Appendix D

Materials Management and Disposal Plan

Materials Management and Disposal Plan

CAPE WIND ASSOCIATES, LLC
BOSTON, MASSACHUSETTS

PREPARED FOR

Cape Wind Associates, LLC
75 Arlington Street
Boston, Massachusetts 02116

PREPARED BY

ESS Group, Inc.
401 Wampanoag Trail, Suite 400
East Providence, Rhode Island 02915

Project No. E159-504

October 2010

www.essgroup.com

MATERIALS MANAGEMENT AND DISPOSAL PLAN
Cape Wind Associates, LLC
Boston, Massachusetts

Prepared For:

Cape Wind Associates, LLC
75 Arlington Street
Boston, Massachusetts 02116

Prepared By:

ESS Group, Inc.
401 Wampanoag Trail, Suite 400
East Providence, Rhode Island 02915

ESS Project No. E159-504

October 2010

Approved by:_____ Date:_____

Printed Name:_____ Title:_____

Approved by:_____ Date:_____

Printed Name:_____ Title:_____

Record of Revisions

Date of Review	Person Conducting Review	Reason for Review (Biennial update, Amendment, or Modification)	Sections Affected	Date Next Review Required

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

Cape Wind Associates, LLC (CWA) proposes to construct 130 Wind Turbine Generators (WTGs) arranged in a grid pattern in the Horseshoe Shoal region of Nantucket Sound, Massachusetts Solid dielectric submarine inner-array cables (33 kilovolt) from each wind turbine generator will interconnect within the grid and terminate at the Electric Service Platform (ESP) located at the center of the array. The electric service platform will serve as the common interconnection point for all of the WTGs. A submarine transmission cable system (115 kilovolt) will deliver the power generated offshore to the onshore distribution grid system. An upland cable will be installed between the submarine cable landfall, located in Yarmouth, Massachusetts, and the NStar Barnstable Switching Station. For the purpose of this document, facility is intended to mean the sum of all project components described above as well as the onshore support facilities including the construction staging area and the control facility.

Construction, operation, and decommissioning of the Facility will involve the purchase, handling, management and use of a variety of materials and products as well as the generation and disposal of non-hazardous and hazardous waste. This plan specifically addresses the materials related to the construction and operation periods. The Materials Management and Disposal Plan will be updated prior to decommissioning in order to reflect best management practices experienced during the lifespan of the project.

Non-hazardous solid wastes generated during operation and maintenance of the facility may include used office materials, oil, solvents, wire, fastening hardware, light bulbs, empty material containers and other spent or surplus supplies. Non-hazardous solid wastes generated during routine maintenance operations at the ESP and WTGs will be transported to shore on the marine service vessel and stored at the onshore service area. Waste will be transported from the onshore service area by a waste management contractor at regular intervals to authorized facilities for disposal. Recyclable or reusable materials, such as oil, wire and bulk metals, will be transported off site by an authorized waste hauler for beneficial reuse.

The Materials Management and Disposal Plan (the Plan) provided herein is intended to serve as the guidance document for standard operating procedures associated with the safe management and disposal of anticipated waste streams for the Cape Wind Energy Project (Project).

The Plan describes procedures that CWA and its subcontractors will employ at the site of the Project to ensure that all non-hazardous materials used on site are controlled, maintained and disposed of in an environmentally compliant manner.

1.1 Purpose and Use

As discussed in Section 5.1 of the BOEMRE Final Environmental Impact Statement (FEIS) for the Project; activities, equipment, materials, and process associated with the Project can be divided into two main categories, those items occurring under normal conditions, and those items occurring under non-routine conditions. Under normal conditions, potential impacts (associated with waste generation, management, and disposal) may occur as a result of the following:

- Maintenance of vessels and crew boats.
- Operation of construction staging facilities.

- Installation of wind turbine generators (WTGs), the electric service platform (ESP), and transmission cables.
- Project operation.

This Plan addresses the storage, handling, and disposal of materials associated with Project construction and operation under normal conditions. This Plan is incorporated as an Appendix to the Project's Construction and Operations Plan (COP).

