-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	2	0	No	0	0	1 sea star	0	0	tubes, 1 sea star, fine shell hash, sea star track
8	ECR-A-525	B	ECR-A-525-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	3 sea star	Soft sediment fauna	Astropecten	0	3	0	No	0	0	3 sea star	0	0	Amphipod tubes, 1 sea star, 2 sea star, fine shell hash
8	ECR-B-526	B	ECR-B-526-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	hydroid	None	2 shrimp, 1 hydroid, Ampelisca tubes	Soft sediment fauna	Ampelisca	0	10	0	No	1 hydroid	0	2 shrimp	0	0	Amphipod tubes, hydroid upper right, shrimp, shell hash
8	ECR-B-526	C	ECR-B-526-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	2 shrimp	Soft sediment fauna	Ampelisca	0	10	0	No	0	0	2 shrimp	0	0	Amphipod tubes, shrimp, shell hash
8	ECR-A-527	A	ECR-A-527-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star	Soft sediment fauna	Astropecten	0	3	0	No	0	0	1 sea star	0	0	Amphipod tubes, 1 sea star, shell hash
8	ECR-A-527	B	ECR-A-527-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	hydroid	None	1 sea star,1 hydroid	Soft sediment fauna	Astropecten	0	1	0	Yes	1 hydroid	0	1 sea star	0	0	Amphipod tubes, 1 sea star, 2 burrows, gastropod track mark in sediment, one shark/skate egg case, 1 hydroid, fine shell hash
8	ECR-B-528	A	ECR-B-528-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	1 Ceriantharia	None	1 Ceriantharia, 1 sea star, 1 shrimp	Soft sediment fauna	Astropecten	0	40	0	No	1 Ceriantharia	Ampelisca tube	1 sea star	0	0	Amphipod tubes, 1 sea star (Astropecten), shell hash
8	ECR-B-528	B	ECR-B-528-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	1 Scallop (Placopecten magellanicus)	None	1 scallop (Placopecten magellanicus), 2 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 scallop (Placopecten magellanicus), 2 sea star	0	0	Amphipod tubes, shell hash, 1 scallop, 2 burrowing sea stars
8	ECR-A-529	A	ECR-A-529-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 shrimp, 1 skate	Soft sediment fauna	Ampelisca	0	3	0	No	0	0	1 shrimp	0	1 skate	Amphipod tubes, burrows, 1 skate with spots partially in frame
8	ECR-A-529	B	ECR-A-529-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	Yes	None	None	Amphipod tubes	Soft sediment fauna	Ampelisca	0	3	0	No	0	0	0	0	0	Amphipod tubes, shell hash
8	ECR-B-530	A	ECR-B-530-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 sea star	Soft sediment fauna	Astropecten	0	15	0	No	0	0	2 sea star	0	0	Amphipod tubes, shell hash, burrows, depression in sediment, 2 sea star out of frame
8	ECR-B-530	C	ECR-B-530-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Amphipod tubes	Soft sediment fauna	Ampelisca	0	20	0	No	0	0	0	0	0	Amphipod tubes, shell hash
8	ECR-A-531	A	ECR-A-531-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Amphipod tubes	Soft sediment fauna	Ampelisca	0	7	0	No	0	0	0	0	0	Amphipod tubes, shell hash
8	ECR-A-531	C	ECR-A-531-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 shrimp	Soft sediment fauna	Ampelisca	0	5	0	No	0	0	1 shrimp	0	0	Amphipod tubes,
8	ECR-B-532	A	ECR-B-532-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	1 Ceriantharia, 1 shrimp, 1 sea pen	Soft sediment fauna	Pennatulid	0.1	10	0	No	1 Ceriantharia	1 sea pen	1 shrimp	0	0	Amphipod tubes, Ceriantharia near left laser, 1 sea pen stalk, shrimp at bottom of sea pen stalk, fine shell hash, burrows
8	ECR-B-532	B	ECR-B-532-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Amphipod tubes	Soft sediment fauna	Ampelisca	0	10	0	No	0	0	0	0	0	Amphipod tubes, burrows, fine shell hash
8	ECR-A-533	A	ECR-A-533-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	1 Ceriantharia, gastropod or Paguroidea	Soft sediment fauna	Ampelisca	0	10	0	No	1 Ceriantharia	0	1 gastropod or Paguroidea	0	0	Amphipod tubes, burrows, white gastropod shell, Ceriantharia in the upper right corner, fine shell hash
8	ECR-A-533	C	ECR-A-533-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	3 Ceriantharia	None	3 Ceriantharia, 2 shrimp	Soft sediment fauna	Ampelisca	0	7	0	No	3 Ceriantharia	0	2 shrimp	0	0	Amphipod tubes, possibly 3 Ceriantharia, burrows, fine shell hash
8	ECR-B-534	A	ECR-B-534-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	2 Ceriantharia	None	2 Ceriantharia, 6 shrimp	Soft sediment fauna	Ceriantharia	0	7	0	No	2 Ceriantharia	0	5 shrimp	0	0	Amphipod tubes, 2 Ceriantharia, fine shell hash, burrows
