Appendix B
National Pollutant Discharge Elimination System Notice of Intent

THIS PAGE
INTENTIONALLY
LEFT BLANK

Shell Exploration & Production Company

December 16, 2010

Ms. Hanh Shaw
U.S. EPA, Region 10
Office of Water & Watersheds, NPDES Permits Unit
1200 Sixth Avenue, Suite 900, M/S OWW-130
Seattle, WA 98101

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503

Tel. (907) 646-7112
Email susan.childs@shell.com
Internet http://www.shell.com/

Dear Ms. Shaw:

Subject: Notice of Intent for administrative extension under General Permit AKG-28-0000
Lease Number OCS-Y-1805, Lease Block 6658
Lease Number OCS-Y-1941, Lease Block 6610

In accordance with 40 CFR 122.21(d) Shell Offshore Inc. (Shell) is submitting Notices of Intent (NOIs) for the Lease Blocks listed above for authorization to discharge under General Permit AKG-28-0000 that expires on June 26, 2011. It is Shell's understanding that a new general permit is not scheduled to be issued until the fall of 2011. Therefore, these NOIs also serve as Shell's request for an administrative extension to discharge under NPDES General Permit AKG-28-0000 for 2011 and beyond for each authorized NOI until the new General Permit is available. The attached NOIs were originally granted by EPA on April 20, 2010 for AKG-28-0005.

If you have questions about any component of the proposed project, please contact me at (907) 646-7112 or email susan.childs@shell.com, or call Nicole St. Amand at (907) 646-7152 or email nicole.stamand@shell.com.

Sincerely,

Susan Childs
Alaska Venture Support Integrator Manager
Attachments - Notice of Intent (NOI) Information Sheets
Location Maps
Ocean Discharge Tables
Discharge Flow Diagrams

cc: *Diane Soderlund, USEPA Region 10, Alaska Operations*
Hahn Shaw, USEPA Region 10
Jeff Walker, BOEMRE Alaska
Don Perrin, Alaska DNR
Administrative Record

ATTACHMENT 1

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

APPLICANT (*Owner/Operator)*					
Owner Name:	Shell Offshore Inc.		Operator Mailing Address:	3601 C Street	
Telephone Number:	907-770-3700			Suite 1000	
Operator Name:	Shell Offshore Inc.			Anchorage, AK 99503	
Telephone Number:	907-770-3700				
FACILITY					
Facility Name:	Discoverer		Facility Mailing Address:	3601 C Street	
Contact Name:	Susan Childs			Suite 1000	
Telephone Number:	907-770-3700			Anchorage, AK 99503	
Beginning Date of Operation:	July 10, 2011		Stationary Facilities	Latitude:	
Expected Duration of Operation:	approximately 34 days per well site			Longitude:	
Facility Type *(check applicable type)*	☐	Jackup	Mobile Facilities	Initial Latitude:	70° 23' 29.5814"
	☒	Drill Ship			
	☐	Semisubmersible			
	☐	Other (specify):		Initial Longitude:	145° 58' 52.5284"

Submit a site map showing the exact location of facility and discharges associated with the project. Mobile facilities may designate an area where they may be operating and must include a map showing those areas and a description of operations within those areas. If the discharge is within 4000 meters of an environmentally sensitive area indicated by the permit, those areas and their distance from the operation/discharge must be shown on the map.

RECEIVING WATER			
☐	Chukchi Sea	☐	Other (*specify*): ☐
☒	Beaufort Sea		

Supply confirmation with the U.S. Department of State and NOAA that the discharge is seaward of the inner boundary baseline, if applicable.

LOCATION OF DISCHARGE					
MMS	Lease Number	**OCS-Y-1805**	ADNR	Lease Number	**N/A**
	Block Number	**6658**		Block Number	**N/A**
Range of water depths below mean lower low water (MLLW) in the lease block:		From:	**107'**	To:	**107'**

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**19.6'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**19.6'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at seafloor 107'**
☐	007 Boiler Blowdown	Water Depth:	
☐	008 Fire Control System Test Water	Water Depth:	
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**19.6'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC through 20" casing cuttings discharged at 97'; cement discharged at the seafloor at 107'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached Table 1

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information			
Well Name:	**Sivulliq**	Latitude:	**70° 23' 29.5814"**
Well Number:	**N**	Longitude:	**145° 58' 52.5284"**
Beginning Drill Date:	**July 10, 2011**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid					
	☒	Water-based		☐	Lignosulfonate

Category (*check all that apply*)			Group (*check all that apply*)		
	☐	Oil-based		☐	Lime
	☐	Synthetic-based		☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Zone of Deposit Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a Zone of Deposit from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A ZONE OF DEPOSIT. The burden of proof for justifying a zone of deposit through demonstrating compliance with the requirements of 18 AAC 70.210 rests with the applicant.

Distance from shoreline of discharge point (measured at M.L.L.W.):		Average Mud density:	
Depth of discharge (measured at M.L.L.W.):		Flow Rate:	
Orientation of outfall to shoreline (e.g., perpendicular, 45°, parallel):		Total Volume:	
Orientation of outfall to water surface (e.g., perpendicular, 45°, parallel):		Maximum current and direction:	

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

Mixing Zone Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a mixing zone from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A MIXING ZONE. The burden of proof for justifying a mixing zone through demonstrating compliance with the requirements of 18 AAC 70.240 through 18 AAC 70.270 rests with the applicant.

Distance from shoreline of discharge point or first port of diffuser (measured at M.L.L.W.):		Length of diffuser:	
Depth of discharge port or diffuser (measured at M.L.L.W.):		Diameter of port(s):	
Orientation of diffuser to shoreline (e.g., perpendicular, 45°, parallel):		Number of ports:	
Maximum current:		Port spacing:	

USE OF RECEIVING WATER AT DISTANCE FROM DIFFUSER i.e., Supply for drinking water, Supply for agriculture including irrigation & stock water, Supply for aquaculture, Supply for industrial use, Contact recreation, Secondary recreation, Fish spawning, Harvesting and consumption of raw fish, or other aquatic life (Not needed if not requesting a mixing zone from ADEC):

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Special Conditions (*provide justification for all that are not required, completed or provided)*					
Special Monitoring	☐	Required	☒	Not Required	Justification:
Exploration Plans	☒	Attached	☐	Not Provided	Justification: Submitted to BOEMRE and copy attached
Biological Surveys	☐	Attached	☒	Not Provided	Justification: None Required
Environmental Report(s)	☐	Attached	☒	Not Provided	Justification: Submitted to BOEMRE as part of the Exploration Plan
Drilling Fluid Plan	☒	Complete	☐	Not Complete	Justification: Submitted with NOI.

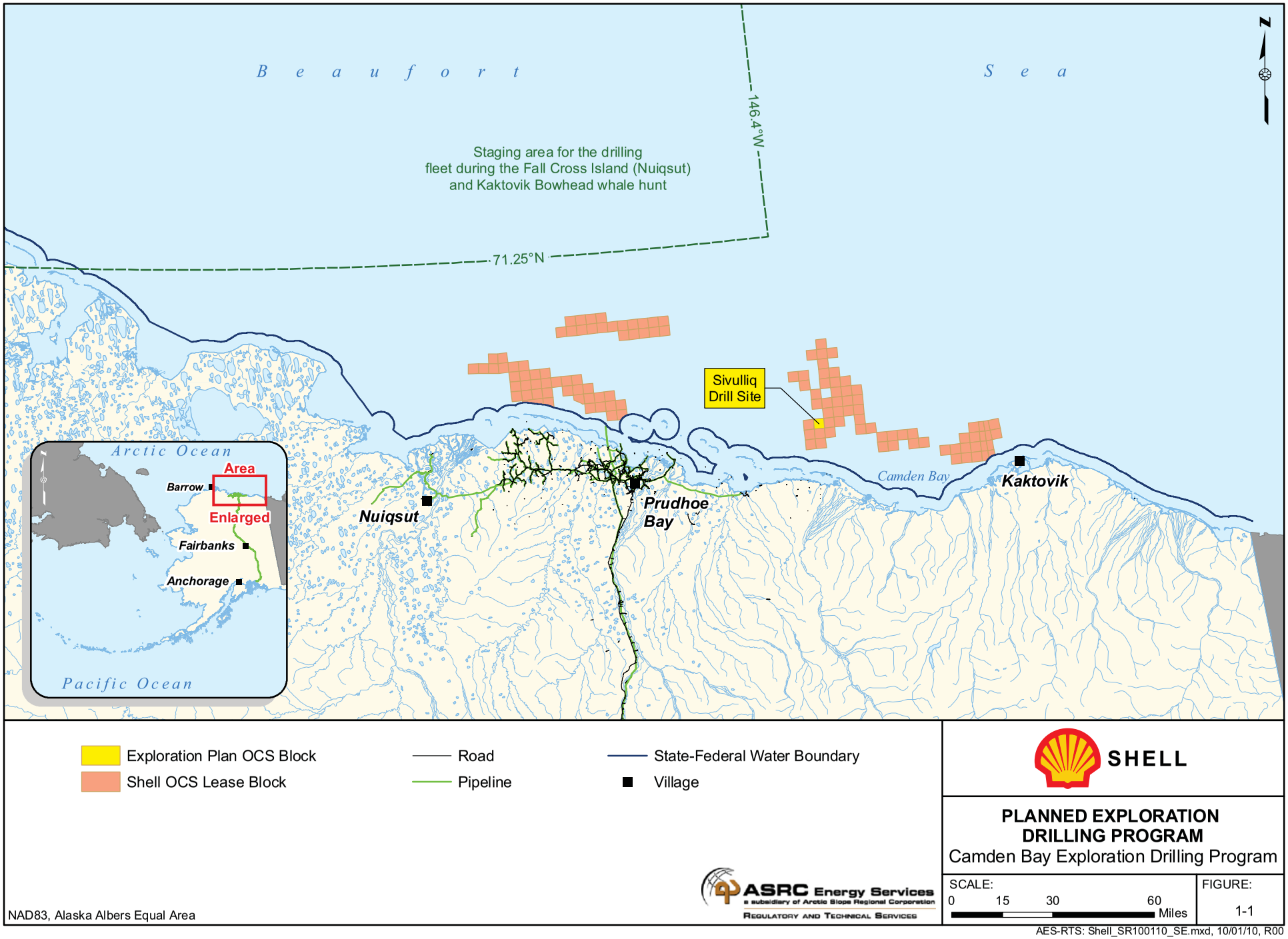
Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:	Susan Childs	Date:	10/12/2010
Printed Name:	Susan Childs	Title:	Alaska Venture Support Integrator Manager

Mail Completed NOI to EPA and ADEC at the following addresses:

US EPA 1200 6th Avenue, M/S OWW-130 Seattle, WA 98101	ADEC, Water Division 555 Cordova Street Anchorage, Alaska 99501

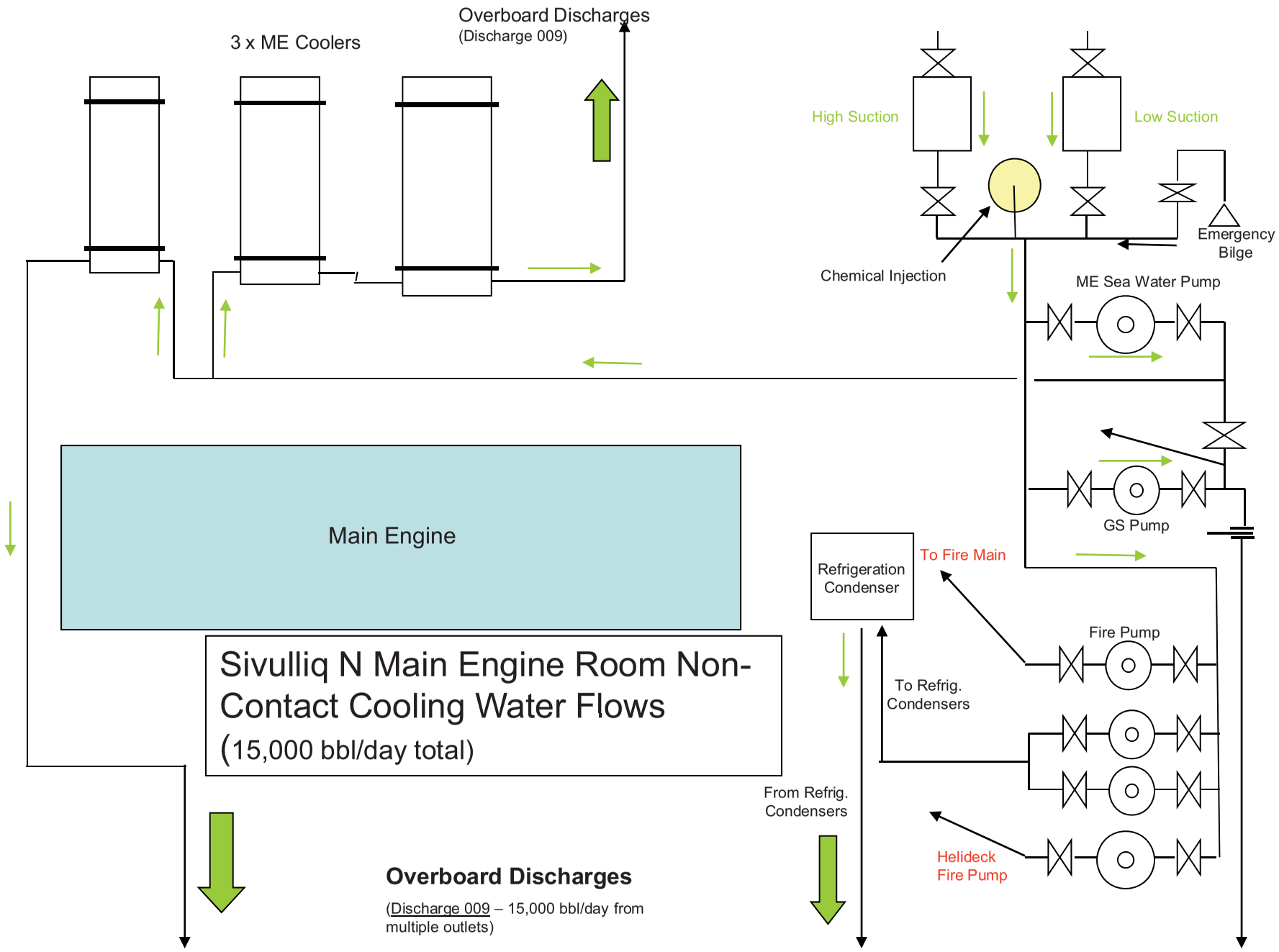

B e a u f o r t
S e a
N
146.4°W
Staging area for the drilling
fleet during the Fall Cross Island (Nuiqsut)
and Kaktovik Bowhead whale hunt
71.25°N
Sivulliq
Drill Site
Camden Bay
Kaktovik
Nuiqsut
Prudhoe
Bay
Arctic Ocean
Area
Barrow
Enlarged
Fairbanks
Anchorage
Pacific Ocean
Exploration Plan OCS Block
Shell OCS Lease Block
Road
Pipeline
State-Federal Water Boundary
Village
SHELL
PLANNED EXPLORATION
DRILLING PROGRAM
Camden Bay Exploration Drilling Program
ASRC Energy Services
a subsidiary of Arctic Slope Regional Corporation
Regulatory and Technical Services
SCALE:
0 15 30 60 Miles
FIGURE:
1-1
NAD83, Alaska Albers Equal Area
AES-RTS: Shell_SR100110_SE.mxd, 10/01/10, R00

Projected generated wastes and discharge methods – Sivulliq Prospect Drill Site N

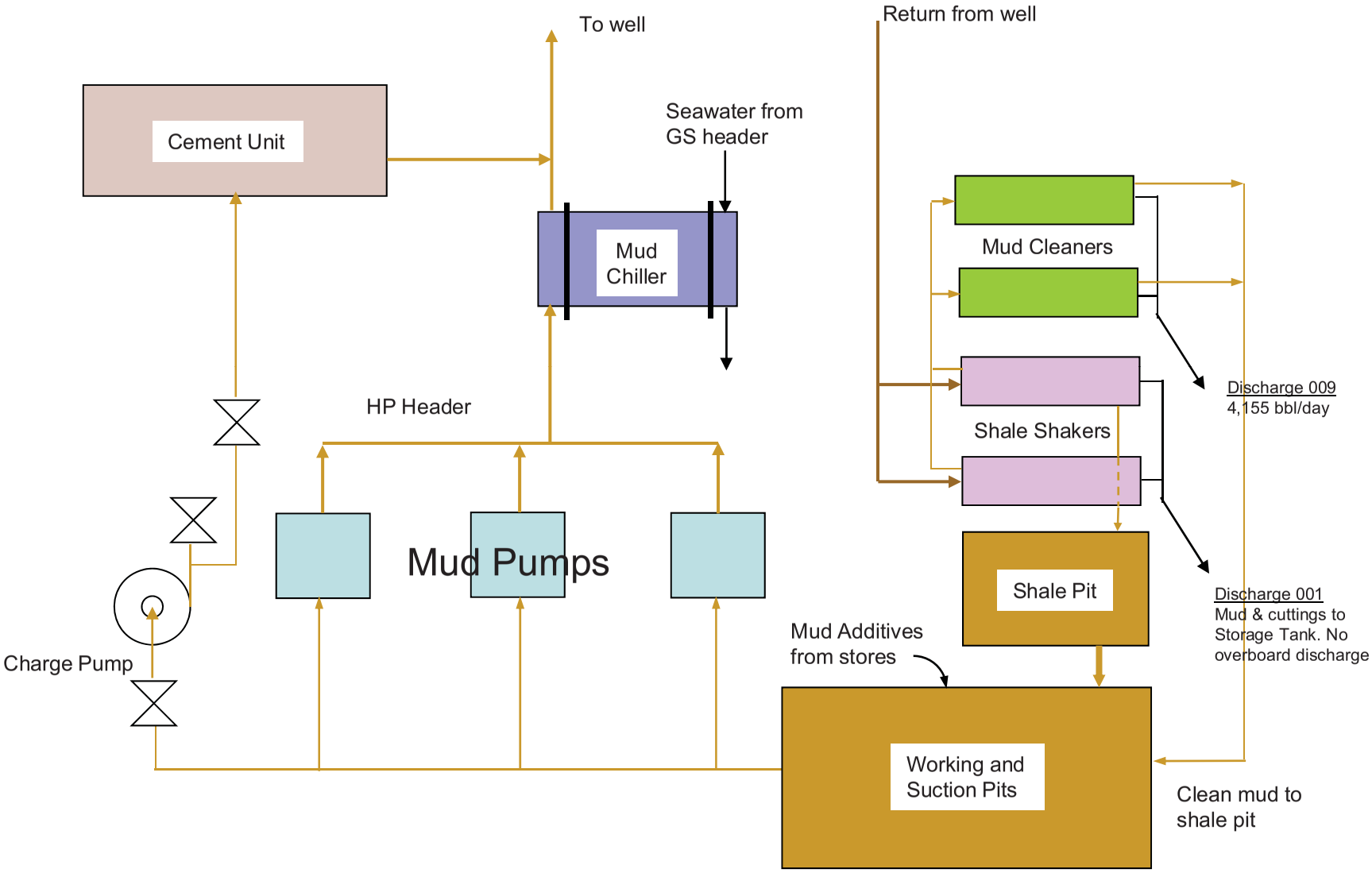
Type of Waste	Total Amount to be Discharged*	Discharge Rate*	Discharge Method
Drill cuttings – Discharge 013	4,031 bbl/well (Cuttings only; no drilling muds used)	697 bbl/day (discharged over 5 days)	Mud Line Cellar (MLC) Cuttings Deposited at the seafloor
Water based mud – Discharge 001	0 bbl/well	0 bbl/day	**No discharge**. Water based muds will be collected and transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations.
Drill cuttings from water base drilling fluid interval – Discharge 001	0bbl/well	0 bbl/day	**No discharge**. Cuttings from the water based drilling fluid interval will be collected and transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations.
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-contact cooling water – Discharge 009	1,530,000 bbl/well	45,000 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations.
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Gray water stored on drillship then transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations. Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	4,250 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	170 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No Discharge**. Ballast water is stored on drillship then transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations.
Firewater bypass – Discharge 008	0 bbl	0 bbl/day	No routine firewater system testing anticipated
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of the Arctic Ocean and disposed of in accordance with all applicable laws and regulations.
BOP fluid – Discharge 006	42 bbl/well	Up to 6 BOP tests at an average 7 bbl/test	Discharged at the seafloor at the BOP