Although this Plan discusses the use and management of oils among the materials addressed, this Plan does not address oil spill response given the availability of a complete Oil Spill Response Plan (OSRP), which is provided as Appendix C to the COP. The OSRP was prepared in accordance with the BOEMRE regulations at 30 CFR 254, "Oil Spill Response Requirements for Facilities Located Seaward of the Coastline." In the event of a release of oil to the ocean, CWA's employees, contractors, and designated responders will refer to the OSRP to ensure that the appropriate spill response actions are taken in a timely manner to prevent impacts to sensitive receptors.

1.2 Implementation Responsibility

1.2.1 Construction

The protocols described herein are applicable to all staff, subcontractors, and on-site vendors working under the authority of the construction contractor. The contractor will be responsible for implementing this plan and ensuring that all subcontractors are acting in accordance with the Plan. The Construction Supervisor may delegate the compliance monitoring and authority to implement corrective actions to a Site Environmental Coordinator.

1.2.2 Operation

The protocols described herein are applicable to all staff and subcontractors working under the authority of CWA's asset manager. The asset manager will be responsible for ensuring that anyone associated with operating the facility is acting in accordance with the Plan. Implementation of the Plan will be the responsibility of the Operations and Maintenance (O&M) Contractor. It is anticipated that Siemens Energy Inc. will be the O&M Contractor. The O&M Contractor's site operations manager may delegate the compliance monitoring and authority to implement corrective actions to a Site Environmental Coordinator.

2.0 Marine Trash and Debris Management

Marine debris is any object or fragment of wood, metal, glass, rubber, plastic, cloth, paper, or any other man-made item or material that is lost or discarded in the marine environment. CWA employees and contractors working on offshore sites will adhere to the procedures described in this section to minimize and/or eliminate the accidental loss or discharge of any man-made objects into the marine environment.

The Project will adhere to all Federal rules and regulations that prohibit the disposal and/or discharge of any solid waste in the marine environment. In particular, the Project will adhere to the requirements of

30 CFR 250.300(a) and (b) (6), which prohibits the discharge of containers and other similar materials into the marine environment. CWA will ensure that its employees and contractors also adhere to the requirements of 30 CFR 250.300(c), which requires durable identification markings on equipment, tools, and containers, and other materials, used on offshore facilities.

To minimize the loss of man-made items into the marine environment, the following best management practices (BMPs) are established for the Project. These BMPs were developed in accordance with BOEMRE NTL No. 2007-G03.

- Marine Trash and Debris Awareness Training will be included as a part of CWA's annual training for all offshore employees, O&M Contractor's employees and other contractors. All employees and offshore contractors will complete this training at least once prior to engaging in offshore work, and thereafter on an annul basis. The training will consist of the following two parts: (1) viewing a marine trash and debris training video[1] or slide slow, and (2) receiving an explanation from CWA's or their O&M Contractor's management personnel that emphasizes their commitment to minimizing and/or eliminating marine trash and debris.

- A Marine Trash and Debris Awareness Training and Certification Process will be developed to reasonably assure that CWA employees and contractors receive the required training. As part of the certification process, CWA or its O&M Contractor will maintain records of employee attendance at initial and annual training sessions. These records will be made available for inspection by BOEMRE. CWA expects that contractors will maintain their own records of employee training. Appendix B contains a sample form which will be used by CWA to track employee training. CWA will require the use of a similar form by its contractors.

- CWA will provide annual reports signed by a company official to describe the marine trash and debris awareness training process and certify that the training has been followed for the previous year. Appendix B contains a sample report that will be prepared by CWA to self-certify compliance with the training requirements of this Plan.

- Marine Trash and Debris Placards will be posted in prominent locations on the ESP and on all of the WTGs. These placards will be displayed on a 5X8-inch format, at a line-of-sight height. The placards will be referenced, and their contents explained, during any initial orientation given at the facilities to any visitors, employees, or contractors. The placards will be sturdy enough to withstand the local environmental conditions and will be replaced when damage or wear compromises readability. Sample placards are provided in Appendix C.