8	ECR-B-534	C	ECR-B-534-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	1 Ceriantharia, 9 shrimp	Soft sediment fauna	Ceriantharia	0	5	0	No	1 Ceriantharia	0	9 shrimp	0	0	Amphipod tubes, 1 Ceriantharia (above right laser), burrows, depression in sediment, fine shell hash
8	ECR-A-535	A	ECR-A-535-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	1 Ceriantharia	None	1 Ceriantharia, 2 shrimp	Soft sediment fauna	Ceriantharia	0	7	0	No	1 Ceriantharia	0	2 shrimp	0	0	Amphipod tubes, 1 Ceriantharia (above lasers), fine shell hash
8	ECR-A-535	B	ECR-A-535-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	2 shrimp	Soft sediment fauna	Ampelisca	0	10	0	No	0	0	2 shrimp	0	0	Amphipod tubes, fine shell hash
8	ECR-B-536	A	ECR-B-536-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 shrimp	Soft sediment fauna	Ampelisca	0	5	0	No	0	0	1 shrimp	0	0	Amphipod tubes, fine shell hash, black object near lower edge of screen
8	ECR-B-536	B	ECR-B-536-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	2 Ceriantharia	None	5 shrimp	Soft sediment fauna	Ampelisca	0	7	0	No	2 Ceriantharia	0	5 shrimp	0	0	Amphipod tubes, burrows, 2 Ceriantharia, two depressions in sediment, shell hash, fine shell hash
8	ECR-A-537	A	ECR-A-537-A-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	Amphipod tubes, 1 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star	0	0	Amphipod tubes, fine shell hash, grainy image
8	ECR-A-537	C	ECR-A-537-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 shrimp, sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star, 2 shrimp	0	0	Muddy sandy bottom with Ampelisca , sea star and razor clam dead shell
8	ECR-B-538	B	ECR-B-538-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star, 1 shrimp	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star, 1 shrimp	0	0	Distorted/grainy image, almost No shell hash
8	ECR-B-538	C	ECR-B-538-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	2 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	2 sea star	0	0	Distorted/grainy image, 2 sea star, Amphipod tubes, fine shell hash
8	ECR-A-539	A	ECR-A-539-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	3 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	3 sea star	0	0	Amphipod tubes, 3 sea star, almost No shell hash
8	ECR-A-539	B	ECR-A-539-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	3 sea star, Ampelisca tubes	Soft sediment fauna	Astropecten	0	10	0	No	0	Ampelisca tubes	3 sea star	0	0	Amphipod tubes, burrows, 3 sea star, sea-star-shaped depressions in sediment upper right quadrant

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
8	ECR-B-540	B	ECR-B-540-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 Echinarachnius parma, 1 shrimp	Soft sediment fauna	Echinarachnius parma	0	5	0	No	0	0	1 Echinarachnius parma, 1 shrimp	0	0	Amphipod tubes, 2 groups of branching organism, 1 dead Echinarachnius parma, Echinarachnius parma shell fragments
8	ECR-B-540	C	ECR-B-540-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	hydroid	None	9 shrimp, 1 hydroid, Ampelisca	Soft sediment fauna	Ampelisca	1	10	0	No	0	1 hydroid, Ampelisca	9 shrimp	0	0	Amphipod tubes, 1 hydroid, attached to sea urchin shell, sea urchin fragments
8	ECR-A-541	A	ECR-A-541-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	4 sea star	Soft sediment fauna	Astropecten	0	10	0	No	0	0	4 sea star	0	0	Amphipod tubes, burrows, 4 sea star, tracks leading to/from burrow entrance, depression in sediment, cla, shell middle of imaqe
8	ECR-A-541	B	ECR-A-541-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	2 Ceriantharia	None	2 Ceriantharia, 3 sea star, 1 shrimp	Soft sediment fauna	Astropecten	0	10	0	No	2 Ceriantharia	0	3 sea star, 1 shrimp	0	0	Amphipod tubes, two Ceriantharia, 3 sea star
8	ECR-B-542	B	ECR-B-542-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	2 Echinarachnius parma, 1 shrimp	Soft sediment fauna	Echinarachnius parma	0	10	0	No	0	0	2 Echinarachnius parma, 1 shrimp	0	0	Amphipod tubes, 2 live Echinarachnius parma, 1 dead Echinarachnius parma, stripe of shell hash
8	ECR-B-542	C	ECR-B-542-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	2 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	10	0	No	0	0	2 Echinarachnius parma	0	0	Amphipod tubes, 2 live Echinarachnius parma, 2 dead Echinarachnius parma, stripe of shell hash