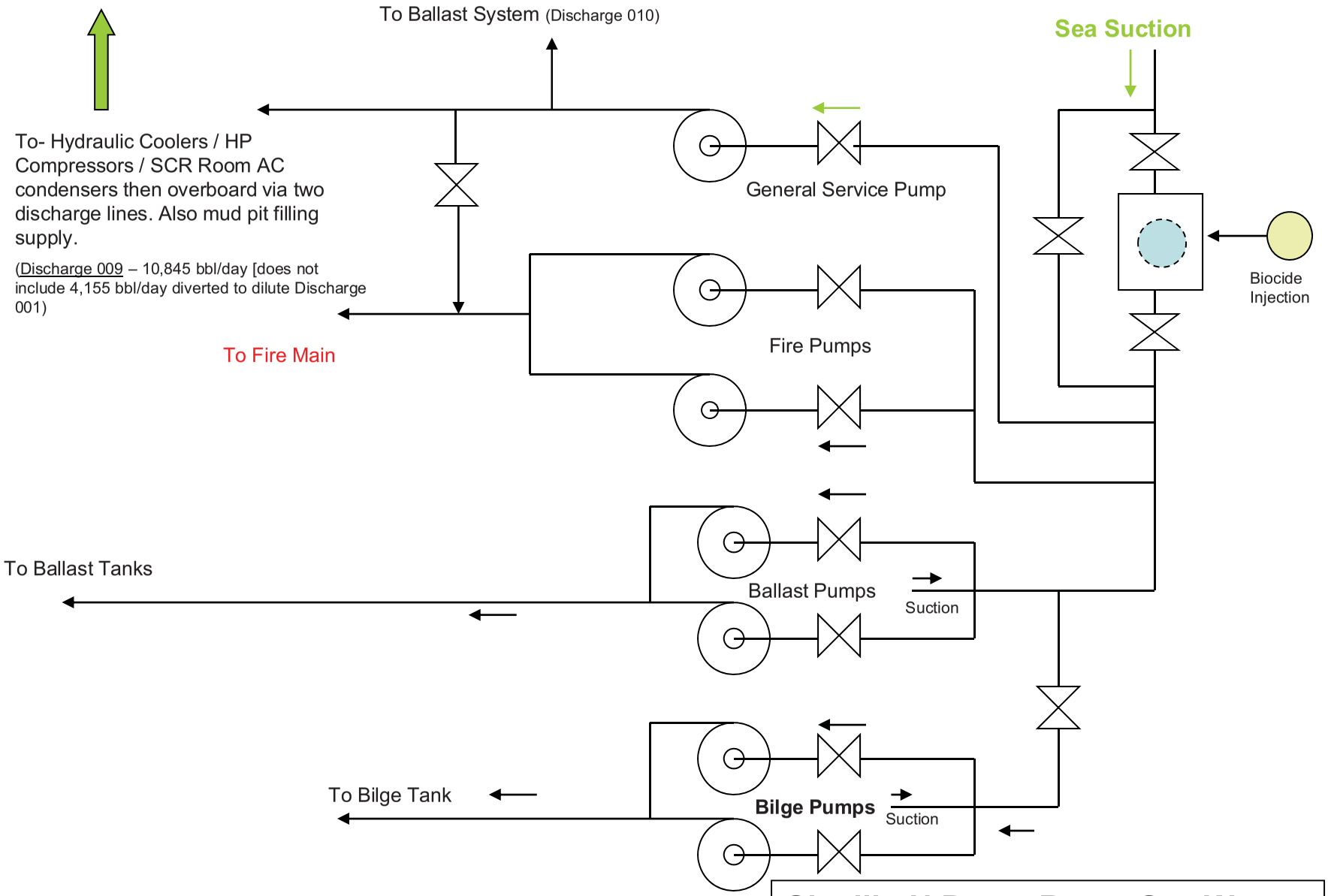
Notes:
* assumes 5 days to complete the MLC through 20" section; 29 days to complete the remainder of the well

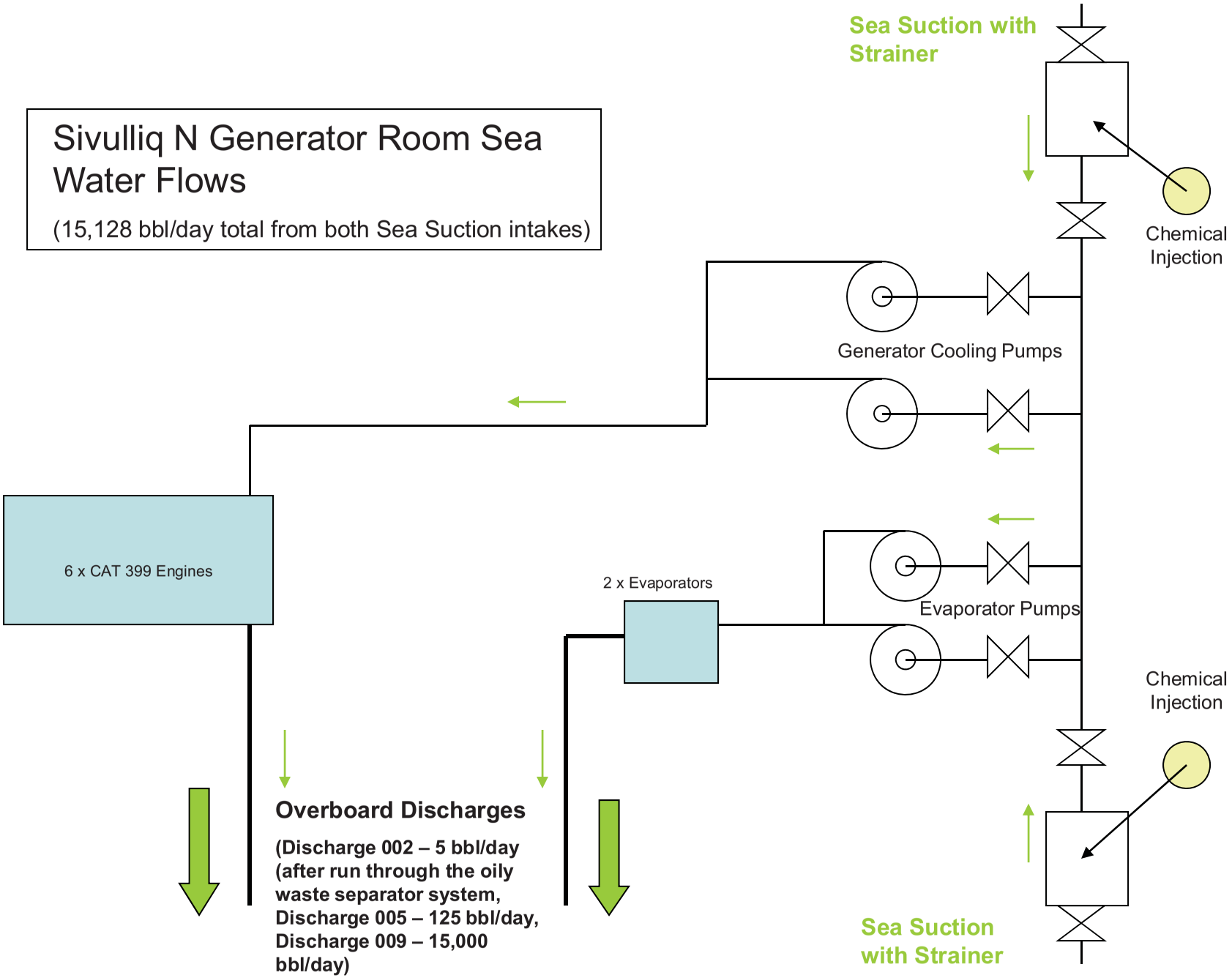
Discharge Flow Diagrams

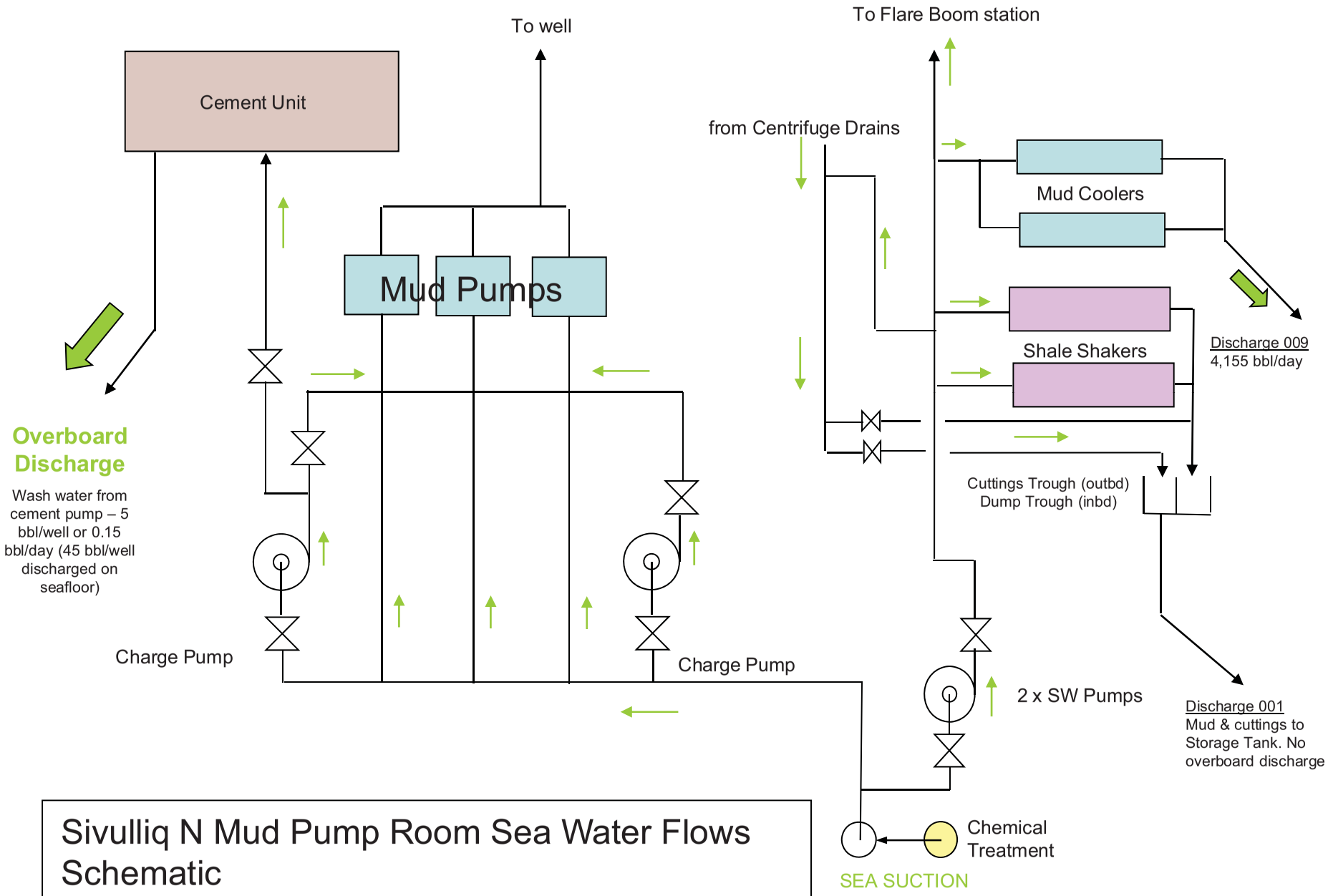

Overboard Discharges
(Discharge 009)
3 x ME Coolers
High Suction
Low Suction
Emergency
Bilge
Chemical Injection
ME Sea Water Pump
Main Engine
GS Pump
Refrigeration
Condenser
To Fire Main
Fire Pump
To Refrig.
Condensers
From Refrig.
Condensers
Helideck
Fire Pump
Sivulliq N Main Engine Room Non-Contact Cooling Water Flows
(15,000 bbl/day total)
Overboard Discharges
(Discharge 009 – 15,000 bbl/day from multiple outlets)

Sivulliq N Drilling Fluid Flowpath




To Ballast System (Discharge 010)
Sea Suction
To- Hydraulic Coolers / HP Compressors / SCR Room AC condensers then overboard via two discharge lines. Also mud pit filling supply.
(Discharge 009 – 10,845 bbl/day [does not include 4,155 bbl/day diverted to dilute Discharge 001)
General Service Pump
Biocide Injection
To Fire Main
Fire Pumps
To Ballast Tanks
Ballast Pumps
Suction
To Bilge Tank
Bilge Pumps
Suction
Sivulliq N Pump Room Sea Water Flows (Maximum 10,845 bbl/day)


Sivulliq N Generator Room Sea Water Flows
(15,128 bbl/day total from both Sea Suction intakes)
Sea Suction with Strainer
Chemical Injection
Generator Cooling Pumps
6 x CAT 399 Engines
2 x Evaporators
Evaporator Pumps
Chemical Injection
Overboard Discharges
(Discharge 002 – 5 bbl/day (after run through the oily waste separator system, Discharge 005 – 125 bbl/day, Discharge 009 – 15,000 bbl/day)
Sea Suction with Strainer