- CWA will implement the following procedures to prevent the production of marine trash and debris. These procedures will be included in the training provided to employees and contractor under this section of the Plan.

[1] Cape Wind will include the OOC-produced training video as part of its training program. This video is available in for download from the OOC website at www.offshoreoperators.com. As an alternative to the video, an OOC-produced Microsoft PowerPoint presentation is also available at the same website.

- Secure or stow any loose items in baskets or lockers to prevent them from being lost overboard.
- Use hardhat chinstraps and/or tethers.
- Properly dispose of all items.
- Ensure that all bins, trash cans and storage containers have covers that are properly and tightly secured.
- Practice good housekeeping.
- Provide butt buckets in smoking areas.
- Observe placards and follow marine debris training guidelines.
- Wherever possible, reduce the use of pallets by using pallet boxes or alternative bulk containers.
- Conduct survey/hazard hunts to identify potential sources of marine debris.
- Include prevention discussions in pre-job hazard assessment meetings and behavior-based safety programs.
- Increase focus on the prevention of marine debris.

In the event that any materials are accidentally lost overboard, CWA employees and/or its contractors will make reasonable efforts to recover any materials lost overboard as safe operations allow. CWA will prepare any required reports to document lost materials in accordance with the applicable federal regulations.

3.0 NON-HAZARDOUS MATERIAL

3.1 Inventory

Non-hazardous solid wastes generated during construction and operation of the facility will include scrap wood, steel, wire, glass, concrete, paper, and empty non-hazardous waste containers. In addition, the ESP and WTGs will require oils and chemicals to be used during operation. The onshore support facility will receive deliveries and provide storage for bulk quantities of oil and chemicals. The amount of oil and chemicals stored on support vessels, ESP, and WTGs will be minimized to the greatest extent possible.

3.1.1 Electric Service Platform

The ESP will have small amounts of lubricating oil, greases and coolants in pumps, fans, air compressors, emergency backup system and miscellaneous equipment. The ESP also will have four oil-cooled step-up transformers. The primary ESP components and the fluids contained within them are as follows:

- Main Transformer - The four 110-megavolt amp (MVA) oil cooled main step-up transformers will each have a capacity of approximately 10,000 gallons (37,854 liters) of dielectric cooling oil. Each transformer will be mounted in a leak-proof detention area that will have the capacity of holding 150% of the transformer oil. Each of the detention areas will be connected via valves to a storage tank that has the capacity to store 100% of the oil from all four transformers. The oil piping to the coolers and the coolers will be configured so that any failures will result in oil being drained to the detention area.

- A back-up battery system will be installed on the ESP to provide power to essential auxiliary loads in the event of a loss of connection to the NSTAR transmission grid. The system will be designed for redundancy with two independent 125-volt (V) direct current (DC) systems each consisting of a stationary battery bank, battery charger and distribution panel. The batteries will be lead acid type for stationary applications. They will be sized appropriately for a 36-hour duty cycle following an emergency trip (dead bus).

- Miscellaneous equipment - Various pumps, fans, and an air compressor will be installed on the platform. They will be lubricated with either grease or oil in small quantities. The equipment will be installed in such a way that any leakage will be contained on the sealed deck of the ESP.

The ESP will be accessible by service vessels as part of the routine maintenance plan. Helicopter access will also be available as needed. Planned preventative service and maintenance for the Project are described in detail in Section 5.0 of the COP. Planned maintenance activities for the ESP include: (1) the testing and potential changing of all liquids in process equipment, as necessary, and (2) the topping up of all fluids on a regular basis.

As part of the maintenance program, delivery of oils and chemicals to the ESP is a multi-step process that involves: (1) the transfer of materials from trucks and other modes of surface transportation to temporary onshore storage facilities, (2) the transfer of materials from temporary onshore storage facilities to ocean-going maintenance vessels, and (3) the transfer of materials from maintenance vessels to the ESP. A similar number of transfers, but in the reverse order, will be required to remove waste oils and chemicals from the ESP for delivery to onshore waste receiving and processing facilities.