8	ECR-A-543	B	ECR-A-543-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star, 1 shrimp, 1 flounder	Soft sediment fauna	Astropecten	0	15	0	No	0	0	1 sea star, 1 shrimp	0	1 flounder	Amphipod tubes, 1 sea star, 1 flounder
8	ECR-A-543	C	ECR-A-543-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star	Soft sediment fauna	Astropecten	0	10	0	No	0	0	1 sea star	0	0	Amphipod tubes, 1 sea star, burrows, almost No shell hash
8	ECR-B-544	B	ECR-B-544-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	Amphipod tubes	Soft sediment fauna	Ampelisca	0	15	0	No	0	0	0	0	0	Amphipod tubes
8	ECR-B-544	C	ECR-B-544-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	hydroid	None	1 sea star, 1 hydroid, 1 shrimp	Soft sediment fauna	Astropecten	0.1	15	0	No	0	1 hydroid	1 sea star, 1 shrimp	0	0	Amphipod tubes, 1 buried sea star
8	ECR-A-545	A	ECR-A-545-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 sea star, 1 shrimp	Soft sediment fauna	Astropecten	0	15	0	No	0	0	1 sea star, 1 shrimp	0	0	Amphipod tubes, 1 burrow, 1 sea star (half out of frame)
8	ECR-A-545	B	ECR-A-545-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	1 flounder, 2 shrimp	Soft sediment fauna	Ampelisca	0	15	0	No	0	0	2 shrimp	0	1 flounder	Amphipod tubes, foraging depression in sediment, 1 flounder
8	ECR-B-546	A	ECR-B-546-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	hydroid	None	2 shrimp, 1 hydroid, Ampelisca tubes	Soft sediment fauna	Hydroids	0.1	10	0	Yes	0	1 hydroid	2 shrimp	0	0	Amphipod tubes, two sea star depressions in sediment, burrows, 1 shark/skate egg case, 1 hydroid
8	ECR-B-546	C	ECR-B-546-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 sea star	Soft sediment fauna	Astropecten	0	5	0	No	0	0	1 sea star	0	0	Amphipod tubes, 1 leg of sea star visible
8	ECR-A-547	A	ECR-A-547-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	1 Ceriantharia	None	4 Sabellidae, 1 shrimp	Soft sediment fauna	Sabellidae	0	5	0	No	4 Sabellidae		1 shrimp	0	0	Amphipod tubes, 4 Sabellidae, 1 sea star track, burrows
8	ECR-A-547	C	ECR-A-547-C-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	2 Ceriantharia	None	2 Sabellidae, 4 shrimp	Soft sediment fauna	Sabellidae	0	1	0	No	2 Sabellidae	0	4 shrimp	0	0	Amphipod tubes grainy image, 2 Sabellidae
8	ECR-B-548	B	ECR-B-548-B-PV.jpg	Muddy Sand			None	Physical	No	No	Yes	No	None	None	1 shrimp, 18 Echinarachnius parma	Soft sediment fauna	Echinarachnius parma	0	20	0	No	0	0	1 shrimp, 18 Echinarachnius parma	0	0	Amphipod tubes, 18 Echinarachnius parma, stripe of shell hash
8	ECR-B-548	C	ECR-B-548-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	None	None	2 shrimp, 2 sea star, 20 Echinarachnius parma	Soft sediment fauna	Astropecten	0	20	0	No	0	0	2 shrimp, 2 sea star, 20 Echinarachnius parma	0	0	Amphipod tubes, 2 buried sea star, at least 20 Echinarachnius parma, Echinarachnius parma tracks, two patches of shell hash/Echinarachnius parma fragments
8	ECR-A-601	A	ECR-A-601-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	hydroid	None	7 shrimp, 2 sea star, Ampelisca tubes, 1 hydroid	Soft Sediment Fauna	Astropecten	0.1	2	0	Yes	0	1 hydroid	2 sea star	0	0	1 skate egg case, hydroid, sea star tracks across sediment
8	ECR-A-601	B	ECR-A-601-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	7 Sabellidae, 4 shrimp, 1 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	10	0	No	7 Sabellidae	Ampelisca tubes	4 shrimp, 1 sea star,	0	0	Amphipod tubes, burrows, 7 Sabellidae
8	ECR-B-602	A	ECR-B-602-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 Sabellidae, 5 shrimp, 1 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	12	0	No	2 Sabellidae	Ampelisca tubes	5 shrimp, 1 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 2 Sabellidae
8	ECR-B-602	B	ECR-B-602-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	9 Ceriantharia	None	9 Sabellidae, 2 shrimp, 5 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	5	0	No	9 Sabellidae	Ampelisca tubes	2 shrimp, 5 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 9 Sabellidae
8	ECR-A-603	B	ECR-A-603-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	18 Sabellidae, 2 sea star, Ampelisca tubes, 1 fish	Soft Sediment Fauna	Sabellidae	0	30	0	No	18 Sabellidae	Ampelisca tubes	2 sea star	0	1 fish	Amphipod tubes, burrows, sea star tracks across sediment, 18 Sabellidae