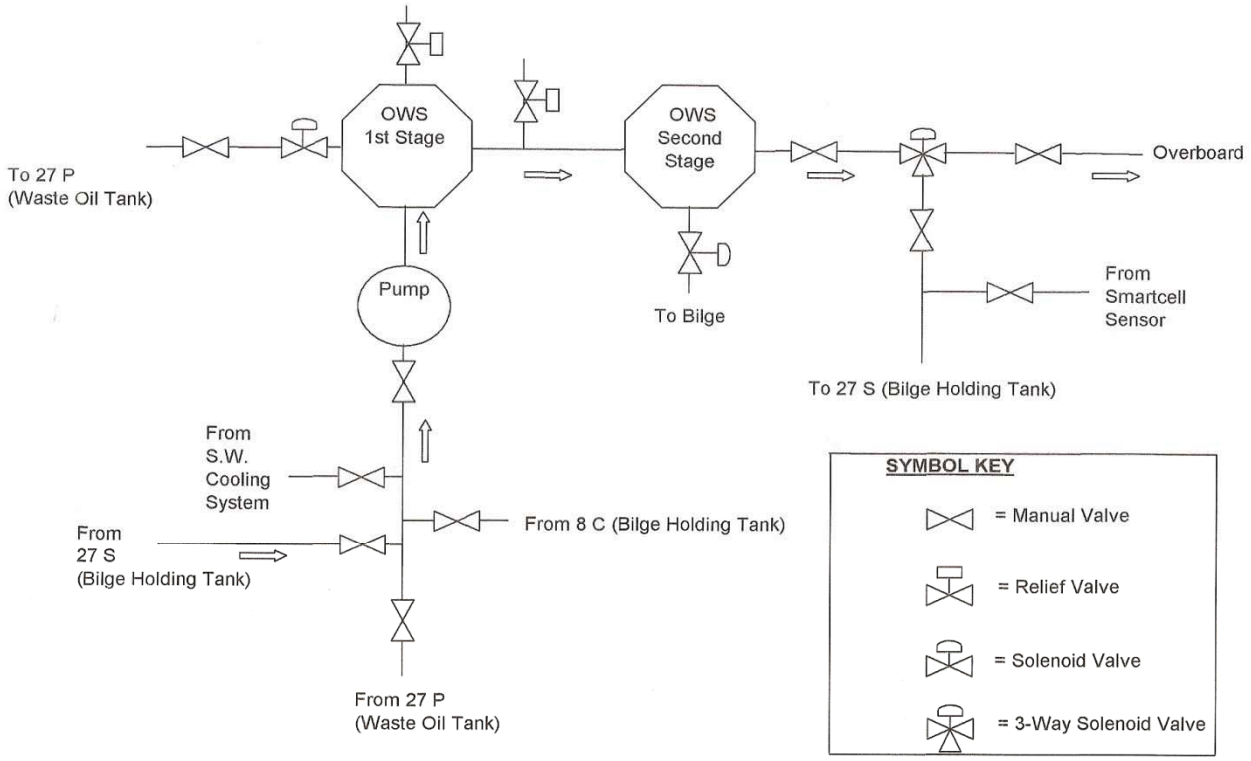


Sivulliq N Mud Pump Room Sea Water Flows Schematic

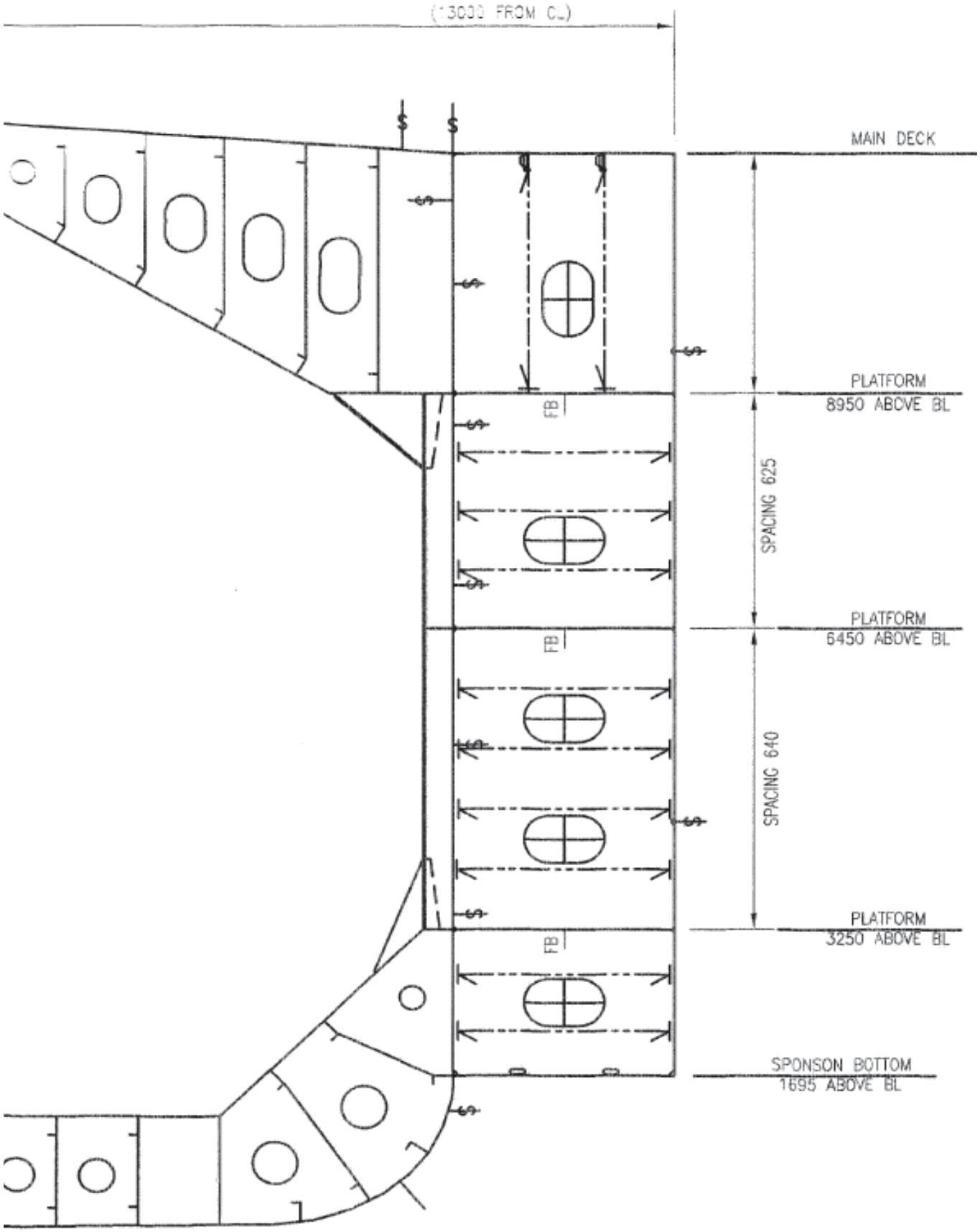
Maximum 4,155 bbl/day

Oily Water Separator System

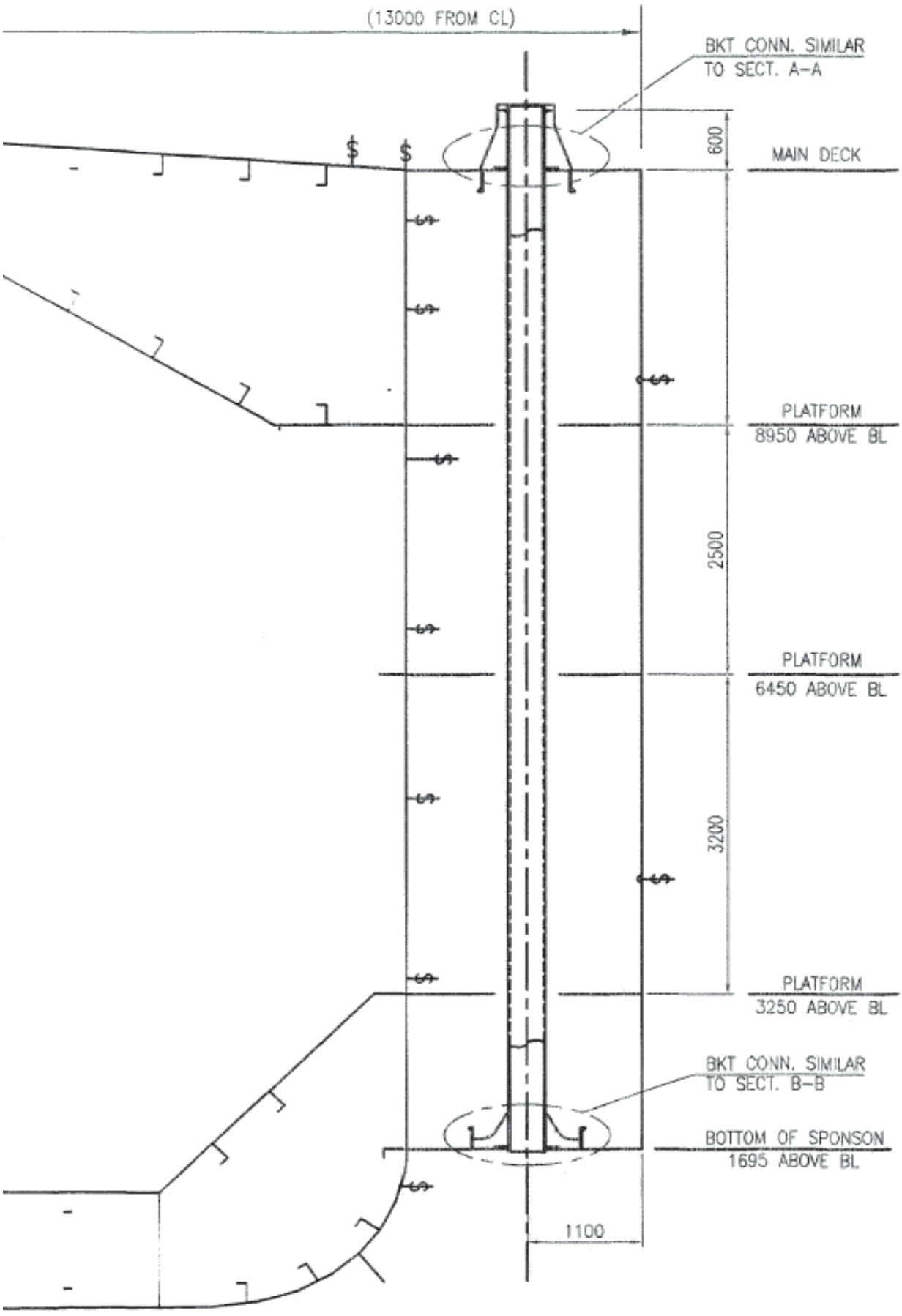
Oily Water Separator System



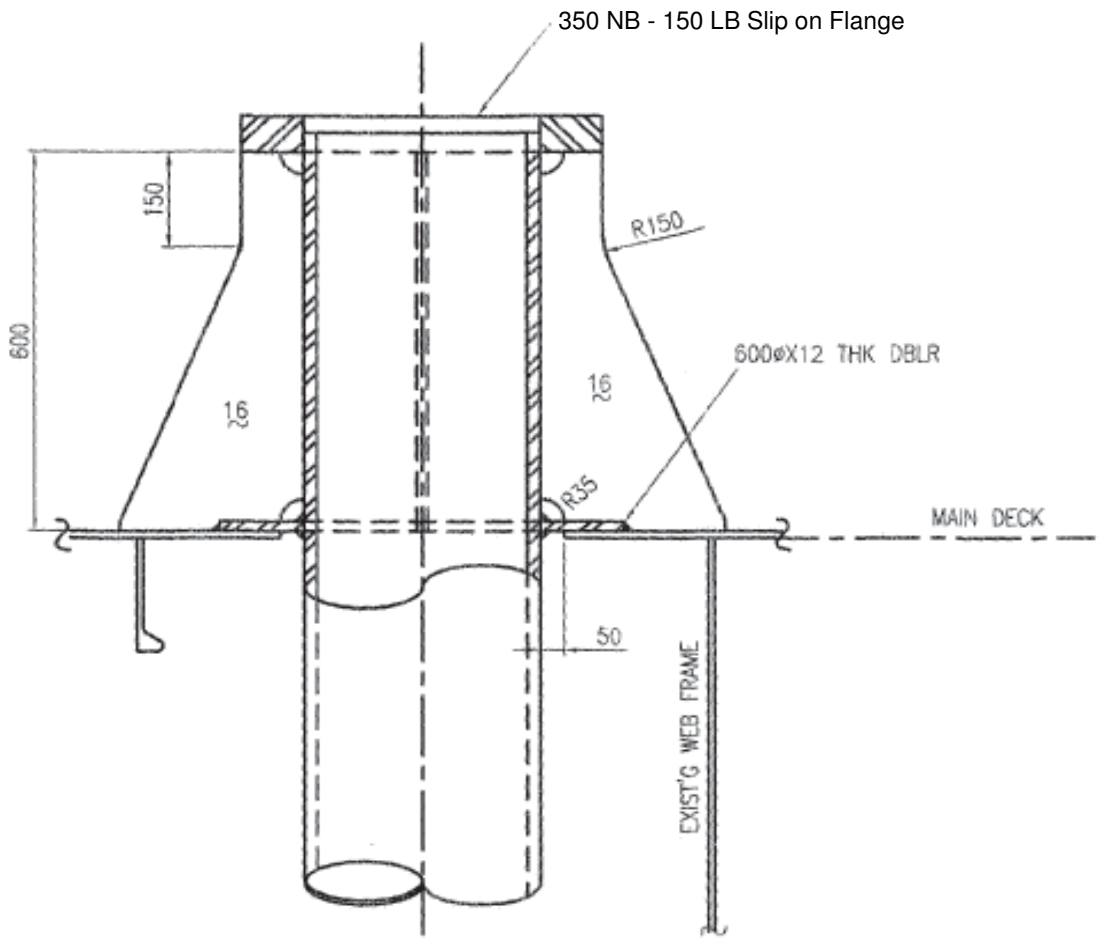
Discharge Caisson



SECTION AT FR 92

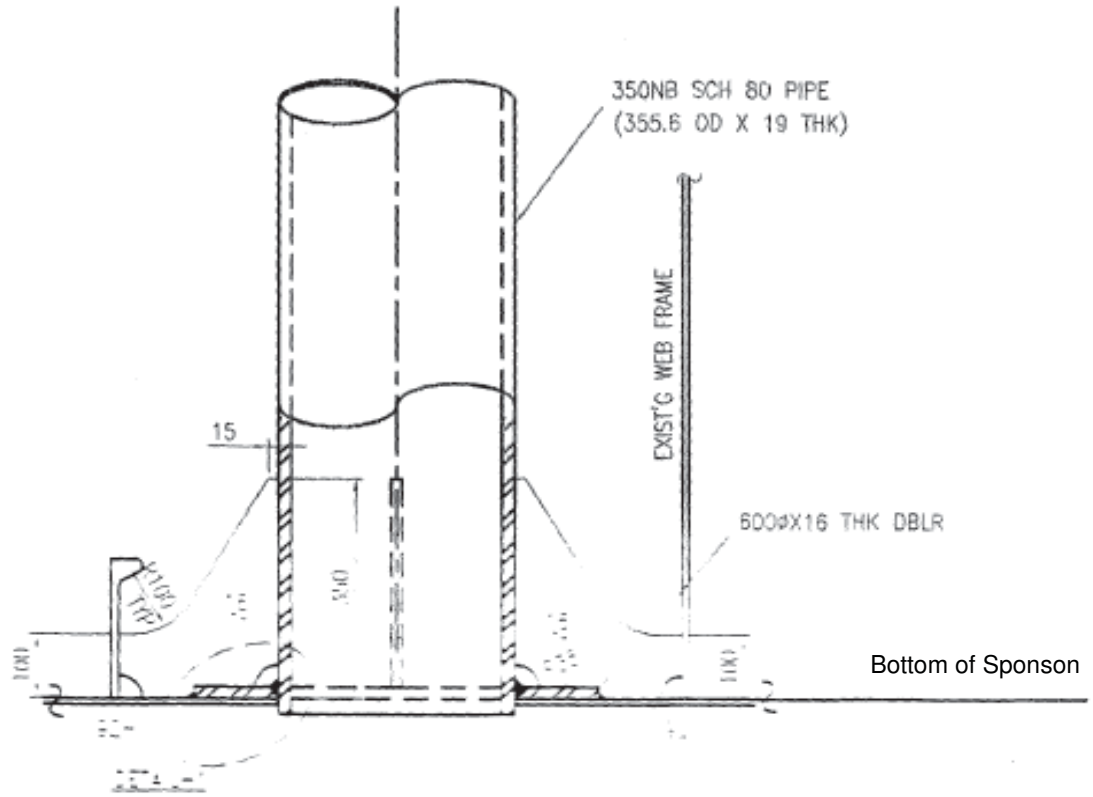


SECTION AT C.L. OF PIPE



SECTION A-A

SCALE=1:10



Discharge Caisson

The discharge caisson is a pipe that runs vertically through the sponson on the hull of the drillship from the main deck level to the base of the sponson. The sponson is an exterior reinforced cladding installed on the *Discoverer* to provide ice resistance. It is hollow and extends from the main deck level to well below the water line.

Waste streams are collected aboard the drillship to a point on the main deck near the mud room. A 15-in. diameter pipe exits the hull, turns downwards and is connected to the top of the discharge caisson.

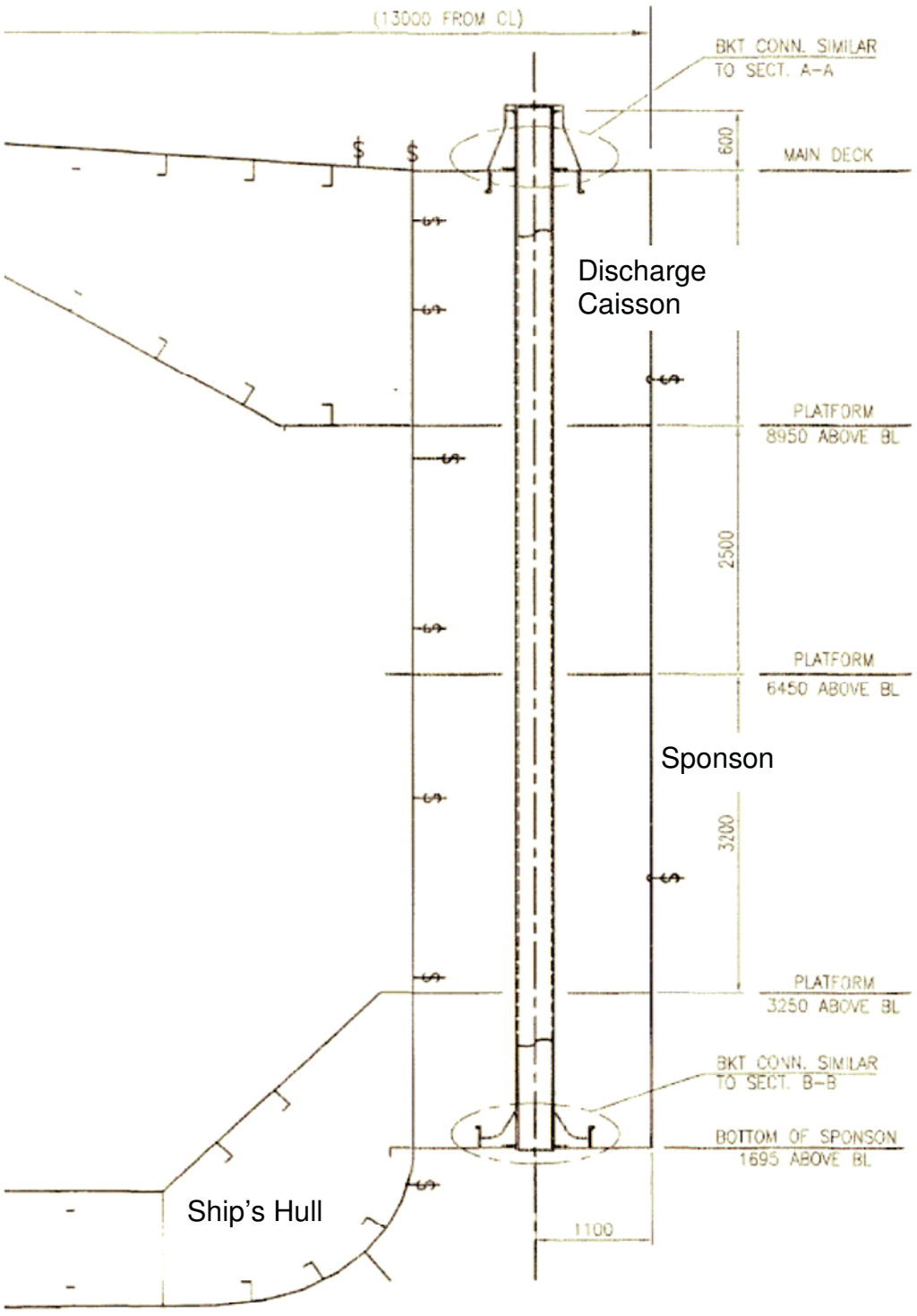
The discharge caisson, also a 15-in OD pipe, is welded into the sponson top and bottom (so that the interior of the sponson remains dry). The bottom of the sponson and the end of the discharge caisson is 5.6 ft (1.7 m) above the keel depth, and since it remains open to the sea at all times, the discharge caisson is constantly filled with water to mean sea level. This caisson is not equipped with a "float" valve; it is merely an open conduit to the sea through which most waste streams are discharged below sea level.

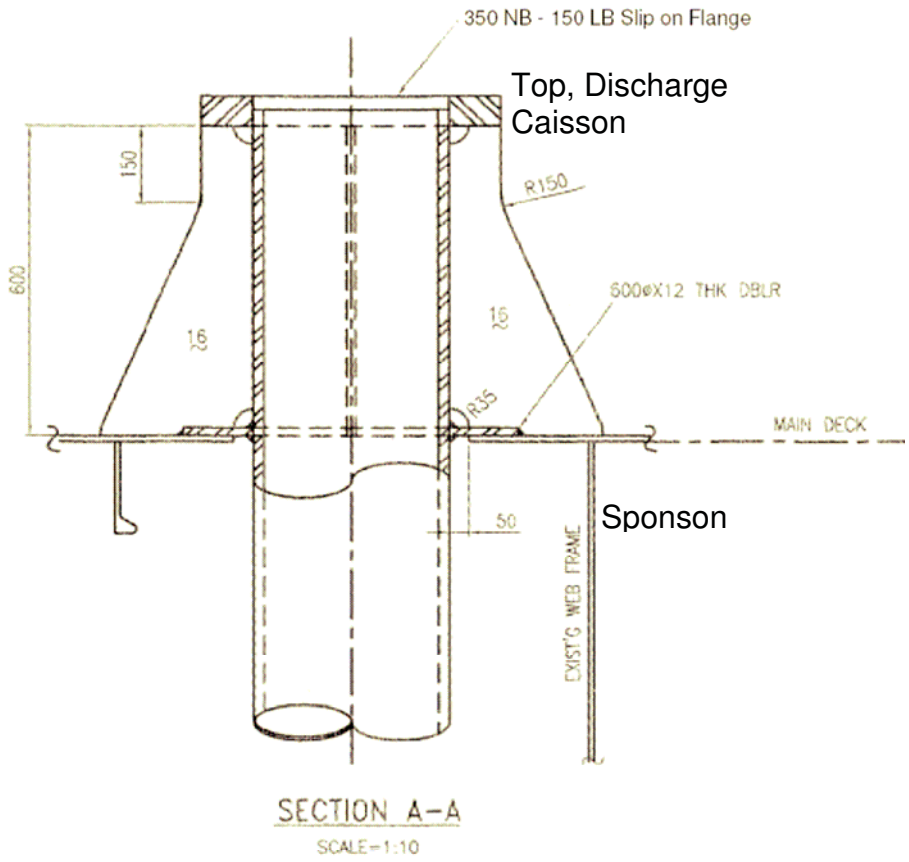
The *Discoverer* has the following draft characteristics:

Max draft at load line:	27 ft (8.2 m)
Transit draft	26.3 ft (8.0 m)
Drilling draft	25.2 ft (7.7 m)
Light ship draft	19.0 ft (5.8 m)

With the bottom of the sponson 5.6 ft above the keel, the base of the discharge caisson while drilling is 25.2 ft – 5.6 ft = 19.6 ft (6.0 m) below mean sea level. Because of heave, the water level inside the caisson is constantly changing.

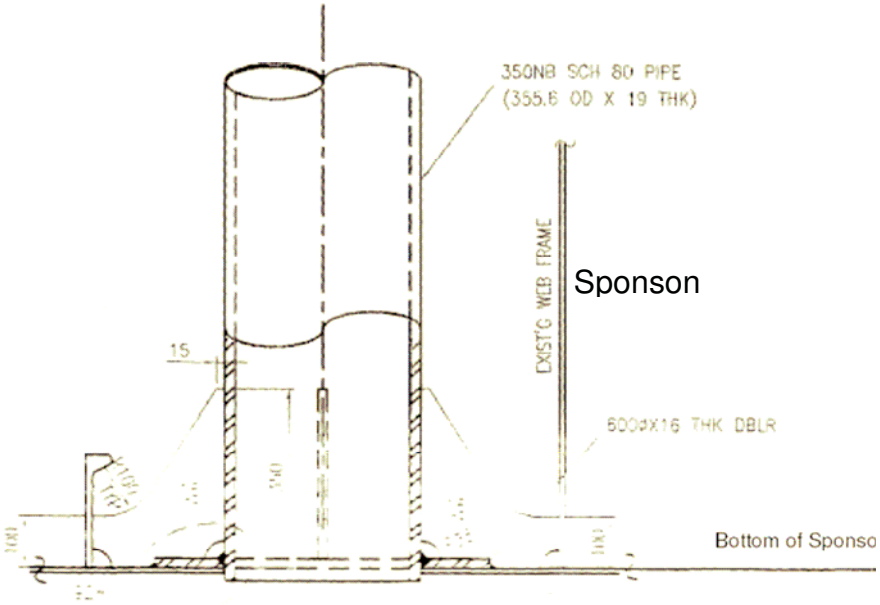
See attached schematic drawings:


(13000 FROM CL)
BKT CONN. SIMILAR
TO SECT. A-A
600
MAIN DECK
Discharge
Caisson
PLATFORM
8950 ABOVE BL
2500
PLATFORM
6450 ABOVE BL
Sponson
3200
PLATFORM
3250 ABOVE BL
BKT CONN. SIMILAR
TO SECT. B-B
BOTTOM OF SPONSON
1695 ABOVE BL
Ship's Hull
1100



SECTION A-A

SCALE=1:10



Base, Discharge Caisson

ATTACHMENT 1

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

APPLICANT (*Owner/Operator)*					
Owner Name:	Shell Offshore Inc.		Operator Mailing Address:	3601 C Street	
Telephone Number:	907-770-3700			Suite 1000	
Operator Name:	Shell Offshore Inc.			Anchorage, AK 99503	
Telephone Number:	907-770-3700				
FACILITY					
Facility Name:	Noble Discoverer		Facility Mailing Address:	3601 C Street	
Contact Name:	Susan Childs			Suite 1000	
Telephone Number:	907-770-3700			Anchorage, AK 99503	
Beginning Date of Operation:	TBD		Stationary Facilities	Latitude:	
Expected Duration of Operation:	approximately 44 days per well site			Longitude:	
Facility Type *(check applicable type)*	☐	Jackup	Mobile Facilities	Initial Latitude:	70° 27' 01.6193"
	☒	Drill Ship			
	☐	Semisubmersible			
	☐	Other (specify):		Initial Longitude:	145° 49' 32.0650"
Submit a site map showing the exact location of facility and discharges associated with the project. Mobile facilities may designate an area where they may be operating and must include a map showing those areas and a description of operations within those areas. If the discharge is within 4000 meters of an environmentally sensitive area indicated by the permit, those areas and their distance from the operation/discharge must be shown on the map.					
RECEIVING WATER					
☐	Chukchi Sea		☐	Other (*specify*): ☐	
☒	Beaufort Sea				
Supply confirmation with the U.S. Department of State and NOAA that the discharge is seaward of the inner boundary baseline, if applicable.					
LOCATION OF DISCHARGE					
MMS	Lease Number	**OCS-Y-1941**	ADNR	Lease Number	**N/A**
	Block Number	**6610**		Block Number	**N/A**
Range of water depths below mean lower low water (MLLW) in the lease block:		From: **120'**		To:	**120'**

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**19.6'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**19.6'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at the seafloor 120'**
☐	007 Boiler Blowdown	Water Depth:	
☐	008 Fire Control System Test Water	Water Depth:	
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**19.6'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC through 26" section cuttings discharged at 110'; cement at the seafloor 120'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached (Table 1)

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information

Well Name:	**Torpedo**	Latitude:	**70° 27' 01.6193"**
Well Number:	**H**	Longitude:	**145° 49' 32.0650"**
Beginning Drill Date:	**TBD**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid

Category	☒	Water-based		☐	Lignosulfonate
	☐	Oil-based		☐	Lime

(*check all that apply*)	☐	Synthetic-based	Group (*check all that apply*)	☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Zone of Deposit Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a Zone of Deposit from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A ZONE OF DEPOSIT. The burden of proof for justifying a zone of deposit through demonstrating compliance with the requirements of 18 AAC 70.210 rests with the applicant.