The quantities of materials transferred during each of the steps described above are dependent upon the maintenance schedule for the ESP, which is addressed in section 5.0 of the COP and will be finalized prior to commencing operations. Oils and chemicals will be delivered to and stored at temporary onshore storage facilities in sufficient quantities in support of the manufacturer's recommended schedule for preventive maintenance of the ESP.

3.1.2 Wind Turbine Generators

In addition to the materials stored on the ESP, the WTGs will utilize lubricating oil, cooling liquids, and grease, all of which will be located in the nacelle or hub. The WTG has been carefully

configured to contain any fluid leakage and prevent overboard discharges. Total oil storage at each WTG is expected to be approximately 680 gallons (16.2 barrels) at any given time, or approximately 88,400 gallons (2105 barrels) for all 130 WTGs. Table 2 provides a summary of the expected materials usage for each WTG system, including a general description, volumetric capacity, and type of product. Appendix A contains the MSDS for the materials used and stored on the WTGs.

The primary WTG components and the fluids contained within them are explained below:

- Nacelle – Approximately 90 gallons of hydraulic oil and 220 gallons of gear oil are contained within the nacelle. In the event of leaking gear oil or a broken hose/pipe, the leaking oil will be guided through the manhole in the bottom of the bedplate and collected on the upper internal platform of the tower.
- Tower - The upper internal platform is designed and sealed in such a way that it can withhold the total amount of gearbox and hydraulic fluid until it can be transferred to containers for safe disposal. The lower tower will include a transformer located near the access door, which will contain approximately 370 gallons of transformer oil.

Each WTG will be accessible by service vessels as part of a routine maintenance plan. Planned preventative service and maintenance for the Project are described in detail in Section 5.0 of the COP. Planned maintenance activities for each WTG include: (1) the cleaning of machine rooms, (2) the changing of all liquids in process equipment, as necessary, and (3) the topping up of all fluids on a regular basis.

The delivery of oils and chemicals to the WTGs will include the same basic steps that are involved with the delivery of said materials to the ESP. That is, the delivery of materials will include: (1) the transfer of materials from trucks and other modes of surface transportation to temporary onshore storage facilities, (2) the transfer of materials from temporary onshore storage facilities to ocean-going maintenance vessels, and (3) the transfer of materials from maintenance vessels to a WTG. A similar number of transfers, but in the reverse order, will be required to remove waste oils and chemicals from each WTG for the ultimate delivery to onshore waste receiving and processing facilities. Note that the types and quantities of oil and chemicals transferred to and from the WTGs during each step will differ from the deliveries of materials to and from the ESP. The maintenance schedule will involve trips to multiple WTGs during a typical workday under normal conditions.

3.1.3 Onshore Support Facilities

The onshore support facilities will provide a base of operation for personnel and equipment deliveries. Materials will be stocked and organized at the facility and transferred to service or construction vessels and vehicles on an as needed basis. During the construction, activities at the support facility will include assembly of major project components (e.g. monopile structures, WTG components, etc.). As a result, miscellaneous tools and equipment (e.g. grinders, torches,

welding rods, wire, etc.) will be required on site that may result in non-hazard materials being generated at the site and managed properly. Non-hazardous cleaning solutions including electronic and parts cleaners will be stored at the onshore support facility and used periodically during routine maintenance activities at the ESP and WTGs.

3.2 Storage

Designated areas will be established for proper storage and management of non-hazardous materials and waste streams. Appropriate and standard housekeeping practices will be implemented on marine construction vessels and at the onshore support facilities to maintain clean and safe working environments. Waste materials (wire, metal shavings, etc.) will be cleaned up on a daily basis from work areas and stored in proper receptacles.

3.2.1 Material Transfer and Delivery

Proper loading and unloading procedures for the transfer of material will be observed during each step in the delivery process. To ensure the overall integrity of individual containers on a delivery vehicle (or vessel), CWA employees and its contractors will visually inspect delivery vehicles arriving at the temporary onshore storage facility. CWA or O&M Contractor's employees and their subcontractors will immediately address any leaks or spills from containers on delivery vehicles, and ensure that proper protective measures are available for personnel and the environment.