8	ECR-A-603	D	ECR-A-603-D-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	28 Ceriantharia	None	28 Sabellidae, 2 shrimp, 2 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	15	0	No	28 Sabellidae	Ampelisca tubes	2 shrimp, 2 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 28 Sabellidae
8	ECR-B-604	A	ECR-B-604-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	9 Ceriantharia	None	9 Sabellidae, 1 shrimp, 3 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	7	0	No	9 Sabellidae	Ampelisca tubes	1 shrimp, 3 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 9 Sabellidae
8	ECR-B-604	C	ECR-B-604-C-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	8 Ceriantharia	None	8 Sabellidae, 3 shrimp, 1 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	5	0	No	8 Sabellidae	Ampelisca tubes	3 shrimp, 1 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 8 Sabellidae
8	ECR-A-605	A	ECR-A-605-A-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	Ceriantharia, hydroid	None	1 sea star, 1 hydroid, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0.1	5	0	No	0	Ampelisca tubes, 1 hydroid	1 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-A-605	C	ECR-A-605-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	No	Ceriantharia, 1 scallop (Placopecten magellanicus), 1 hydroid	None	1 mussel , hydroid, 1 sea pen, Ampelisca tubes, 1 scallop (Placopecten magellanicus)	Soft Sediment Fauna	Ampelisca	0.1	30	0	No	0	Ampelisca tubes, 1 hydroid	0	0	0	Amphipod tubes, burrows
8	ECR-B-606	B	ECR-B-606-B-PV.jpg	Muddy Sand			Ripples	Physical	Yes	Yes	Yes	Yes	7 Ceriantharia	None	7 Sabellidae, 2 shrimp, 2 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	25	0	No	7 Sabellidae	Ampelisca tubes	2 shrimp, 2 sea star	0	0	Amphipod tubes, burrows, 7 Sabellidae
8	ECR-B-606	C	ECR-B-606-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	10 Sabellidae, 4 shrimp, 2 sea star, 1 flatfish, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	12	0	No	10 Sabellidae	Ampelisca tubes	4 shrimp, 2 sea star	0	1 flatfish	Amphipod tubes, burrows, sea star tracks across sediment, 10 Sabellidae
8	ECR-A-607	A	ECR-A-607-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	6 Sabellidae, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	15	0	No	6 Sabellidae, Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, sea star imprint in sediment, 6 Sabellidae
8	ECR-A-607	B	ECR-A-607-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 Sabellidae, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	10	0	No	1 Sabellidae, Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, crab tracks across sediment, 1 Sabellidae
8	ECR-B-608	A	ECR-B-608-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	4 shrimp, 2 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	15	0	No	0	Ampelisca tubes	4 shrimp, 2 sea star	0	0	Amphipod tubes, burrows
8	ECR-B-608	C	ECR-B-608-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Ampelisca	0	50	0	No	0	Ampelisca tubes	1 shrimp	0	0	Amphipod tubes, burrows
8	ECR-A-609	B	ECR-A-609-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 Sabellidae, 1 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	15	0	No	3 Sabellidae, Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star imprint in sediment, 3 Sabellidae
8	ECR-A-609	C	ECR-A-609-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	8 Sabellidae, 3 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	10	0	No	8 Sabellidae Amphiuridae (multiple organisms)	0	3 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star imprint in sediment, 8 Sabellidae
8	ECR-B-610	A	ECR-B-610-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	60	0	No	0	Ampelisca tubes	1 sea star	0	0	Amphipod tubes, burrows
8	ECR-B-610	B	ECR-B-610-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	1 sea star, 1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	60	0	No	0	Ampelisca tubes	1 sea star, 1 shrimp	0	0	Amphipod tubes, burrows, sea star imprint in sediment

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
8	ECR-A-611	A	ECR-A-611-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	7 Sabellidae, 1 sea star, 2 shrimp, 1 sea pen, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Astropecten	0.1	20	0	No	7 Sabellidae, Amphiuridae (multiple organisms)	1 sea pen,	1 sea star, 2 shrimp,	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment, 7 Sabellidae