Distance from shoreline of discharge point (measured at M.L.L.W.):		Average Mud density:	
Depth of discharge (measured at M.L.L.W.):		Flow Rate:	
Orientation of outfall to shoreline (e.g., perpendicular, 45°, parallel):		Total Volume:	
Orientation of outfall to water surface (e.g., perpendicular, 45°, parallel):		Maximum current and direction:	

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

Mixing Zone Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a mixing zone from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A MIXING ZONE. The burden of proof for justifying a mixing zone through demonstrating compliance with the requirements of 18 AAC 70.240 through 18 AAC 70.270 rests with the applicant.

Distance from shoreline of discharge point or first port of diffuser (measured at M.L.L.W.):		Length of diffuser:	
Depth of discharge port or diffuser (measured at M.L.L.W.):		Diameter of port(s):	
Orientation of diffuser to shoreline (e.g., perpendicular, 45°, parallel):		Number of ports:	
Maximum current:		Port spacing:	

USE OF RECEIVING WATER AT DISTANCE FROM DIFFUSER i.e., Supply for drinking water, Supply for agriculture including irrigation & stock water, Supply for aquaculture, Supply for industrial use, Contact recreation, Secondary recreation, Fish spawning, Harvesting and consumption of raw fish, or other aquatic life (Not needed if not requesting a mixing zone from ADEC):

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Special Conditions (*provide justification for all that are not required, completed or provided)*					
Special Monitoring	☐	Required	☒	Not Required	Justification:
Exploration Plans	☐	Attached	☒	Not Provided	Justification: Approved 2010 EP previously submitted to BOEMRE
Biological Surveys	☐	Attached	☒	Not Provided	Justification: None Required
Environmental Report(s)	☐	Attached	☒	Not Provided	Justification: Submitted to BOEMRE as part of the 2010 Exploration Plan
Drilling Fluid Plan	☐	Complete	☒	Not Complete	Justification: In Preparation

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:		Date:	12/16/2010
Printed Name:	Susan Childs	Title:	Alaska Support Intergrator Manager

Mail Completed NOI to EPA and ADEC at the following addresses:

US EPA 1200 6th Avenue, M/S OWW-130 Seattle, WA 98101	ADEC, Water Division 555 Cordova Street Anchorage, Alaska 99501

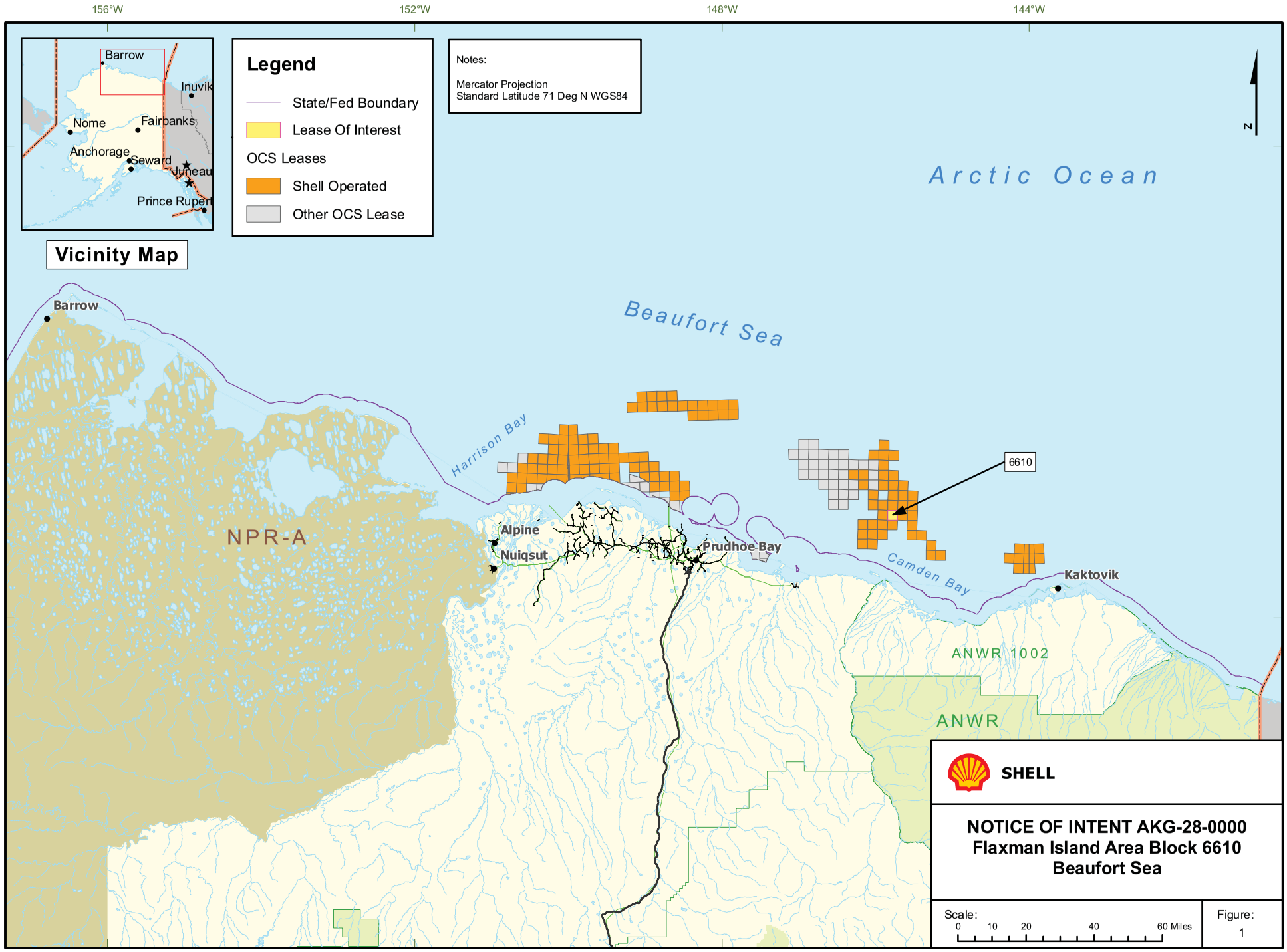
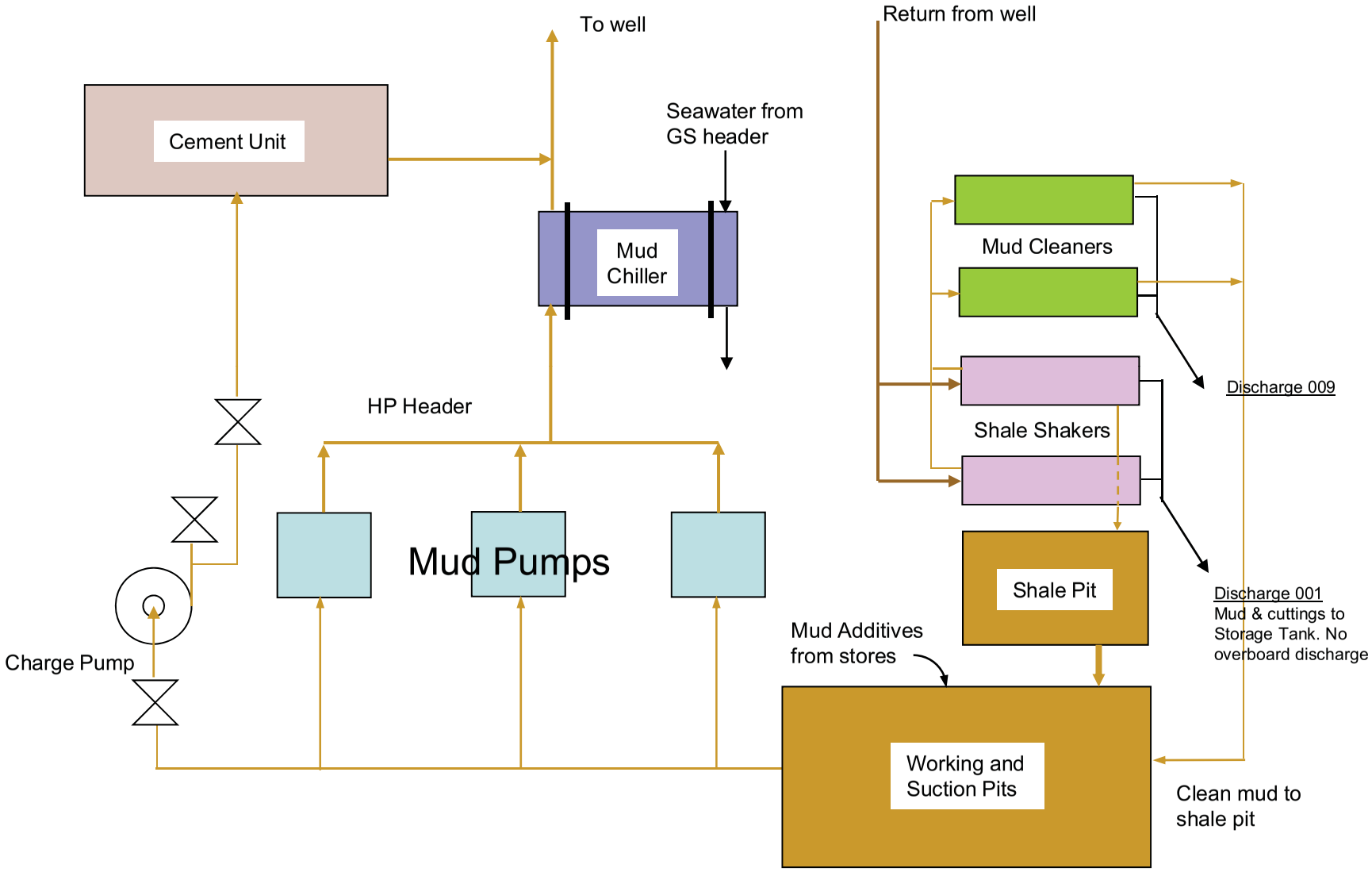

156°W
152°W
148°W
144°W
72°N
70°N
Barrow
Inuvik
Nome
Fairbanks
Anchorage
Seward
Juneau
Prince Rupert
Vicinity Map
Legend
State/Fed Boundary
Lease Of Interest
OCS Leases
Shell Operated
Other OCS Lease
Notes:
Mercator Projection
Standard Latitude 71 Deg N WGS84
N
Arctic Ocean
Beaufort Sea
Harrison Bay
Camden Bay
NPR-A
Alpine
Nuiqsut
Prudhoe Bay
Kaktovik
6610
ANWR 1002
ANWR
SHELL
NOTICE OF INTENT AKG-28-0000
Flaxman Island Area Block 6610
Beaufort Sea
Scale:
0 10 20 40 60 Miles
Figure:
1
Shell AV GIS/12-14-2010/AKG-28-0000_Fig1_v1.mxd

Table 1 Projected ocean discharges – Torpedo Prospect Drill Site H

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings – Discharge 013	3,806 bbl/well (Cuttings only; no drilling muds used)	317 bbl/day* (discharged over 12 days)	Mud Line Cellar (MLC) through 26" section cuttings deposited at the seafloor
Water based mud – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Water based muds will be collected and transported out of region for disposal at a licensed facility
Drill cuttings from water base drilling interval – Discharge 001	0 bbl/well	0 bbl/day* (discharged over 35 days)	**No discharge**. Cuttings will be collected and transported out of region for disposal at a licensed facility
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-Contact Cooling water – Discharge 009	1,980,000 bbl/well	45,000 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	5,500 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	220 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No discharge**. Ballast water is stored on drillship then transported out of region for disposal at a licensed facility
Firewater bypass – Discharge 008	0 bbl	0 bbl/day	No routine firewater system testing anticipated
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of region for disposal at a licensed facility
BOP fluid – Discharge 006	42 bbl/well	Up to 6 BOP tests at an average 7 bbl/test	Discharged at the seafloor at the BOP

Notes:
* assumes 12 days to complete the MLC through 26" section; 32 days to complete the remainder of the well

Figure 1. Drilling Fluid Flowpath



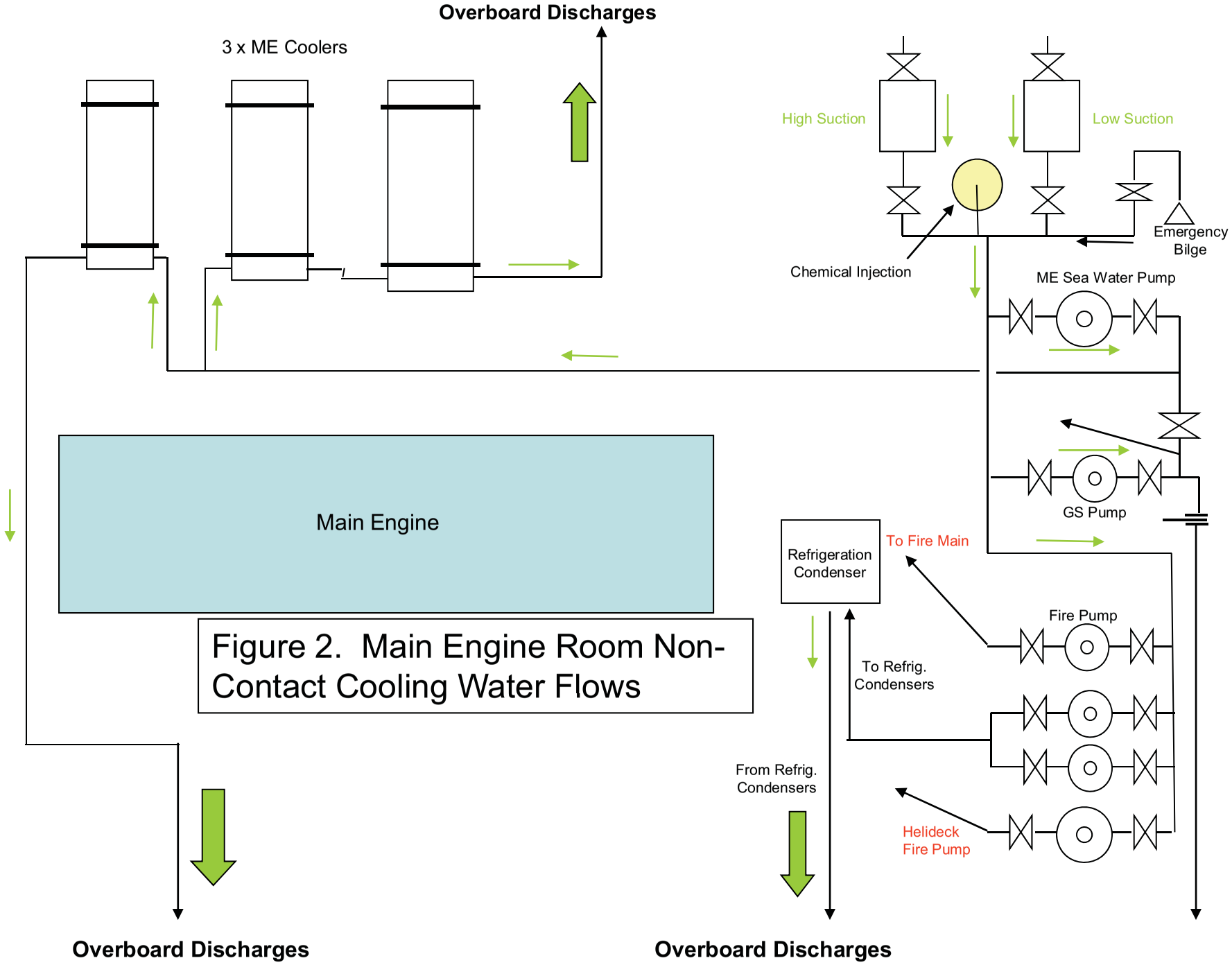


Figure 2. Main Engine Room Non-Contact Cooling Water Flows

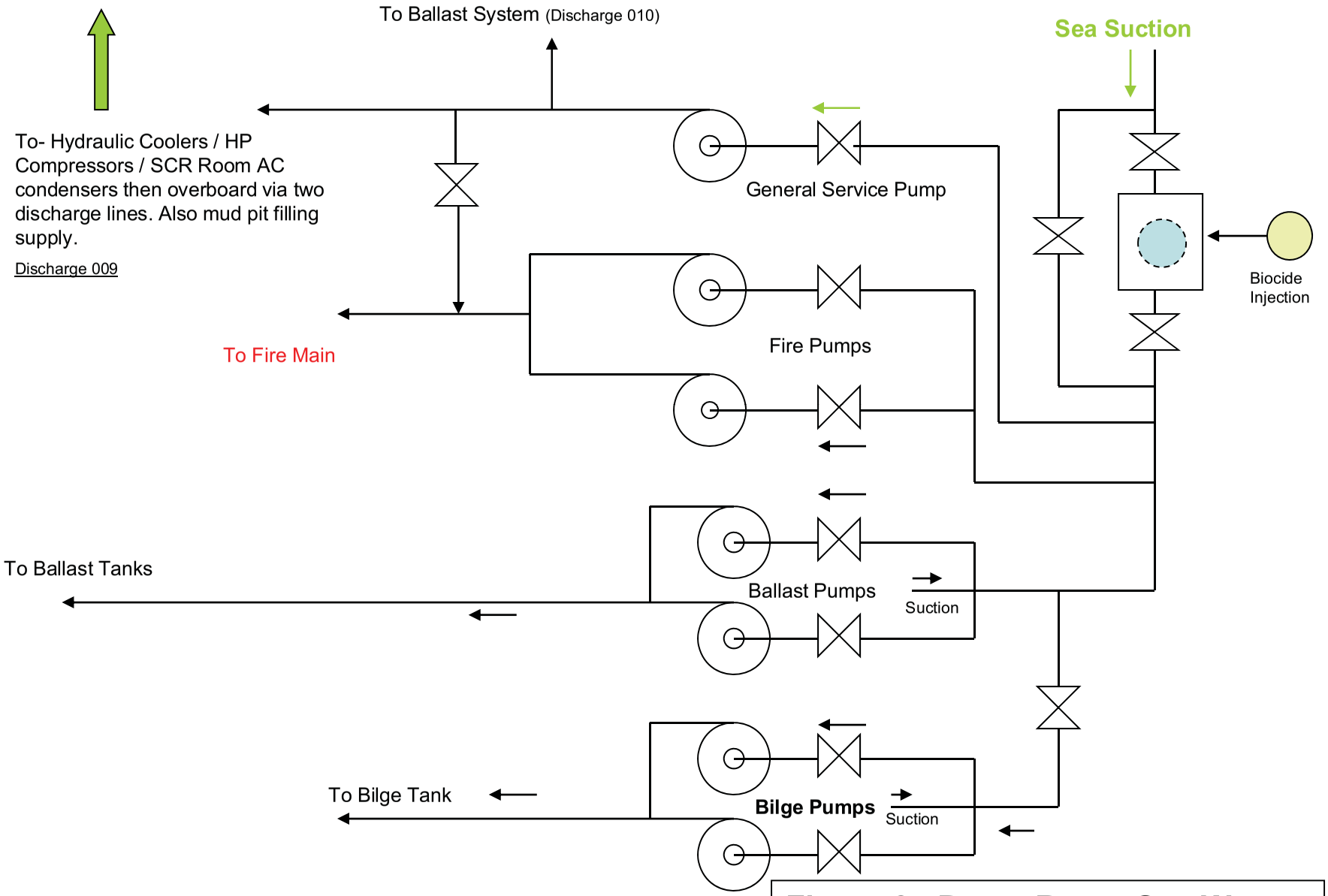
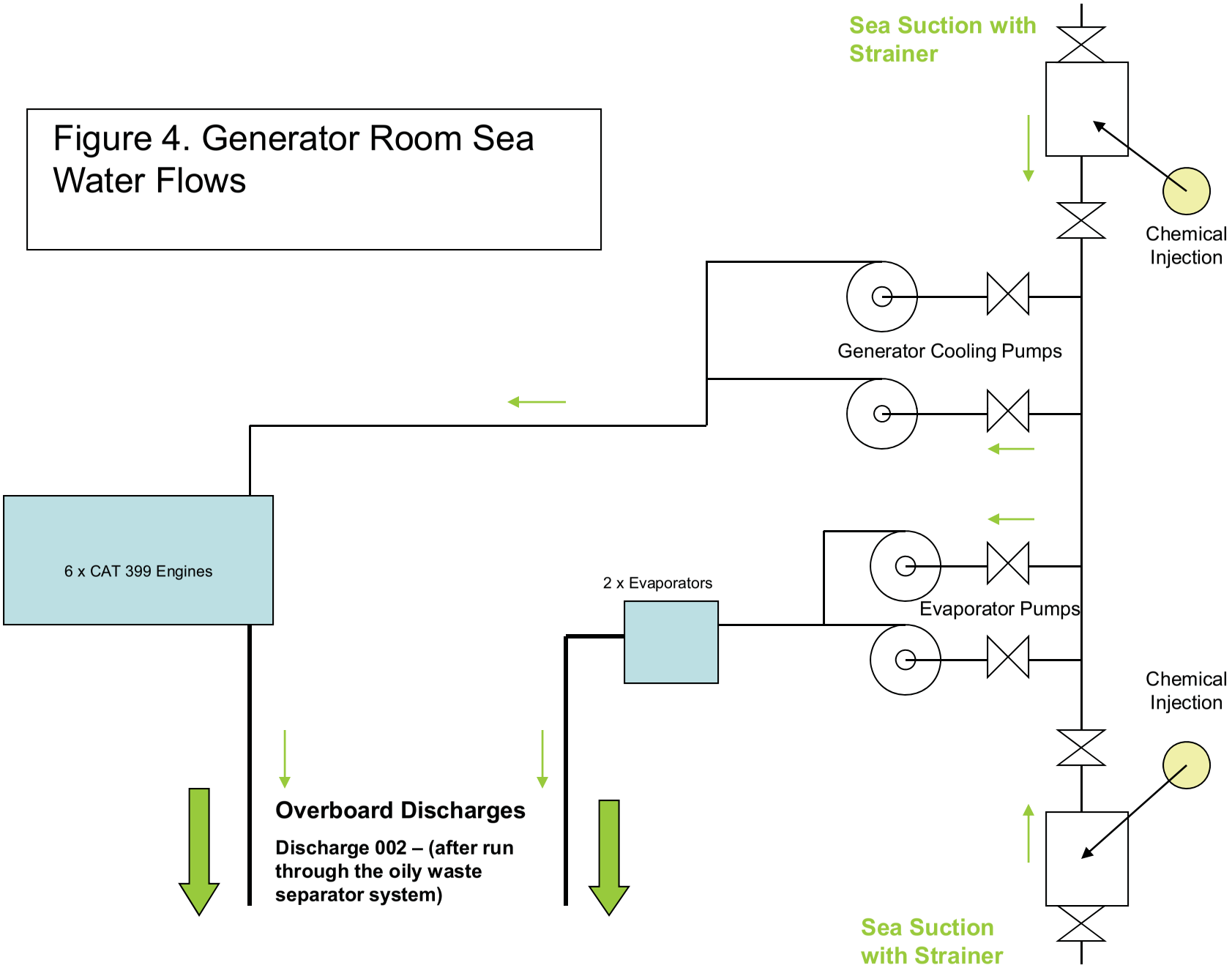