The following procedure will be followed for the bulk delivery of oils and chemicals by truck. This procedure will be used when petroleum products (and other bulk chemicals) are being unloaded or transferred from trucks to the temporary onshore storage facility. Note that smoking and ignition sources will be prohibited from in the unloading/transfer areas.

1. Upon arrival on-site, the delivery personnel (vehicle operator, subcontractor, etc.) will notify the Site Environmental Coordinator, or another CWA or O&M Contractor employee with the proper authority, before unloading/transferring bulk oil and chemical containers.

2. CWA or O&M Contractor personnel will inspect the overall integrity of the delivery vehicle and containers. If the vehicle or containers are determined to be in poor condition (e.g. signs of leaks or corrosion), the vehicle's driver or operator will be informed that repairs must be made, or a new shipment must be ordered, before CWA or O&M Contractor can accept delivery.

3. The delivery personnel will turn off the vehicle and set the handbrake, to prevent vehicular movement during container transfer.

4. CWA or O&M Contractor personnel will ensure the containers are properly closed and sealed prior to unloading or transferring the container.

5. The container must be properly secured on forks or pallets to prevent the container from falling during movement.

6. After the above steps have been taken, the delivery personnel will proceed with the transfer of the container, with CWA or O&M Contractor personnel monitoring the transfer.

The procedures outlined above will be followed during subsequent transfers of petroleum products and chemicals during the bulk delivery of materials to the ESP and each WTG. That is, all containers will be visually inspected during the transfer from the temporary onshore storage facility to maintenance vessels, and again during the transfer from the maintenance vessel to the ESP and/or WTG. If the overall integrity of a container is jeopardized, for any reason, during the delivery process, CWA or O&M Contractor personnel and/or their subcontractors will withhold the delivery of the problematic container and take appropriate measures to prevent the discharge of materials into the ocean. CWA or O&M Contractor personnel and/or its subcontractors will maintain records to document the reasons for withholding the delivery of any containers. These records will be maintained at the Operations Center.

3.3 Disposal

Construction-related materials will be stored and/or disposed of in an appropriate manner at the onshore support facility. Recycling, to the maximum practicable extent, will be the preferred and primary disposal method for dealing with waste material. Waste will be temporarily accumulated onsite in designated waste accumulation areas, in accordance with industry-standard practices.

Recyclable waste streams (including lead-acid batteries) will be segregated from regular trash as part of the site recycling program. Small trash items and miscellaneous debris will be placed into secure bins for storage prior to disposal. Waste containers that have the potential for significant paper or dust blowing will be covered. Bin placement will be approved by the Construction Manager. Unprotected plastic bags will not be placed on the ground. Salvageable wastes will be stored onsite in a manner to prevent contamination of storm water and will be removed on a periodic basis. Construction debris collection areas will have legible signs noting the prohibition of mixing with non-hazardous waste. Construction related waste will not be burned on-site.

All wastes will be evaluated to determine the waste's characterization and to determine if the waste is a hazardous waste requiring special provisions. This evaluation will include, but is not limited to laboratory analysis, knowledge of the process, or review of material safety data sheets (MSDS). All wastes will be evaluated when associated materials, processes or conditions change or as required by any permits or exemptions maintained by the operation.

Waste generated during offshore construction and operation will be temporarily stored on the construction vessels in designated areas. Waste will be transported to shore on a regular basis and stored in appropriate containers on CWA property until properly disposed of off site by a licensed contractor. Additional vessel waste and discharge information is provided in Appendix C of this document.