8	ECR-A-611	B	ECR-A-611-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	13 Sabellidae, 1 sea star, 1 sea pen, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Astropecten	0.1	7	0	No	13 Sabellidae, Amphiuridae (multiple organisms)	1 sea pen, Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star tracks across sediment, 13 Sabellidae
8	ECR-B-612	A	ECR-B-612-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	7 Sabellidae, 1 shrimp, 1 flatfish, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	10	0	No	7 Sabellidae, Amphiuridae (multiple organisms)	0	1 shrimp	0	1 flatfish	Amphiuridae (multiple organisms), burrows,7 Sabellidae
8	ECR-B-612	C	ECR-B-612-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	11 Sabellidae, 6 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	15	0	No	11 Sabellidae, Amphiuridae (multiple organisms)	Ampelisca tubes	6 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star imprint in sediment, 11 Sabellidae
8	ECR-A-613	B	ECR-A-613-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	50	0	No	0	Ampelisca tubes	1 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-A-613	C	ECR-A-613-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-B-614	A	ECR-B-614-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	6 Ceriantharia	None	6 Sabellidae, 1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	40	0	No	6 Sabellidae, Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star tracks across sediment, 6 Sabellidae
8	ECR-B-614	B	ECR-B-614-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	4 Ceriantharia	None	4 Sabellidae, 1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Sabellidae	0	15	0	No	4 Sabellidae, Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star imprint in sediment, 4 Sabellidae
8	ECR-A-615	B	ECR-A-615-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	30	0	No	0	Ampelisca tubes	2 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-A-615	C	ECR-A-615-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	4 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	30	0	No	0	Ampelisca tubes	4 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-B-616	B	ECR-B-616-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia, hydroid	None	5 sea star, 2 shrimp, 1 hydroid, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0.1	20	0	No	0	Ampelisca tubes, 1 hydroid	5 sea star, 2 shrimp	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-B-616	C	ECR-B-616-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia, hydroid	None	2 sea star, 1 shrimp, 1 hydroid, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0.1	20	0	No	0	Ampelisca tubes, 1 hydroid	2 sea star, 1 shrimp	0	0	Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-A-617	A	ECR-A-617-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	20	0	No	0	Ampelisca tubes, 1 hydroid	1 sea star	0	0	Amphipod tubes, burrows
8	ECR-A-617	C	ECR-A-617-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	No	Ceriantharia	None	4 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	15	0	No	0	Ampelisca tubes, 1 hydroid	4 sea star	0	0	Amphipod tubes, burrows
8	ECR-B-618	A	ECR-B-618-A-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	10	0	No	0	Ampelisca tubes	1 sea star	0	0	Amphipod tubes, burrows
8	ECR-B-618	B	ECR-B-618-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia	None	10 Sabellidae, 1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Ampelisca	0	10	0	No	10 Sabellidae	Ampelisca tubes	1 shrimp	0	0	Amphipod tubes, burrows, 10 Sabellidae
8	ECR-A-619	B	ECR-A-619-B-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	Ceriantharia, hydroid	None	7 Sabellidae, 5 sea star, 1 shrimp, 1 hydroid, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0.1	7	0	No	7 Sabellidae	Ampelisca tubes, 1 hydroid	5 sea star, 1 shrimp	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 7 Sabellidae
8	ECR-A-619	C	ECR-A-619-C-PV.jpg	Muddy Sand			None	Physical	No	Yes	Yes	Yes	15 Ceriantharia	None	15 Sabellidae, 1 sea star, 2 shrimp, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	10	0	No	15 Sabellidae	Ampelisca tubes	1 sea star, 2 shrimp	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 15 Sabellidae