Figure 3. Pump Room Sea Water Flows

Figure 4. Generator Room Sea Water Flows



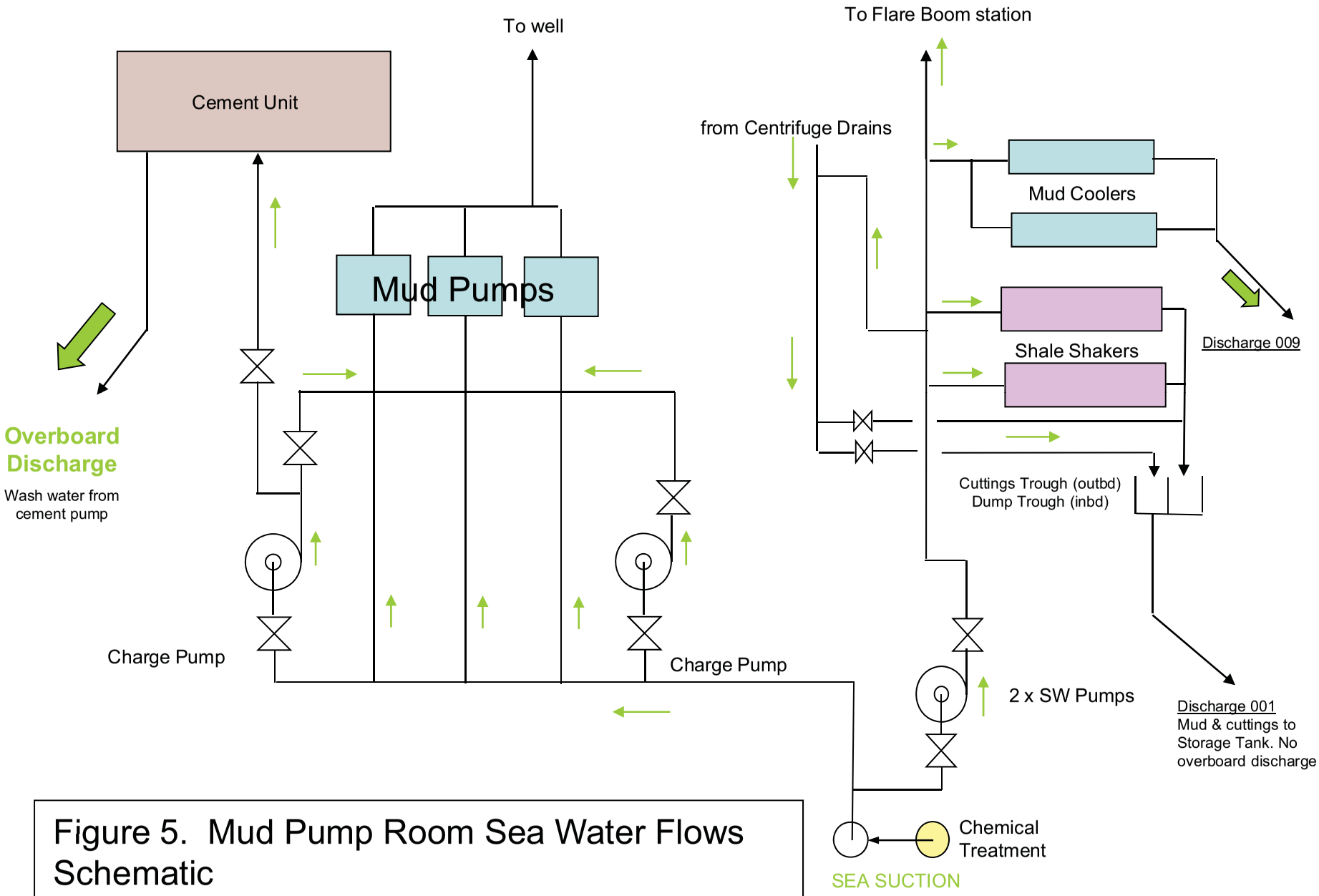
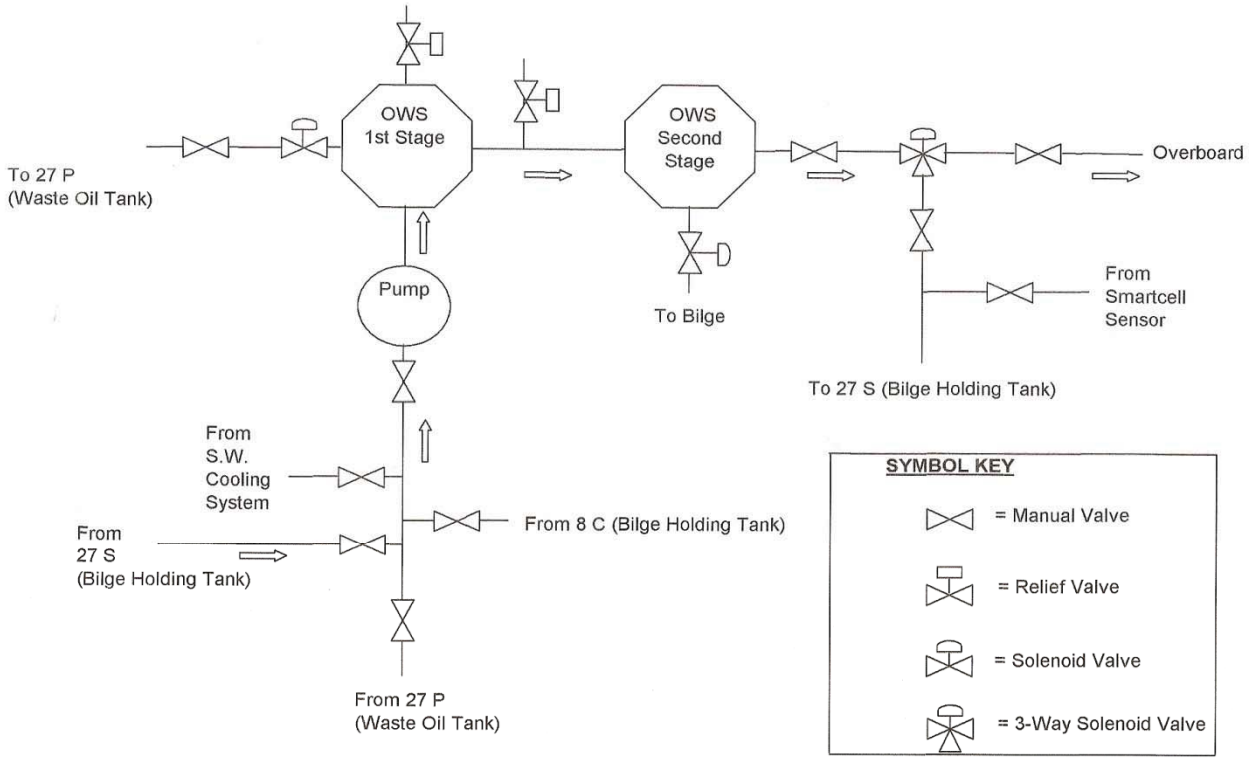


Figure 5. Mud Pump Room Sea Water Flows Schematic

Oily Water Separator System



Discharge Caisson

The discharge caisson is a pipe that runs vertically through the sponson on the hull of the drillship from the main deck level to the base of the sponson. The sponson is an exterior reinforced cladding installed on the *Discoverer* to provide ice resistance. It is hollow and extends from the main deck level to well below the water line.

Waste streams are collected aboard the drillship to a point on the main deck near the mud room. A 15-in. diameter pipe exits the hull, turns downwards and is connected to the top of the discharge caisson.

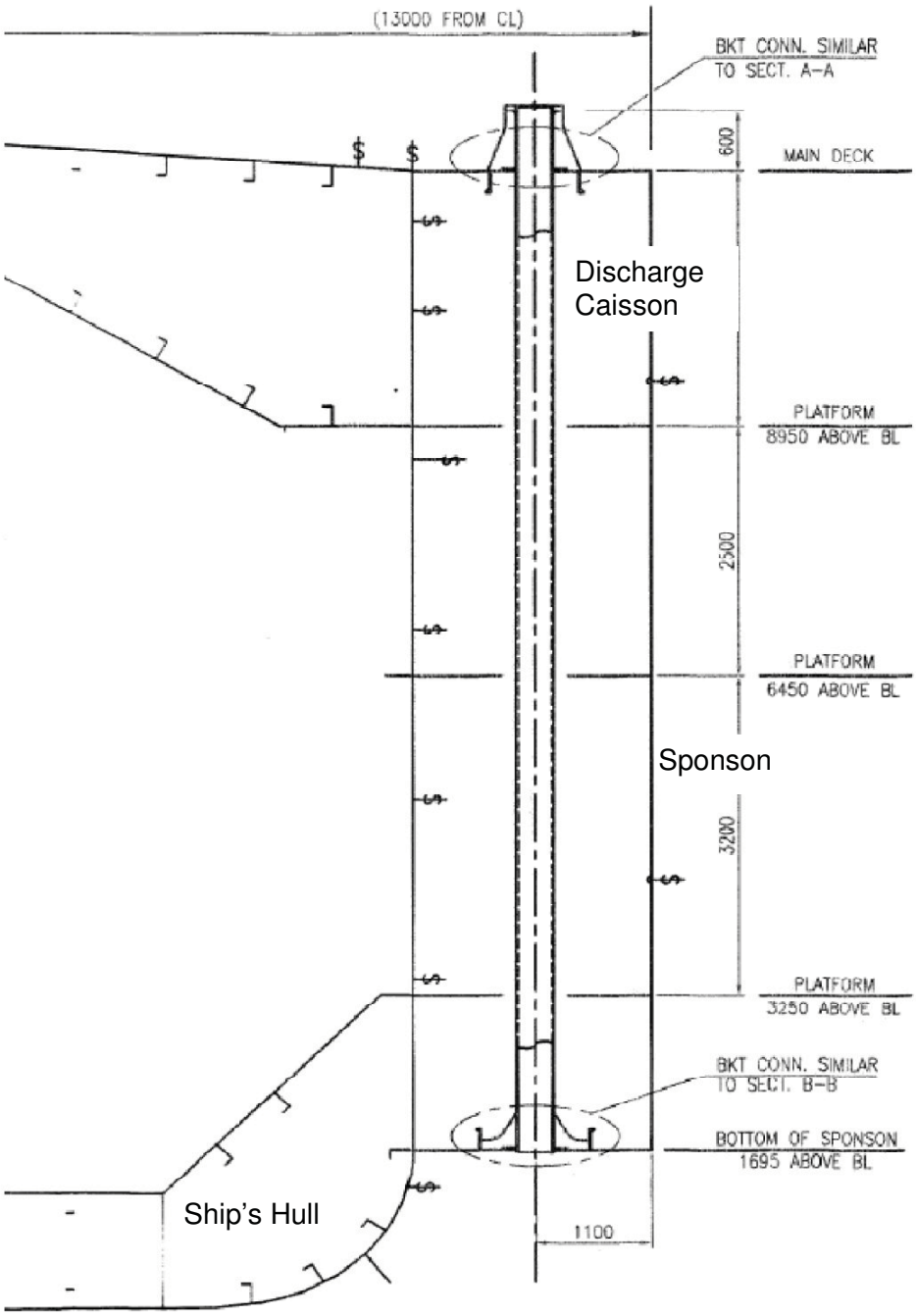
The discharge caisson, also a 15-in OD pipe, is welded into the sponson top and bottom (so that the interior of the sponson remains dry). The bottom of the sponson and the end of the discharge caisson is 5.6 ft (1.7 m) above the keel depth, and since it remains open to the sea at all times, the discharge caisson is constantly filled with water to mean sea level. This caisson is not equipped with a "float" valve; it is merely an open conduit to the sea through which most waste streams are discharged below sea level.

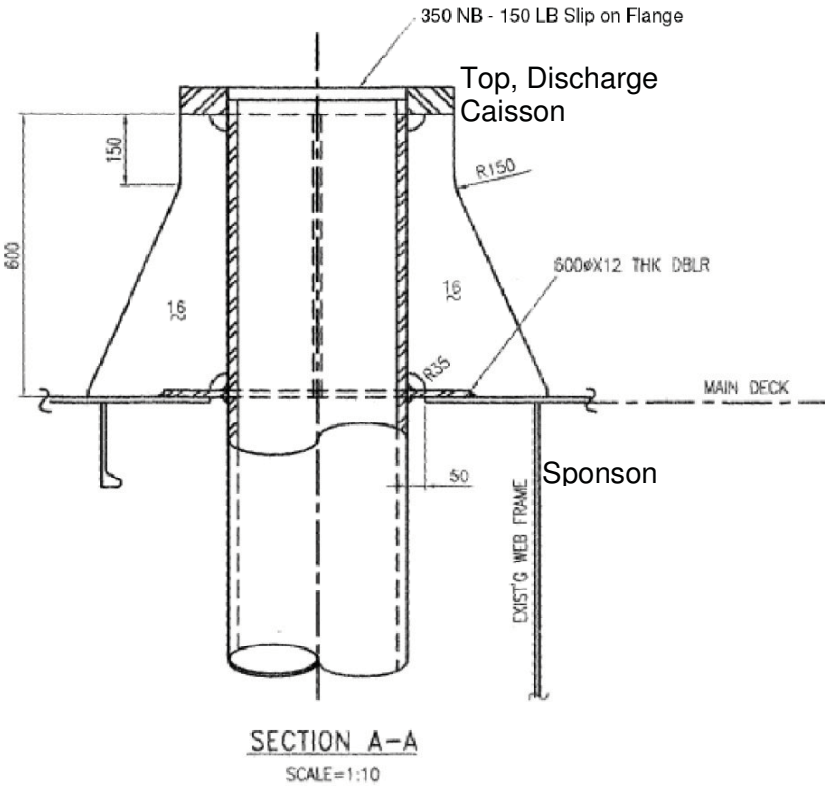
The *Discoverer* has the following draft characteristics:

Max draft at load line:	27 ft (8.2 m)
Transit draft	26.3 ft (8.0 m)
Drilling draft	25.2 ft (7.7 m)
Light ship draft	19.0 ft (5.8 m)

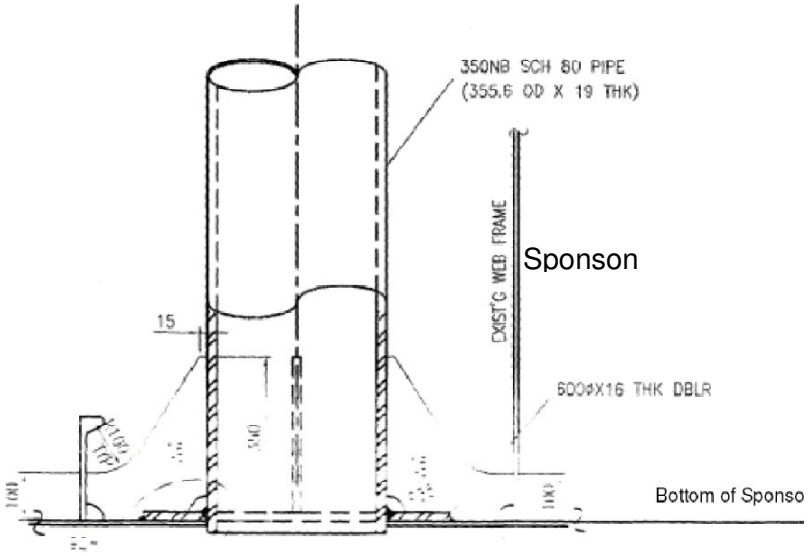
With the bottom of the sponson 5.6 ft above the keel, the base of the discharge caisson while drilling is 25.2 ft – 5.6 ft = 19.6 ft (6.0 m) below mean sea level. Because of heave, the water level inside the caisson is constantly changing.

See attached schematic drawings:


(13000 FROM CL)
BKT CONN. SIMILAR
TO SECT. A-A
600
MAIN DECK
Discharge
Caisson
PLATFORM
8950 ABOVE BL
2500
PLATFORM
6450 ABOVE BL
Sponson
3200
PLATFORM
3250 ABOVE BL
BKT CONN. SIMILAR
TO SECT. B-B
BOTTOM OF SPONSON
1695 ABOVE BL
Ship's Hull
1100



SECTION A–A
SCALE=1:10



Section B-B
Base, Discharge Caisson

Shell Exploration & Production Company

December 16, 2010

Ms. Hanh Shaw
U.S. EPA, Region 10
Office of Water & Watersheds, NPDES Permits Unit
1200 Sixth Avenue, Suite 900, M/S OWW-130
Seattle, WA 98101

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503

Tel. (907) 646-7112
Email susan.childs@shell.com
Internet http://www.shell.com/

Dear Ms. Shaw:

Subject: Notice of Intent for administrative extension under General Permit AKG-28-0000
Lease Number OCS-Y-1929, Lease Block 6508
Lease Number OCS-Y-1935, Lease Block 6558
Lease Number OCS-Y-1936, Lease Block 6559
Lease Number OCS-Y-1940, Lease Block 6609
Lease Number OCS-Y-1807, Lease Block 6707
Lease Number OCS-Y-1809, Lease Block 6709
Lease Number OCS-Y-1812, Lease Block 6757

In accordance with 40 CFR 122.21(d) Shell Offshore Inc. (Shell) is submitting Notices of Intent (NOIs) for the Lease Blocks listed above for authorization to discharge under General Permit AKG-28-0000 that expires on June 26, 2011. It is Shell's understanding that a new general permit is not scheduled to be issued until the fall of 2011. Therefore, these NOIs also serve as Shell's request for an administrative extension to discharge under NPDES General Permit AKG-28-0000 for 2011 and beyond for each authorized NOI until the new General Permit is available.