CWA or its O&M Contractor and their subcontractors will only use properly licensed solid waste disposal firms. Solid waste disposal firms must present evidence of required permits and licenses. All

contractors will be informed that before a waste disposal vehicle may enter an onshore storage facility, for the transfer of waste material to an approved off-site waste receiving and processing facility, the operator of the waste disposal vehicle must provide a copy of its certifications to the Site Environmental Coordinator. The Site Environmental Coordinator will maintain a list of approved solid waste disposal firms and the list will be available at the security gate. Only waste disposal firms on the approved list will be allowed to enter the site. All documentation will be maintained through the life of the project.

CWA or its O&M Contractor will identify specific disposal firms and off-site waste receiving and processing facilities. One such facility is located in Braintree, Massachusetts, and is owned and operated by Clean Harbors.[2]

3.4 Best Management Practices

The following best management practices are established to ensure the proper storage, handling, and disposal of oils and chemicals during the construction and operation of the Project.

ESP Containment Areas: The ESP will have sealed, leak-proof decks, which will act as fluid containment. In addition, spill containment kits will be available near all equipment. Total maximum oil storage on the ESP is expected to be approximately 42,000 gallons (1,000 barrels) at any given time.

WTG Containment Areas: The WTGs have been carefully configured to contain any fluid leakage and prevent accidental discharges to the ocean.

Transfer of Oils and Chemicals: The ultimate transfer of oils and chemicals from the temporary onshore storage facilities to the ESP and to each WTG will be carried out with appropriate safeguards to prevent the accidental release of oils and chemicals to the marine environment. In the event of an accidental discharge of such materials to the ocean, CWA or O&M Contractor employees and contractors will execute the procedures in the OSRP to contain and recover any discharged materials. The OSRP is included as a separate Appendix to the COP.

Inspection: The Site Environmental Coordinator, as part of his or her daily regimen, will report on all product specific housekeeping activities utilizing a checklist.

Reporting: The results of construction inspections will be documented on the inspection checklist designated for this activity and forms part of the Resident Engineer daily inspection report. It will be distributed and maintained in accordance with project administrative procedures. The Site Construction Manager will receive a copy of all non-compliance notices.

Training: Employees of CWA or O&M Contractor and their subcontractors at the site and home office will be responsible for the management, handling, and preparation for shipment, spill response, and

[2] According to the Clean Harbors website (http://www.cleanharbors.com/locations/index.asp?id=152), the Clean Harbors of Braintree, Inc. facility serves the New England area as the largest storage and treatment fuels blending, stabilization, infectious

maintenance of all waste and/or waste systems. Subcontractor site employees will receive appropriate training on a periodic basis. All training will be documented and retained as long as the employee is employed and then archived per CWA policy.

4.0. HAZARDOUS MATERIAL

CWA does not anticipate hazardous materials being brought on site during construction or operation of the Project.

waste, and incineration facility in New England. Halogenated solvents are reclaimed on-site and certain non hazardous solids are incinerated. Other wastes are treated and disposed at company-owned facilities or other ultimate disposal sites.

Appendix A

Training Information

APPENDIX A
TRAINING INFORMATION

CWA or its O&M Contractor will provide training for all employees in the storage, handling, and disposal of chemicals, oils and hazardous materials in accordance with the purpose and use of this Plan. CWA or its O&M Contractor will provide initial training to all employees – thereafter the training will be repeated on an annual basis. CWA or its O&M Contractor will maintain records of employee training. All CWA contractors and outside agencies will be responsible for certifying the training of their employees.

A. Location of Records

Records of all CWA employee training will be maintained at the Operations Center. Records of spill response contractor's employee training will be maintained at the appropriate facility.

Appendix B

Sample Marine Debris Placards

APPENDIX B
SAMPLE MARINE DEBRIS PLACARDS

WHAT IS MARINE DEBRIS?

Marine debris is any object or fragment of wood, metal, glass, rubber, plastic, cloth, paper or any other man-made item or material that is lost or discarded in the marine environment. Marine debris may be intentionally dumped, accidentally dropped, or indirectly deposited. Whatever the source, marine debris is a direct result of human activities on land and at sea. Depending upon its composition, marine debris may sink to the seafloor, drift in the water column, or float on the surface of the sea. Certain debris, such as plastics, can persist for hundreds of years in the marine environment without decomposing.