8	ECR-B-620	A	ECR-B-620-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	4 Ceriantharia	None	4 Sabellidae, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Sabellidae	0	15	0	No	4 Sabellidae, Amphiuridae (multiple organisms)	Ampelisca tubes	0	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment, 4 Sabellidae
8	ECR-B-620	C	ECR-B-620-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	20 Ceriantharia	None	20 Sabellidae, 5 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	10	0	No	20 Sabellidae	Ampelisca tubes	5 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 20 Sabellidae
8	ECR-A-621	A	ECR-A-621-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	9 Ceriantharia	None	9 Sabellidae, 1 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	20	0	No	9 Sabellidae	Ampelisca tubes	1 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 9 Sabellidae
8	ECR-A-621	B	ECR-A-621-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	11 Ceriantharia	None	11 Sabellidae, 2 sea star, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	10	0	No	11 Sabellidae	Ampelisca tubes	2 sea star	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 11 Sabellidae
8	ECR-B-622	B	ECR-B-622-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	17 Ceriantharia	None	17 Sabellidae, 2 sea star, 1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Sabellidae	0	10	0	No	17 Sabellidae	Ampelisca tubes	2 sea star, 1 shrimp	0	0	Amphipod tubes, burrows, sea star tracks across sediment, 17 Sabellidae
8	ECR-B-622	C	ECR-B-622-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	16 Sabellidae, 3 sea star, 5 shrimp, 1 flatfish, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	10	0	No	16 Sabellidae	Ampelisca tubes	3 sea star, 5 shrimp	0	1 flatfish	Amphipod tubes, burrows, sea star tracks across sediment, 16 Sabellidae
8	ECR-A-623	A	ECR-A-623-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, 1 shrimp, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Astropecten	0	8	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	2 sea star, 1 shrimp	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-A-623	C	ECR-A-623-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	7	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, sea star tracks across sediment
8	ECR-B-624	A	ECR-B-624-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-624	B	ECR-B-624-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	10 Ceriantharia	None	2 sea star,Amphiuridae (multiple organisms)	Soft Sediment Fauna	Sabellidae	0	10	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
8	ECR-A-625	A	ECR-A-625-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, 1 flatfish, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	12	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	1 flatfish	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-A-625	C	ECR-A-625-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows
8	ECR-B-626	A	ECR-B-626-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Astropecten	0	7	0	No	Amphiuridae (multiple organisms)	0	3 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-626	C	ECR-B-626-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Astropecten	0	15	0	No	Amphiuridae (multiple organisms)	0	3 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-A-627	A	ECR-A-627-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-A-627	B	ECR-A-627-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-628	B	ECR-B-628-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	25	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-628	C	ECR-B-628-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-A-629	A	ECR-A-629-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	15	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, decapod tracks across sediment
8	ECR-A-629	B	ECR-A-629-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	15	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-630	A	ECR-B-630-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	25	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-630	C	ECR-B-630-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-A-631	A	ECR-A-631-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows
8	ECR-A-631	C	ECR-A-631-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-632	A	ECR-B-632-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 Ceriantharia, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	1 Ceriantharia, Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, 1 Ceriantharia