If you have questions about any component of the proposed project, please contact me at (907) 646-7112 or email susan.childs@shell.com, or call Nicole St. Amand at (907) 646-7152 or email nicole.stamand@shell.com.

Sincerely,

Susan Childs
Alaska Venture Support Integrator Manager

Attachments - Notice of Intent (NOI) Information Sheets
Location Maps
Ocean Discharge Tables
Discharge Flow Diagrams

cc: Diane Soderlund, USEPA Region 10, Alaska Operations
Michael Lidgard, USEPA Region 10
Jeff Walker, BOEMRE Alaska
Don Perrin, Alaska DNR
Administrative Record

ATTACHMENT 1

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

APPLICANT (*Owner/Operator)*					
Owner Name:	Shell Offshore Inc.		Operator Mailing Address:	3601 C Street	
Telephone Number:	907-770-3700			Suite 1000	
Operator Name:	Shell Offshore Inc.			Anchorage, AK 99503	
Telephone Number:	907-770-3700				
FACILITY					
Facility Name:	Noble Discoverer		Facility Mailing Address:	3601 C Street	
Contact Name:	Susan Childs			Suite 1000	
Telephone Number:	907-770-3700			Anchorage, AK 99503	
Beginning Date of Operation:	TBD		Stationary Facilities	Latitude:	
Expected Duration of Operation:	approximately 44 days per well site			Longitude:	
Facility Type *(check applicable type)*	☐	Jackup	Mobile Facilities	Initial Latitude:	
	☒	Drill Ship			
	☐	Semisubmersible			
	☐	Other (specify):		Initial Longitude:	
Submit a site map showing the exact location of facility and discharges associated with the project. Mobile facilities may designate an area where they may be operating and must include a map showing those areas and a description of operations within those areas. If the discharge is within 4000 meters of an environmentally sensitive area indicated by the permit, those areas and their distance from the operation/discharge must be shown on the map.					
RECEIVING WATER					
☐	Chukchi Sea		☐	Other (*specify*): ☐	
☒	Beaufort Sea				
Supply confirmation with the U.S. Department of State and NOAA that the discharge is seaward of the inner boundary baseline, if applicable.					
LOCATION OF DISCHARGE					
MMS	Lease Number	**OCS-Y-1936**	ADNR	Lease Number	**N/A**
	Block Number	**6559**		Block Number	**N/A**
Range of water depths below mean lower low water (MLLW) in the lease block:		From: **124'**		To:	**124'**

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**19.6'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**19.6'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at the seafloor 124'**
☐	007 Boiler Blowdown	Water Depth:	
☐	008 Fire Control System Test Water	Water Depth:	
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**19.6'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC and 36" casing mud and cuttings discharged at 114'; cement at the seafloor 124'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached (Table 1)

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information

Well Name:	**Torpedo**	Latitude:	**TBD**
Well Number:	**C**	Longitude:	**TBD**
Beginning Drill Date:	**TBD**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid

Category	☒	Water-based		☐	Lignosulfonate
	☐	Oil-based		☐	Lime

(*check all that apply*)	☐	Synthetic-based	Group (*check all that apply*)	☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Zone of Deposit Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a Zone of Deposit from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A ZONE OF DEPOSIT. The burden of proof for justifying a zone of deposit through demonstrating compliance with the requirements of 18 AAC 70.210 rests with the applicant.

Distance from shoreline of discharge point (measured at M.L.L.W.):		Average Mud density:	
Depth of discharge (measured at M.L.L.W.):		Flow Rate:	
Orientation of outfall to shoreline (e.g., perpendicular, 45°, parallel):		Total Volume:	
Orientation of outfall to water surface (e.g., perpendicular, 45°, parallel):		Maximum current and direction:	

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

Mixing Zone Request (*applicable to those discharges within state of Alaska waters)*				
Are you requesting a mixing zone from ADEC?	☐	Yes (*continue filling out this section*)	☒	No (*skip this section and proceed to Special Conditions, below*)

THE FOLLOWING INFORMATION MUST BE PROVIDED IF REQUESTING A MIXING ZONE. The burden of proof for justifying a mixing zone through demonstrating compliance with the requirements of 18 AAC 70.240 through 18 AAC 70.270 rests with the applicant.

Distance from shoreline of discharge point or first port of diffuser (measured at M.L.L.W.):		Length of diffuser:	
Depth of discharge port or diffuser (measured at M.L.L.W.):		Diameter of port(s):	
Orientation of diffuser to shoreline (e.g., perpendicular, 45°, parallel):		Number of ports:	
Maximum current:		Port spacing:	

USE OF RECEIVING WATER AT DISTANCE FROM DIFFUSER i.e., Supply for drinking water, Supply for agriculture including irrigation & stock water, Supply for aquaculture, Supply for industrial use, Contact recreation, Secondary recreation, Fish spawning, Harvesting and consumption of raw fish, or other aquatic life (Not needed if not requesting a mixing zone from ADEC):

If possible, provide salinity and temperature data from the receiving water surface to the depth of the discharge port or diffuser.

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Special Conditions (*provide justification for all that are not required, completed or provided)*					
Special Monitoring	☐	Required	☒	Not Required	Justification:
Exploration Plans	☐	Attached	☒	Not Provided	Justification: TBD
Biological Surveys	☐	Attached	☒	Not Provided	Justification: None Required
Environmental Report(s)	☐	Attached	☒	Not Provided	Justification: Will be submitted to BOEM as part of the Exploration Plan
Drilling Fluid Plan	☐	Complete	☒	Not Complete	Justification: In Preparation

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:		Date:	12/16/2010
Printed Name:	Susan Childs	Title:	Alaska Support Intergrator Manager

Mail Completed NOI to EPA and ADEC at the following addresses:

US EPA 1200 6th Avenue, M/S OWW-130 Seattle, WA 98101	ADEC, Water Division 555 Cordova Street Anchorage, Alaska 99501

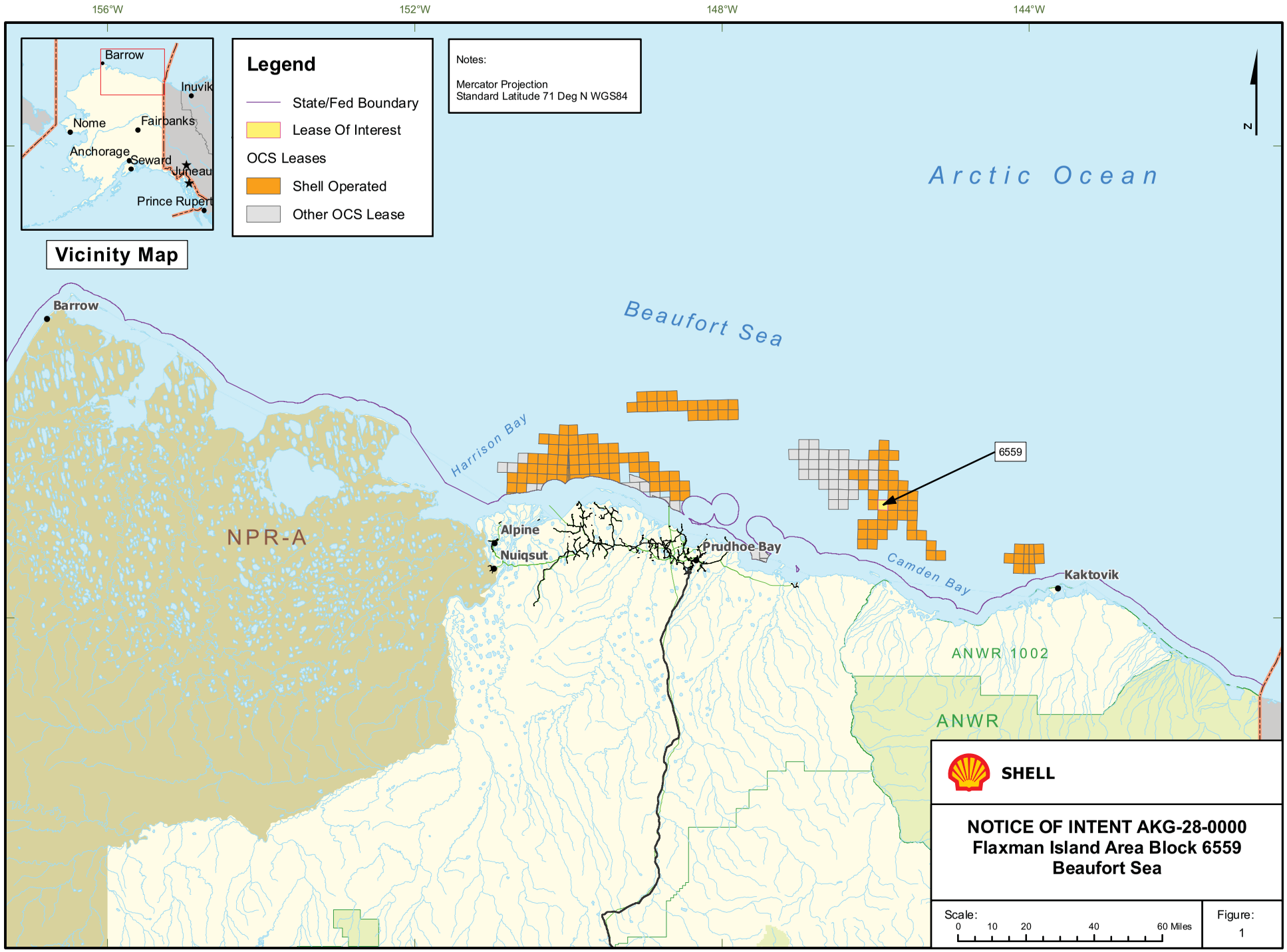
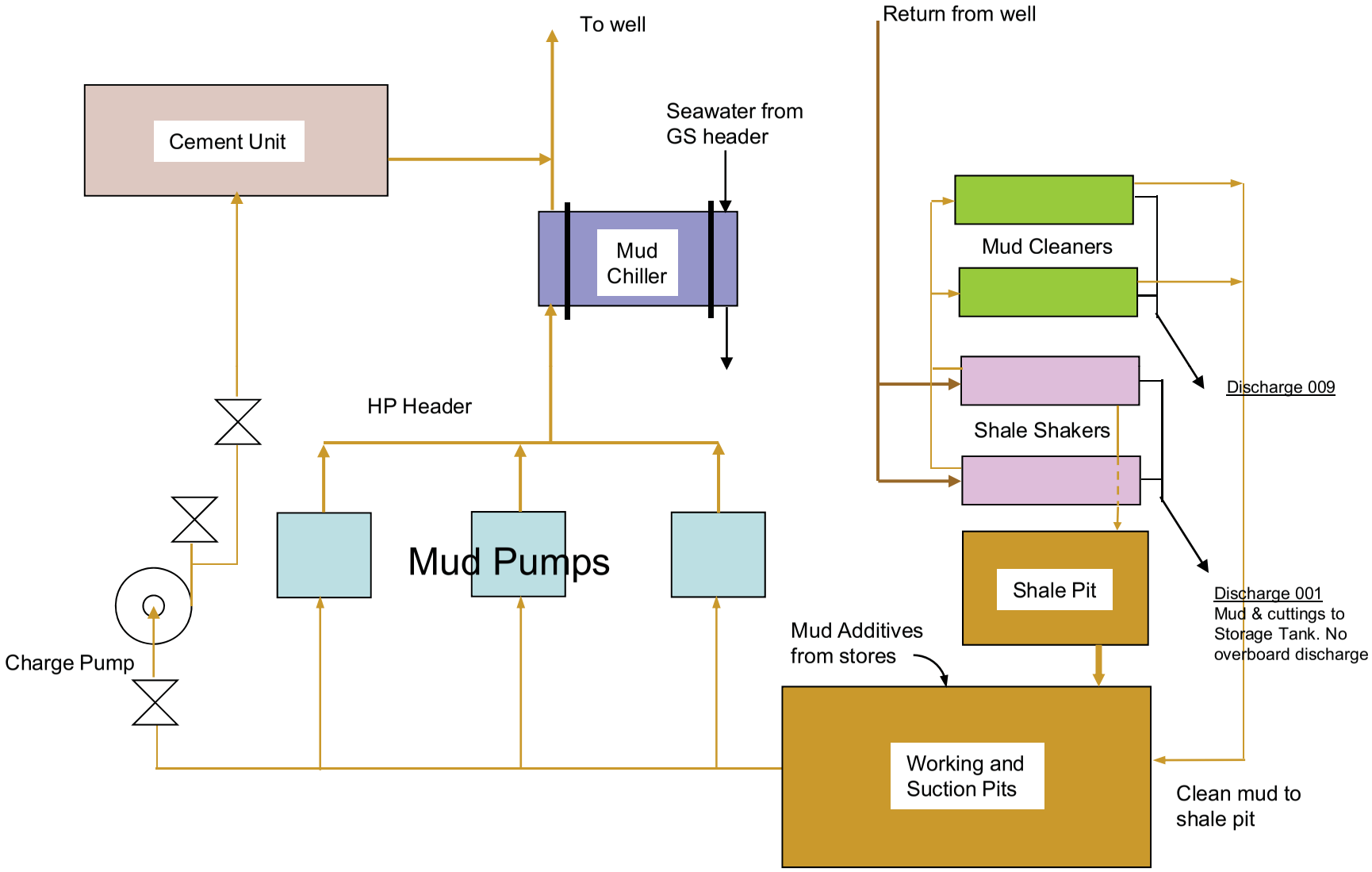

156°W
152°W
148°W
144°W
72°N
70°N
Barrow
Inuvik
Nome
Fairbanks
Anchorage
Seward
Juneau
Prince Rupert
Vicinity Map
Legend
State/Fed Boundary
Lease Of Interest
OCS Leases
Shell Operated
Other OCS Lease
Notes:
Mercator Projection
Standard Latitude 71 Deg N WGS84
N
Arctic Ocean
Beaufort Sea
Harrison Bay
Camden Bay
6559
NPR-A
Alpine
Nuiqsut
Prudhoe Bay
Kaktovik
ANWR 1002
ANWR
SHELL
NOTICE OF INTENT AKG-28-0000
Flaxman Island Area Block 6559
Beaufort Sea
Scale:
0 10 20 40 60 Miles
Figure:
1
Shell AV GIS/12-14-2010/AKG-28-0000_Fig1_v1.mxd

Table 1 Projected ocean discharges – Torpedo Prospect Drill Site C

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings – Discharge 013	3,850 bbl/well (Cuttings only; no drilling muds used)	321 bbl/day* (discharged over 12 days)	Mud Line Cellar (MLC) through 26" section cuttings deposited at the seafloor
Water based mud – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Water based muds will be collected and transported out of region for disposal at a licensed facility
Drill cuttings from water base drilling interval – Discharge 001	0 bbl/well	0 bbl/day* (discharged over 35 days)	**No discharge**. Cuttings will be collected and transported out of region for disposal at a licensed facility
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-Contact Cooling water – Discharge 009	1,980,000 bbl/well	45,000 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	5,500 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	220 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No discharge**. Ballast water is stored on drillship then transported out of region for disposal at a licensed facility
Firewater bypass – Discharge 008	0 bbl	0 bbl/day	No routine firewater system testing anticipated
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of region for disposal at a licensed facility
BOP fluid – Discharge 006	42 bbl/well	Up to 6 BOP tests at an average 7 bbl/test	Discharged at the seafloor at the BOP

Notes:
* assumes 12 days to complete the MLC through 26" section; 32 days to complete the remainder of the well