WARNING!

YOUR ACTIONS MAY SUBJECT YOU TO SEVERE LEGAL CONSEQUENCES!

The disposal and/or discharge of any solid waste anywhere in the marine environment (other than ground-up food particles) is strictly prohibited by U.S. Coast Guard and Environmental Protection Agency regulations. **THIS INCLUDES MATERIALS OR DEBRIS ACCIDENTALLY LOST OVERBOARD.**

The disposal of equipment, cables, chains, containers or other materials into offshore waters is prohibited by the Minerals Management Service (30 CFR 250.300(b) (6)). **THIS INCLUDES MATERIALS OR DEBRIS ACCIDENTALLY LOST OVERBOARD.**

ATTENTION!

MARINE DEBRIS MAY CAUSE SEVERE ECOLOGICAL DAMAGE!

Marine debris discarded or lost from offshore and coastal sources may injure or kill fish, marine mammals, sea turtles, seabirds and other wildlife.

Thousands of marine animals, including marine mammals, sea turtles and seabirds, die every year from entanglement in fishing line, strapping bands, discarded ropes and nets and plastic six-pack rings. Additionally, unknown numbers of marine animals die each year from internal injury, intestinal blockage and starvation as a result of ingesting marine debris.

Marine debris fouls boat propellers and clogs water intake ports on engines thereby endangering the safety of fishermen and boaters and resulting in heavy loss of time and money.

Marine debris detracts from the aesthetic quality of recreational beaches and shorelines and increases the cost of park and beach maintenance.

ATTENTION!

SECURE ALL LOOSE ARTICLES!

NOAA Fisheries now expects offshore energy industry personnel to pick up and recover any articles lost overboard from boats and offshore structures as safety conditions permit.

Protect marine animals, as well as your valuable time and money, by doing the following to prevent accidental loss of these items:

Properly securing all materials, equipment and personal belongings. Articles such as hardhats, life vests, sunglasses, cigarette lighters, parts bags, buckets, shrink wrap, strip lumber, and pipe thread protectors become marine debris when lost overboard.

Making sure that all trash receptacles have tight fitting lids and that the lids are used.

Providing and using secure cigarette butt containers. Cigarette butts are one of the most common forms of marine debris. Many cigarette butts contain some form of plastic and do not decompose in the ocean. Cigarette butts pose a major threat to marine wildlife as they resemble food and cause gut blockages and starvation when ingested.

Doing your part to eliminate marine debris. Encourage others to be responsible about marine debris by making suggestions to secure potential marine debris on your boat or structure or by participating in a beach cleanup.

Appendix C

Vessel Waste and Discharge Information

Appendix C

Anticipated Vessel and Waste Discharge Information

Type of Waste or Composition	Approximate Total Amount Discharged[1]	Maximum Discharge Rate[1]	Means of Storage or Discharge Method
Sewerage from vessels	25 gal/person/day	NA	MSD Type III
Domestic water	35 gal/person/day	NA	Discharged overboard after treatment
Uncontaminated bilge water	Volume dependent on vessel size/bilge volume	Rate dependent on vessel size and equipment.	Discharged in accordance with USCG Regulations (33 CFR §151.10).
Deck drainage and sumps	Volume dependent on vessel size/deck area [3]	Rate dependent on vessel size/deck area [3]	Discharged overboard after treatment
Uncontaminated ballast water	Volume dependent on vessel size/ballast volumes	Rate dependent on vessel size and equipment	Discharged incidental to the normal operation of the vessels
Uncontaminated fresh or seawater[2]	NA	NA	Discharged overboard
Solid trash or debris	As Generated	NA	Regular Onshore Licensed Trash Hauling

bbl = 42 U.S. gallon barrel, 1 m^3 = 6.3 bbl.

[1] Final discharge volumes and rates will be provided in the Fabrication and Installation Report following execution of contract with the construction contractor and the assignment of a CWA Marine Coordinator.

[2] Used for vessel air conditioning.

[3] Volumes dependent on weather.