8	ECR-B-632	C	ECR-B-632-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	60	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-633	A	ECR-A-633-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-633	B	ECR-A-633-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-634	A	ECR-B-634-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	25	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows
8	ECR-B-634	B	ECR-B-634-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	25	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-635	A	ECR-A-635-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	15	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-635	B	ECR-A-635-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	15	0	No	Amphiuridae (multiple organisms)	0	3 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star imprint in sediment
8	ECR-B-636	A	ECR-B-636-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, 2 sea pen, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0.1	10	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-636	B	ECR-B-636-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	10	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-637	A	ECR-A-637-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea pen, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0.1	10	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-637	B	ECR-A-637-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	6 sea star, Ampelisca tubes	Soft Sediment Fauna	Astropecten	0	25	0	No	Amphiuridae (multiple organisms)	0	6 sea star	0	0	Amphiuridae (multiple organisms), burrows, sea star tracks across sediment
8	ECR-B-638	A	ECR-B-638-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-638	B	ECR-B-638-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, 1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	10	0	No	Amphiuridae (multiple organisms)	0	1 sea star, 1 shrimp	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-639	B	ECR-A-639-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	15	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment, sea star imprint
8	ECR-A-639	C	ECR-A-639-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, 1 sea pen, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0.1	20	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-640	A	ECR-B-640-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	2 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-640	B	ECR-B-640-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-641	A	ECR-A-641-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-641	B	ECR-A-641-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-642	B	ECR-B-642-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-642	C	ECR-B-642-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 shrimp	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment, fish shadow, sea star imprint in sediment
8	ECR-A-643	A	ECR-A-643-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	None	None	Amphiuridae (multiple organisms), Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-643	B	ECR-A-643-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment,
8	ECR-B-644	A	ECR-B-644-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-644	C	ECR-B-644-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-645	A	ECR-A-645-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-645	B	ECR-A-645-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment, detritus in center of image
8	ECR-B-646	A	ECR-B-646-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-646	B	ECR-B-646-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment

KP Segment	Station ID	Replicate	PV Image ID	Substrate Group	Substrate Subgroup	Gravel Component	Bedforms	Bedform origin (Biological / Physical)	Mobile Bed	Burrows presence (yes/No)	Tubes presence (yes/No)	Bioturbation	Potenially vulnereable Species	Non-Native Taxa	Type of Common Taxa	CMECS Biotic Subclass	CMECS Co-Occurring Biotic Subclass	Percent Cover of All Attached Fauna	Percent Cover of Emergent Taxa	Percent Cover of Flora	Presence of Eggs	Infauna	Sessile Epifauna	Mobile Epifauna	Flora	Fish	Comments