Figure 1. Drilling Fluid Flowpath



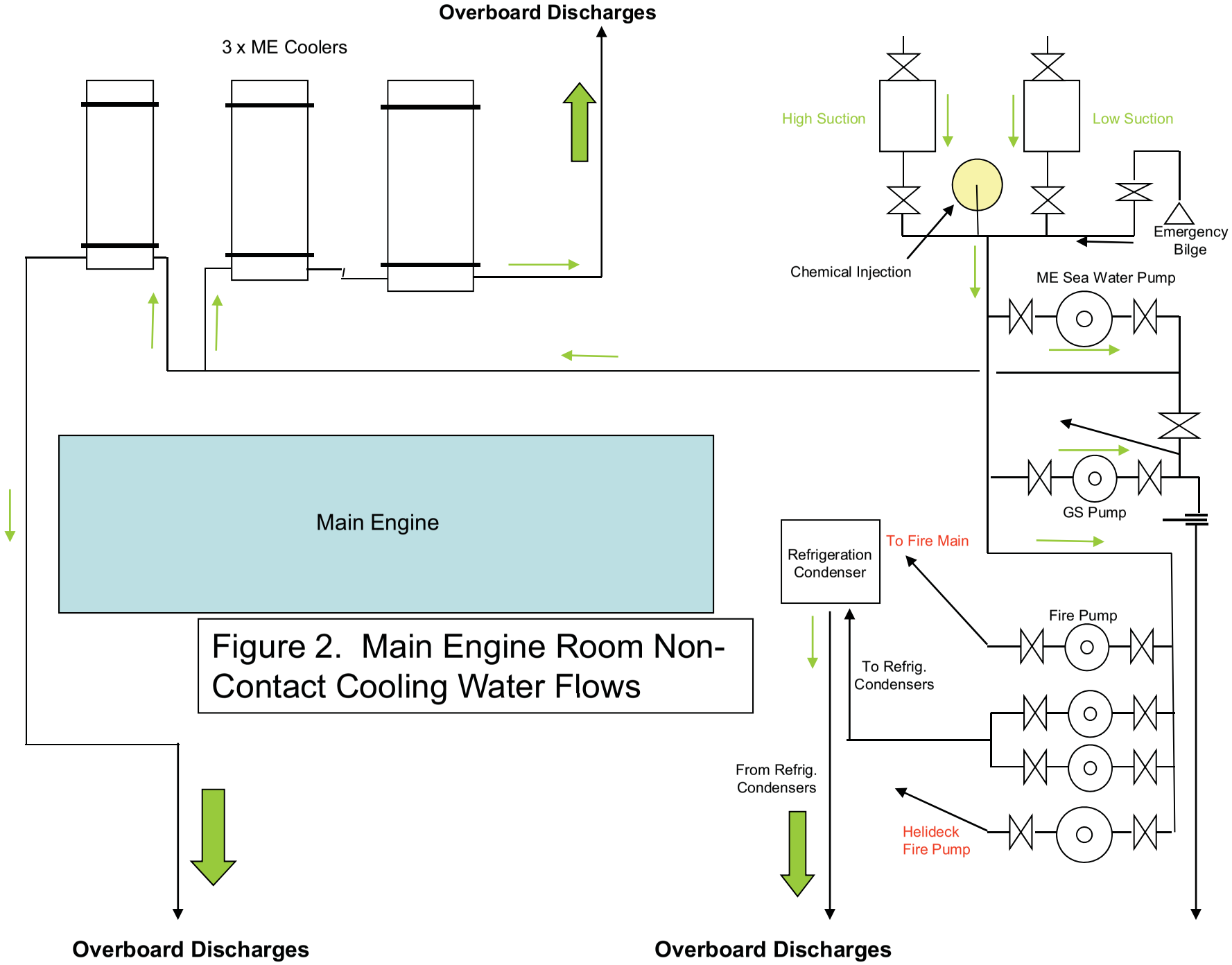


Figure 2. Main Engine Room Non-Contact Cooling Water Flows

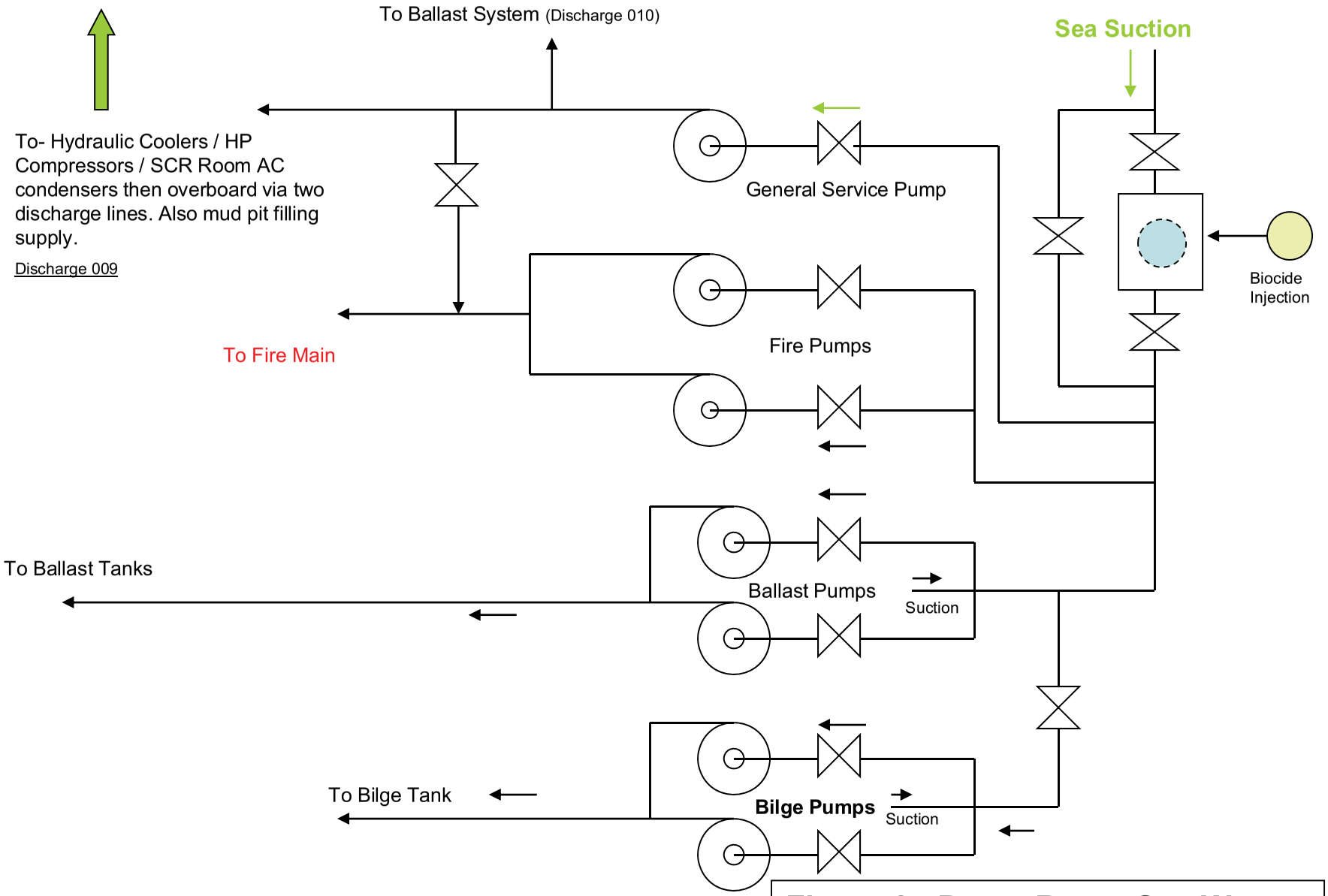
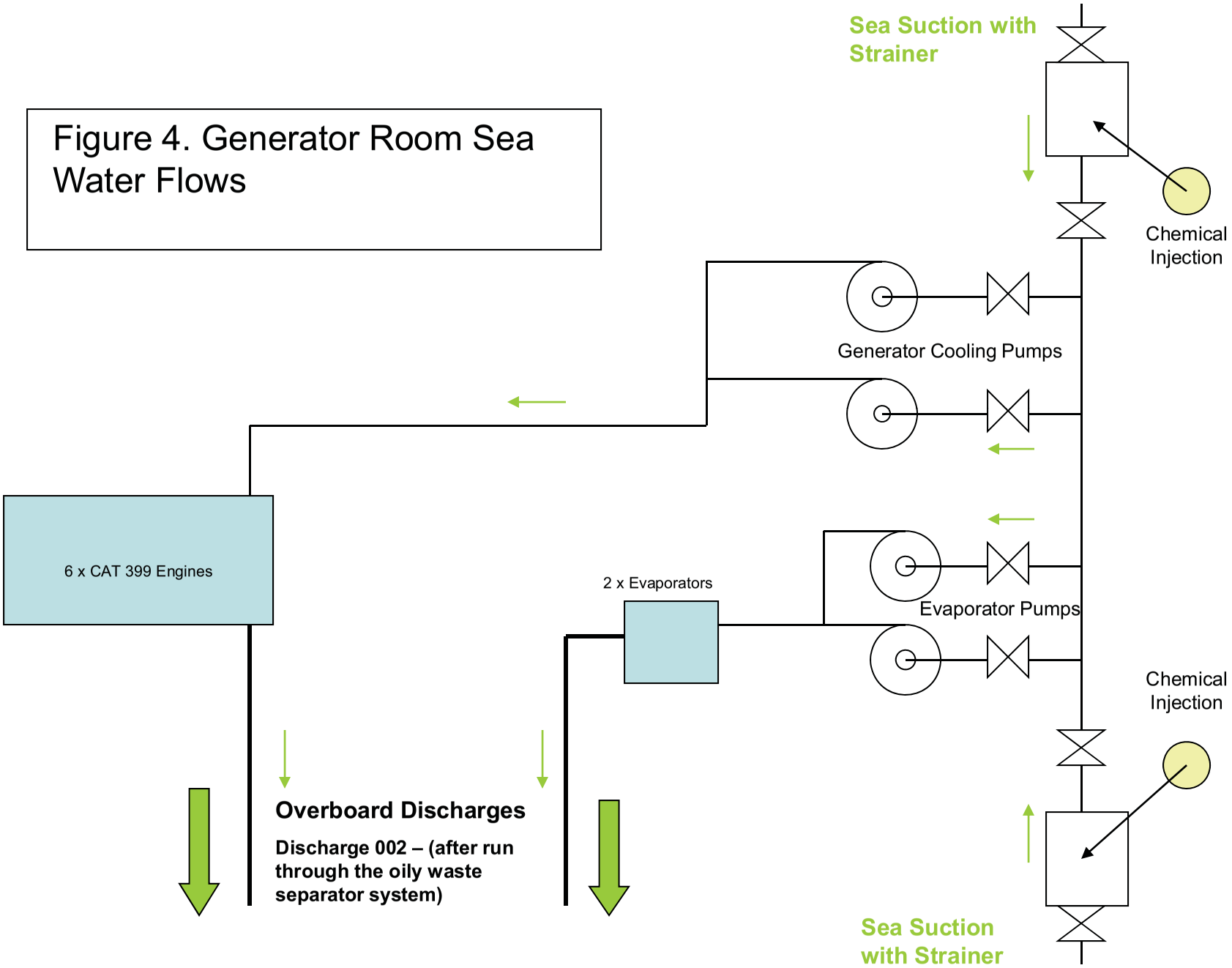


Figure 3. Pump Room Sea Water Flows

Figure 4. Generator Room Sea Water Flows



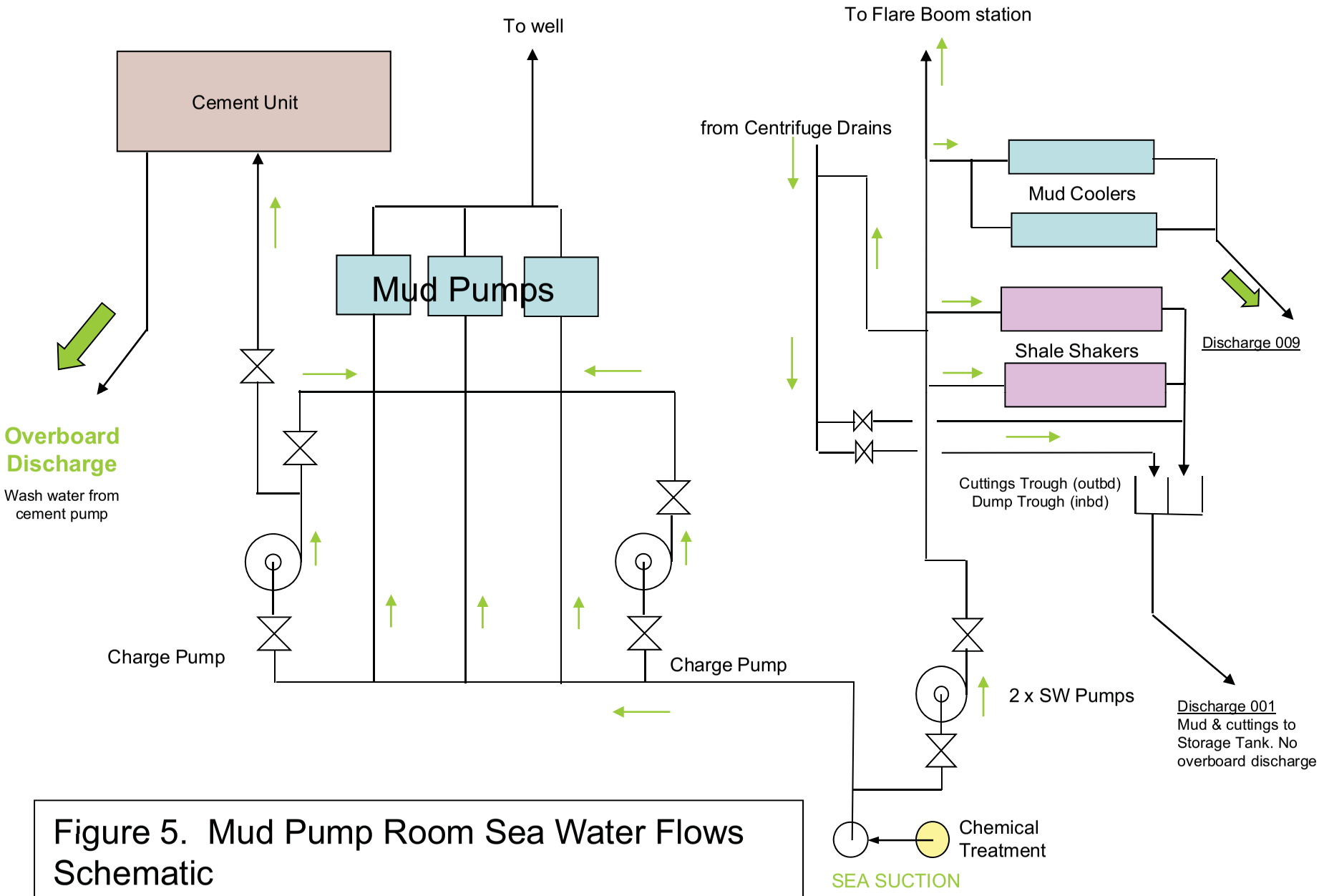
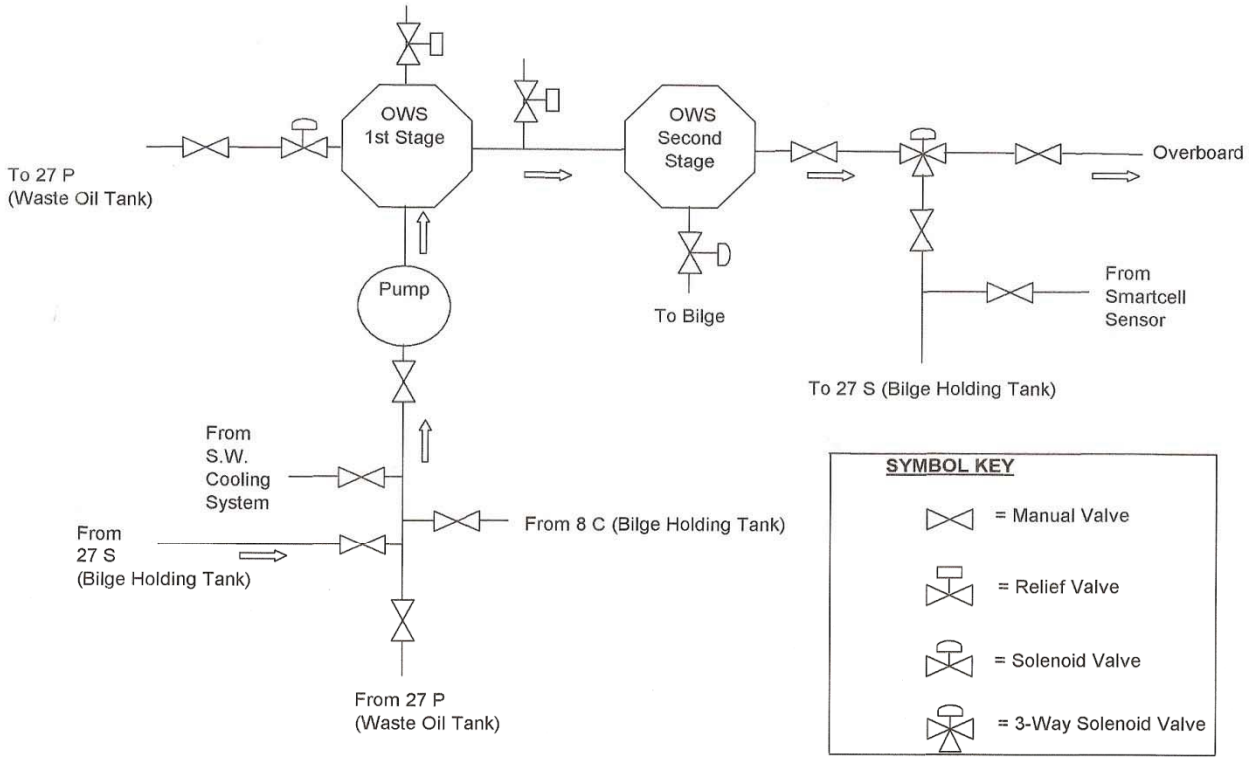


Figure 5. Mud Pump Room Sea Water Flows Schematic

Oily Water Separator System



Discharge Caisson

The discharge caisson is a pipe that runs vertically through the sponson on the hull of the drillship from the main deck level to the base of the sponson. The sponson is an exterior reinforced cladding installed on the *Discoverer* to provide ice resistance. It is hollow and extends from the main deck level to well below the water line.

Waste streams are collected aboard the drillship to a point on the main deck near the mud room. A 15-in. diameter pipe exits the hull, turns downwards and is connected to the top of the discharge caisson.

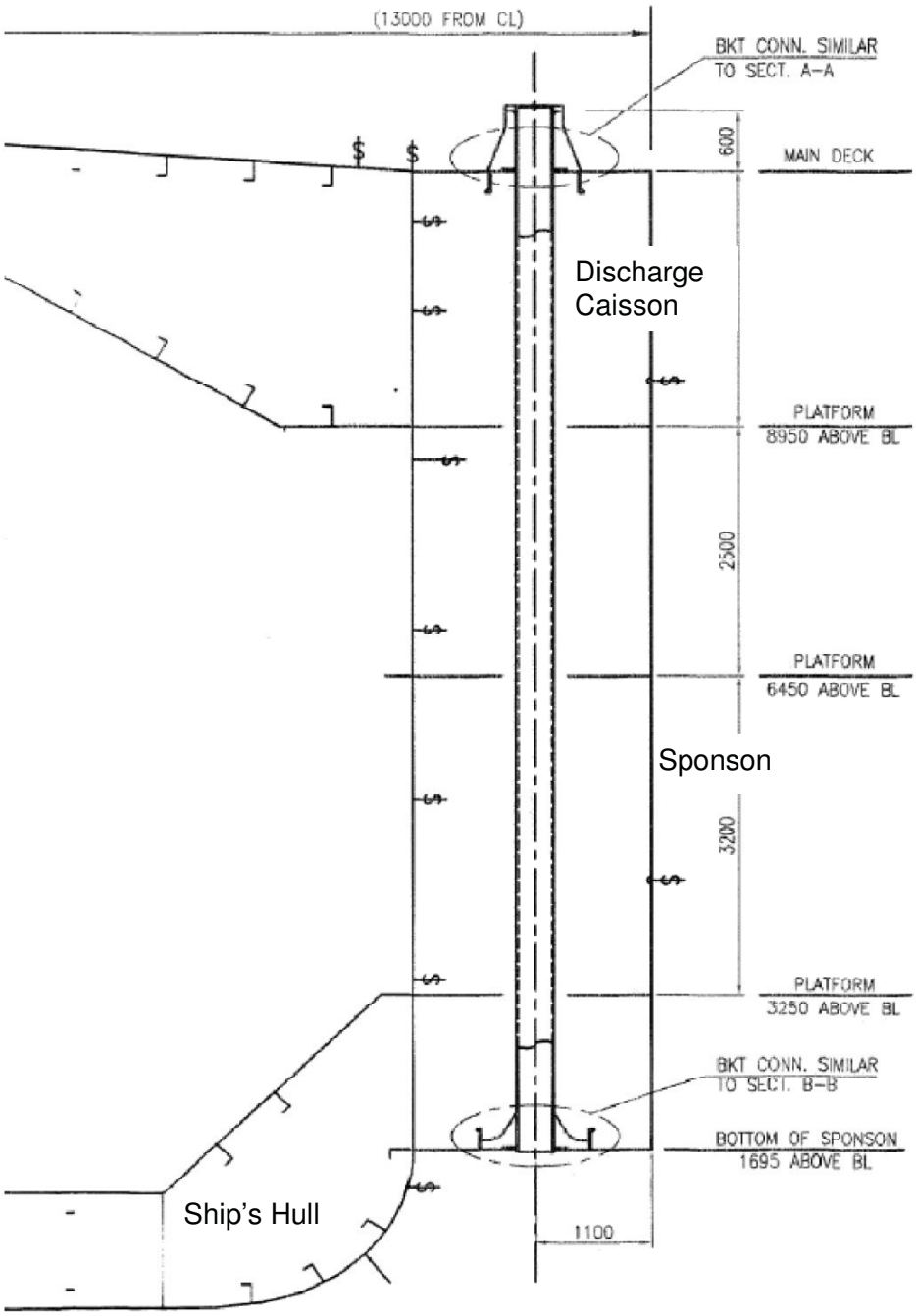
The discharge caisson, also a 15-in OD pipe, is welded into the sponson top and bottom (so that the interior of the sponson remains dry). The bottom of the sponson and the end of the discharge caisson is 5.6 ft (1.7 m) above the keel depth, and since it remains open to the sea at all times, the discharge caisson is constantly filled with water to mean sea level. This caisson is not equipped with a "float" valve; it is merely an open conduit to the sea through which most waste streams are discharged below sea level.

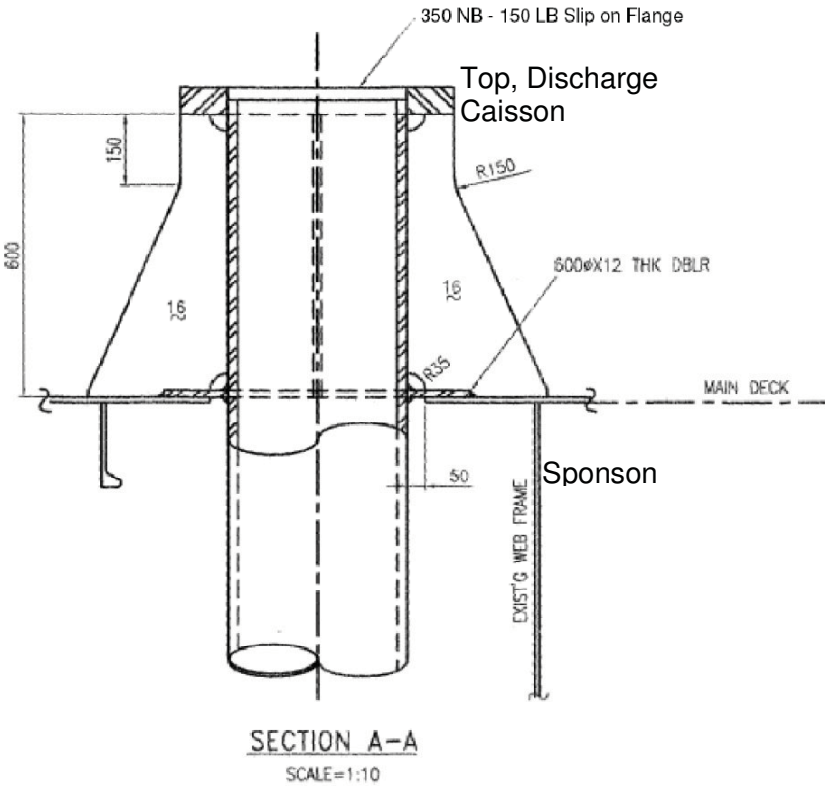
The *Discoverer* has the following draft characteristics:

Max draft at load line:	27 ft (8.2 m)
Transit draft	26.3 ft (8.0 m)
Drilling draft	25.2 ft (7.7 m)
Light ship draft	19.0 ft (5.8 m)

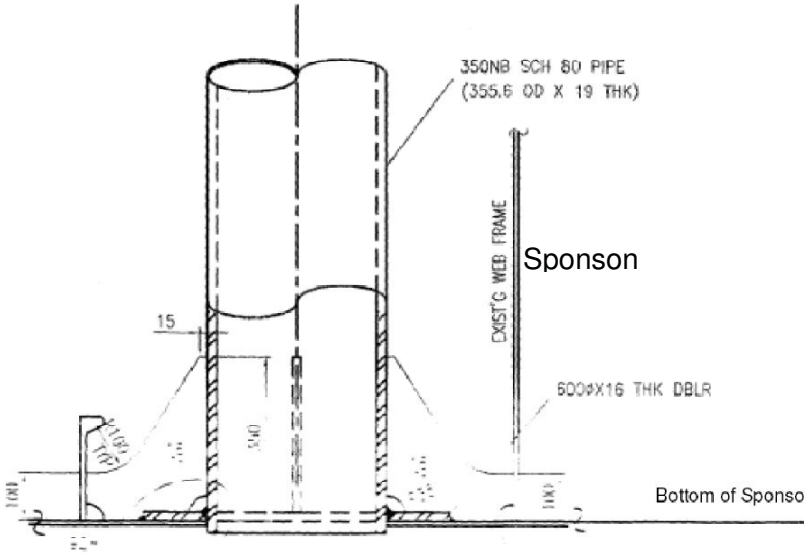
With the bottom of the sponson 5.6 ft above the keel, the base of the discharge caisson while drilling is 25.2 ft – 5.6 ft = 19.6 ft (6.0 m) below mean sea level. Because of heave, the water level inside the caisson is constantly changing.