8	ECR-A-647	A	ECR-A-647-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-647	B	ECR-A-647-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-648	A	ECR-B-648-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	0	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-648	B	ECR-B-648-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-649	B	ECR-A-649-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-A-649	C	ECR-A-649-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	0	1 sea star	0	0	Amphiuridae (multiple organisms), burrows, tracks across sediment
8	ECR-B-650	A	ECR-B-650-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment
8	ECR-B-650	B	ECR-B-650-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	3 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment
8	ECR-A-651	A	ECR-A-651-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star	0	0	Amphiuridae (multiple organisms),, Amphipod tubes, burrows
8	ECR-A-651	B	ECR-A-651-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	2 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows
8	ECR-B-652	B	ECR-B-652-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 sea star, 1 nudibranch, Ampelisca (multipl e organisms), Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	1 sea star, 1 nudibranch, 1 worm	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment
8	ECR-B-652	C	ECR-B-652-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	4 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	25	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	4 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, imprint of sea star in sediment
8	ECR-A-653	A	ECR-A-653-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	1 Ceriantharia, 6 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	50	0	No	1 Ceriantharia, Amphiuridae (multiple organisms)	Ampelisca tubes, Amphiuridae (multiple organisms)	6 sea star	0	0	Muddy sandy bottom with Amphipod tubes, 1 Ceriantharia, area covered by brittle star (Amphiuridae) multiple organisms
8	ECR-A-653	C	ECR-A-653-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, 1 shrimp, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	20	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	3 sea star, 1 shrimp	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment
8	ECR-B-654	A	ECR-B-654-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	3 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, imprint of sea star in sediment
8	ECR-B-654	B	ECR-B-654-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	40	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes, 1 hydroid	0	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, tracks across sediment, 1 hydroid
8	ECR-A-655	B	ECR-A-655-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Ampelisca	0	50	0	No	0	Ampelisca tubes	2 sea star	0	0	Amphipod tubes, burrows, tracks and imprint of sea star in sediment
8	ECR-A-655	C	ECR-A-655-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, 1 flatfish, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Ampelisca	0	30	0	No	0	Ampelisca tubes	3 sea star	0	1 flatfish	Amphipod tubes, burrows, tracks across sediment
8	ECR-B-656	A	ECR-B-656-A-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	2 sea star, Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	30	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	2 sea star	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows, imprint of sea star in sediment
8	ECR-B-656	C	ECR-B-656-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	Ampelisca tubes, Amphiuridae (multiple organisms)	Soft Sediment Fauna	Amphiuridae	0	50	0	No	Amphiuridae (multiple organisms)	Ampelisca tubes	0	0	0	Amphiuridae (multiple organisms), Amphipod tubes, burrows
8	ECR-A-657	B	ECR-A-657-B-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	1 Black sea bass (Centropristis striata)	None	2 sea star, 5 shrimp, 1 black sea bass, Ampelisca tubes	Soft Sediment Fauna	Ampelisca	0	50	0	No	0	Ampelisca tubes	2 sea star, 5 shrimp	0	1 black sea bass	Amphipod tubes, 2 sea star, shrimp and 1 black sea bass
8	ECR-A-657	C	ECR-A-657-C-PV.jpg	Muddy Sand			None	Physical	Yes	Yes	Yes	Yes	Ceriantharia	None	3 sea star, 1 shrimp, Ampelisca tubes	Soft Sediment Fauna	Ampelisca	0	20	0	No	0	Ampelisca tubes	3 sea star, 1 shrimp	0	0	Amphipod tubes, burrows, tracks across sediment