See attached schematic drawings:


(13000 FROM CL)
BKT CONN. SIMILAR
TO SECT. A-A
600
MAIN DECK
Discharge
Caisson
PLATFORM
8950 ABOVE BL
2500
PLATFORM
6450 ABOVE BL
Sponson
3200
PLATFORM
3250 ABOVE BL
BKT CONN. SIMILAR
TO SECT. B-B
BOTTOM OF SPONSON
1695 ABOVE BL
Ship's Hull
1100



SECTION A–A
SCALE=1:10



Section B-B
Base, Discharge Caisson

Shell Exploration & Production Company

April 8, 2011

Ms. Hanh Shaw
U.S. EPA, Region 10
Office of Water & Watersheds, NPDES Permits Unit
1200 Sixth Avenue, Suite 900, M/S OWW-130
Seattle, WA 98101

Shell
3601 C Street, Suite 1000
Anchorage, AK 99503

Tel. (907) 646-7112
Email susan.childs@shell.com
Internet http://www.shell.com/

Dear Ms. Shaw:

Subject: AKG-28-0000 Notice of Intent, Kulluk Floating Drilling Platform Supplemental Information

Shell Offshore Inc, (Shell) is currently in the process of preparing two year Exploration Plans (EPs) for the Chukchi Sea and Camden Bay beginning in 2012. Within the Camden Bay EP, Shell is requesting flexibility to drill with either the Kulluk or the Noble Discoverer drilling vessels. As a result, Shell is also requesting this flexibility be represented in our corresponding Camden Bay NOIs,(numbers 6658, 6610, 6757, 6707, 6709, 6559, 6609, 6558, and 6508). Per EPA guidance provided to Shell on March 24, 2011, we are therefore submitting additional information for the Conical drilling unit Kulluk to supplement those NOIs (Attachments A – C).

Further, it was discovered that within the December 16, 2010 NOI submittals, Shell had a typo for a Chukchi Sea NOI block. Shell provided an NOI for Honey Guide, Tison 6917 which in actuality is Honey Guide, Tison 6971. Shell is requesting a replacement of the incorrect block 6917 with the correct block 6971 in the corresponding NOI.

As always, thank you for your assistance regarding our submittals. If you have questions about any component of the proposed project, please contact me at (907) 646-7112 or email susan.childs@shell.com, or call Nicole St. Amand at (907) 646-7152 or email nicole.stamand@shell.com.

Sincerely,

Susan Childs
Alaska Venture Support Integrator Manager

Attachment A: Provided is additional information in support of the NOIs that were submitted to EPA on December 16, 2010 in accordance with 40 CFR 122.21(d) for lease blocks 6658, 6610, 6757, 6707, 6709, 6559, 6609, 6558, and 6508. For each block attached information includes discharge depths and discharge volumes generated during drilling operations utilizing the Kulluk.

Attachment B: Provided is the current flow diagram for the Kulluk. Shell currently is in the process of re-fabricating the Kulluk in order to provide onboard storage for grey water, sanitary water, ballast water, and bilge water. The updated flow diagrams for the onboard capture and collecting of the waste streams are not available at this time. Shell will provide them to EPA once the design is completed.

Attachment C: Provided is the disposal caisson diagram.

cc: Diane Soderlund, USEPA Region 10, Alaska Operations
Michael Lidgard, USEPA Region 10
Richard Cool, USEPA Region 10
Admin Record

Attachment A

Sivulliq 6658

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**40'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**40'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at seafloor 107'**
☐	007 Boiler Blowdown	Water Depth:	
☒	008 Fire Control System Test Water	Water Depth:	**40'**
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**40'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC through 20" casing cuttings discharged at 97'; cement discharged at the seafloor at 107'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached Table 1

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information			
Well Name:	**Sivulliq**	Latitude:	**70° 23' 29.5814"**
Well Number:	**N & G**	Longitude:	**145° 58' 52.5284"**
Beginning Drill Date:	**July 2012**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid					
	☒	Water-based		☐	Lignosulfonate

Category (*check all that apply*)			Group (*check all that apply*)		
	☐	Oil-based		☐	Lime
	☐	Synthetic-based		☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

Table 1 Projected ocean discharges – Sivulliq Prospect Drill Site N & G*

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings – Discharge 013	5,187 bbl/well (Cuttings only; no drilling muds used)	432 bbl/day** (discharged over 12 days)	Mud Line Cellar (MLC) through 26" section cuttings deposited on the seafloor through the moonpool
Water based mud – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Water based muds will be collected and transported out of region for disposal at a licensed facility
Drill cuttings from water base drilling interval – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Cuttings will be collected and transported out of region for disposal at a licensed facility
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-Contact Cooling water – Discharge 009	448,052 bbl/well	13,178 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the Marine Sanitation Device (MSD) and recycled for use aboard the Kulluk. Any unrecycled sanitary waste will be transported out of region for disposal at a licensed facility
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	4,250 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	170 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No discharge**. Ballast water is stored on drillship then transported out of region for disposal at a licensed facility
Firewater bypass – Discharge 008	286 bbl (1 test)	monthly test of fire hose at 200 gal/min for 60 minutes	Discharged through disposal caisson below water's surface
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of region for disposal at a licensed facility
BOP fluid – Discharge 006	56.4 bbl/well	Up to 6 BOP tests at an average 9.4 bbl/test	Discharged at the seafloor at the BOP

Notes:
* Discharges are based on one drill site.
**assumes 12 days to complete the MLC though 26" section; 22 days to complete the remainder of the well

Torpedo 6610

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**40'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**40'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at the seafloor 120'**
☐	007 Boiler Blowdown	Water Depth:	
☒	008 Fire Control System Test Water	Water Depth:	**40'**
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**40'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC through 26" section cuttings discharged at 110'; cement at the seafloor 120'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached (Table 1)

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information

Well Name:	**Torpedo**	Latitude:	**70° 27' 01.6193"**
Well Number:	**H**	Longitude:	**145° 49' 32.0650"**
Beginning Drill Date:	**July 2012**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid

Category	☒	Water-based		☐	Lignosulfonate
	☐	Oil-based		☐	Lime

(*check all that apply*)	☐	Synthetic-based	Group (*check all that apply*)	☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

Table 1 Projected ocean discharges – Torpedo Prospect Drill Site H

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings – Discharge 013	5,335 bbl/well (Cuttings only; no drilling muds used)	445 bbl/day* (discharged over 12 days)	Mud Line Cellar (MLC) through 26" section cuttings deposited at the seafloor
Water based mud – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Water based muds will be collected and transported out of region for disposal at a licensed facility
Drill cuttings from water base drilling interval – Discharge 001	0 bbl/well	0 bbl/day* (discharged over 35 days)	**No discharge**. Cuttings will be collected and transported out of region for disposal at a licensed facility
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-Contact Cooling water – Discharge 009	579,832 bbl/well	13,178 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the Marine Sanitation Device (MSD) and recycled for use aboard the Kulluk. Any unrecycled sanitary waste will be transported out of region for disposal at a licensed facility
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	5,500 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	220 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No discharge**. Ballast water is stored on drillship then transported out of region for disposal at a licensed facility
Firewater bypass – Discharge 008	572 bbl (2 Tests)	Monthly test of fire hose at 200 gal/min for 60 minutes	Discharged through disposal caisson below water's surface.
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of region for disposal at a licensed facility
BOP fluid – Discharge 006	56.4 bbl/well	Up to 6 BOP tests at an average 9.4 bbl/test	Discharged at the seafloor at the BOP

Notes:
* assumes 12 days to complete the MLC through 26" section; 32 days to complete the remainder of the well

Torpedo 6559

Attachment 1: NOI Information Sheet **Permit No.: AKG280000**

NOTICE OF INTENT (NOI) IFORMATION SHEET
NPDES GENERAL PERMIT AKG280000
OIL AND GAS EXPLORATION FACILITIES
ON THE OUTER CONTINENTAL SHELF AND CONTIGUOUS STATE WATERS

Discharges (*check all that apply)*			
☐	001 Drilling Mud and Cuttings	Water Depth:	
☒	002 Deck Drainage	Water Depth:	**40'**
☐	003 Sanitary Waste	Water Depth:	
☐	004 Domestic Waste	Water Depth:	
☒	005 Desalination Unit Waste	Water Depth:	**40'**
☒	006 Blowout Preventer Fluid	Water Depth:	**discharged at the seafloor 124'**
☐	007 Boiler Blowdown	Water Depth:	
☒	008 Fire Control System Test Water	Water Depth:	**40'**
☒	009 Non-Contact Cooling Water	Water Depth:	**on the surface at several locations**
☐	010 Uncontaminated Ballast Water	Water Depth:	
☐	011 Bilge Water	Water Depth:	
☒	012 Excess Cement Slurry	Water Depth:	**40'**
☒	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	**MLC through 26" section cuttings discharged at 114'; cement at the seafloor 124'**
☐	014 Test Fluid	Water Depth:	

Provide a brief description of the treatment process(es) and disposal practices (e.g., backhauled, reinjected, discharged, etc.) at the facility. See attached (Table 1)

Provide a line drawing that shows flow of discharged waste streams through the facility. Indicate intake sources, operations contributing to the effluent, and treatment units labeled to correspond to the discharges (001 – 014). Construct a flow balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a flow balance cannot be determined, provide a pictorial description of the nature and amount of any sources, and any collection or treatment measures.

Well Information

Well Name:	**Torpedo**	Latitude:	**70° 28' 56.94"**
Well Number:	**J**	Longitude:	**145° 53' 47.14"**
Beginning Drill Date:	**July 2012**	Hole Diameter or Estimated Total Discharge Volume:	**36" diameter at surface, reducing through 4 stages to 8.5" at depth**

Drilling Fluid

Category	☒	Water-based		☐	Lignosulfonate
	☐	Oil-based		☐	Lime

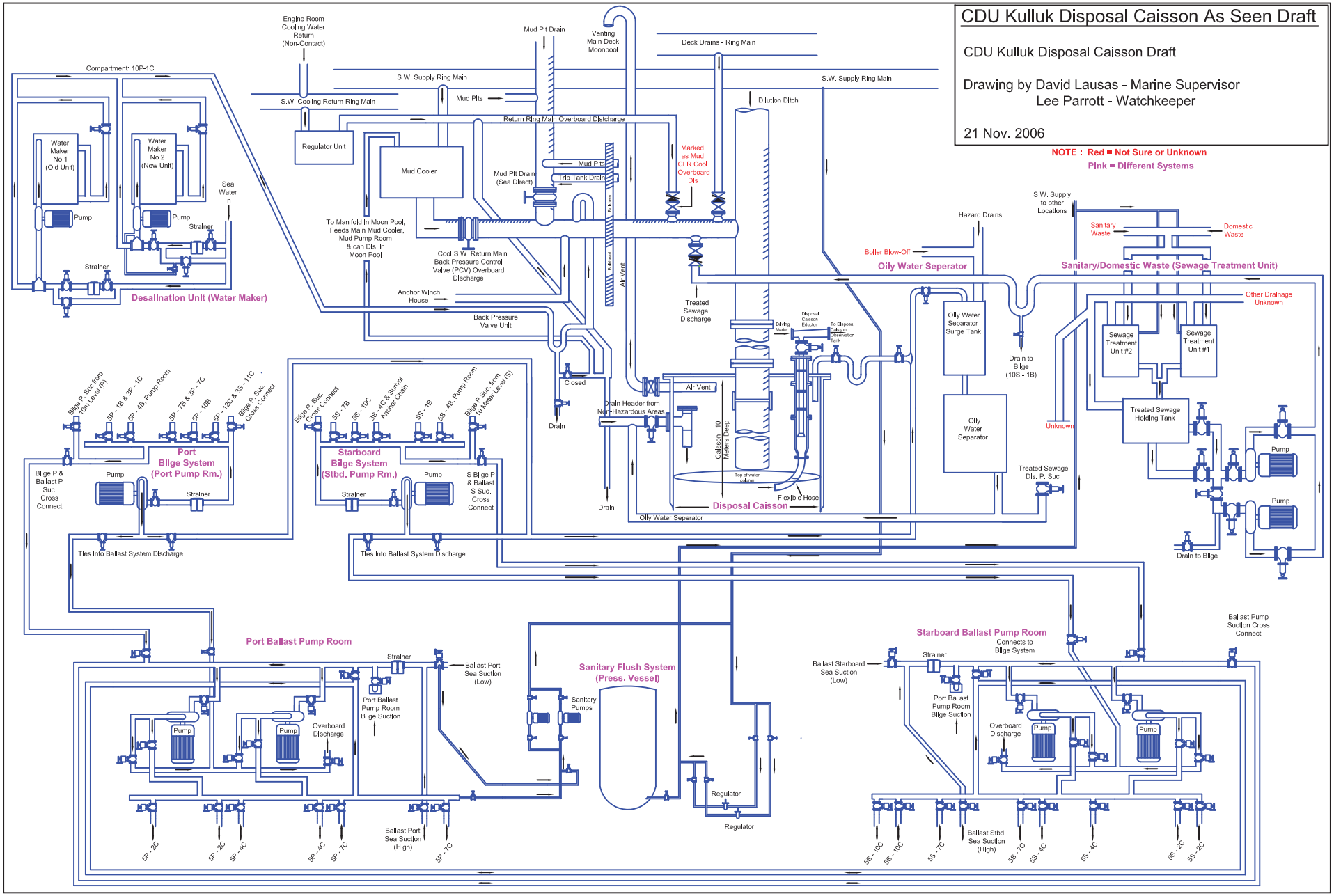
(*check all that apply*)	☐	Synthetic-based	Group (*check all that apply*)	☐	Gyp
	☐	Other (*specify*):		☒	Sea-water
				☒	Saltwater
				☐	Saturated Saltwater
				☒	Nondispersed (Viscosifier/Polymer) PH/PA

Table 1 Projected ocean discharges – Torpedo Prospect Drill Site J

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings – Discharge 013	5,335 bbl/well (Cuttings only; no drilling muds used)	445 bbl/day* (discharged over 12 days)	Mud Line Cellar (MLC) through 26" section cuttings deposited at the seafloor
Water based mud – Discharge 001	0 bbl/well	0 bbl/day*	**No discharge**. Water based muds will be collected and transported out of region for disposal at a licensed facility
Drill cuttings from water base drilling interval – Discharge 001	0 bbl/well	0 bbl/day* (discharged over 35 days)	**No discharge**. Cuttings will be collected and transported out of region for disposal at a licensed facility
Excess cement – Discharge 012	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Non-Contact Cooling water – Discharge 009	579,832 bbl/well	13,178 bbl/day	Discharged to the water at several sites
Sanitary waste – Discharge 003	0 bbl/well	0 bbl/day	**No discharge**. Treated in the Marine Sanitation Device (MSD) and recycled for use aboard the Kulluk. Any unrecycled sanitary waste will be transported out of region for disposal at a licensed facility
Domestic waste – Discharge 004	0 bbl/well	0 bbl/day	**No discharge**. Treated in the MSD and stored on drillship then transported out of region for disposal at a licensed facility Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water – Discharge 005	5,500 bbl/well	125 bbl/day	Discharged through disposal caisson below water's surface
Deck drainage – Discharge 002	220 bbl/well	5 bbl/day (dependent on rainfall)	Discharged through disposal caisson below water's surface
Uncontaminated Ballast water – Discharge 010	0 bbl/well	0 bbl/day	**No discharge**. Ballast water is stored on drillship then transported out of region for disposal at a licensed facility
Firewater bypass – Discharge 008	572 bbl (2 Tests)	Monthly Test of fire hose at 200 gal/min for 60 minutes	Discharged through disposal caisson below water's surface
Bilge water – Discharge 011	0 bbl/well	0 bbl/day	**No discharge**. Treated in an oil/water separator; uncontaminated water and separated oily water is stored onboard then transported out of region for disposal at a licensed facility
BOP fluid – Discharge 006	56.4 bbl/well	Up to 6 BOP tests at an average 9.4 bbl/test	Discharged at the seafloor at the BOP

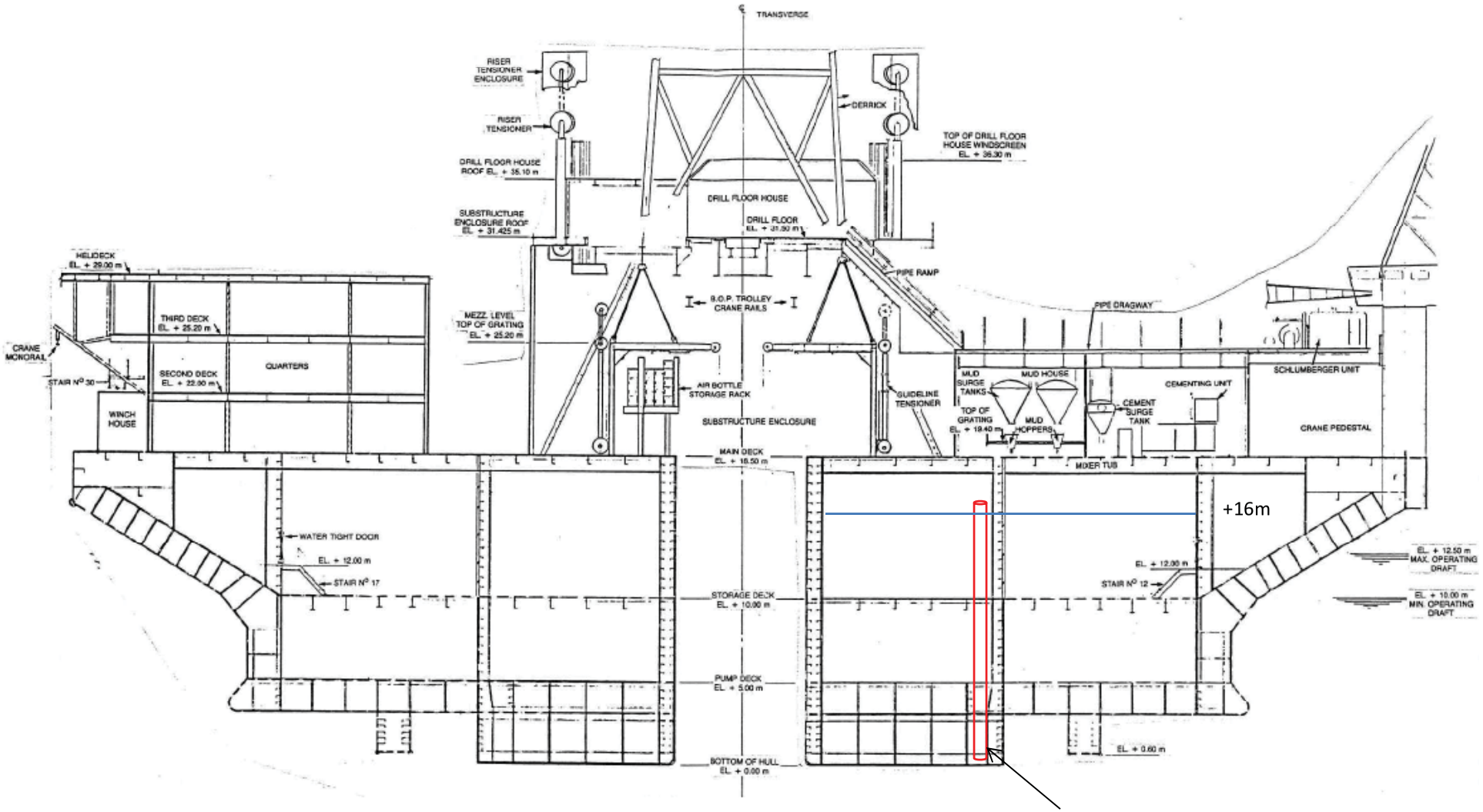
Notes:
* assumes 12 days to complete the MLC through 26" section; 32 days to complete the remainder of the well

Attachment B

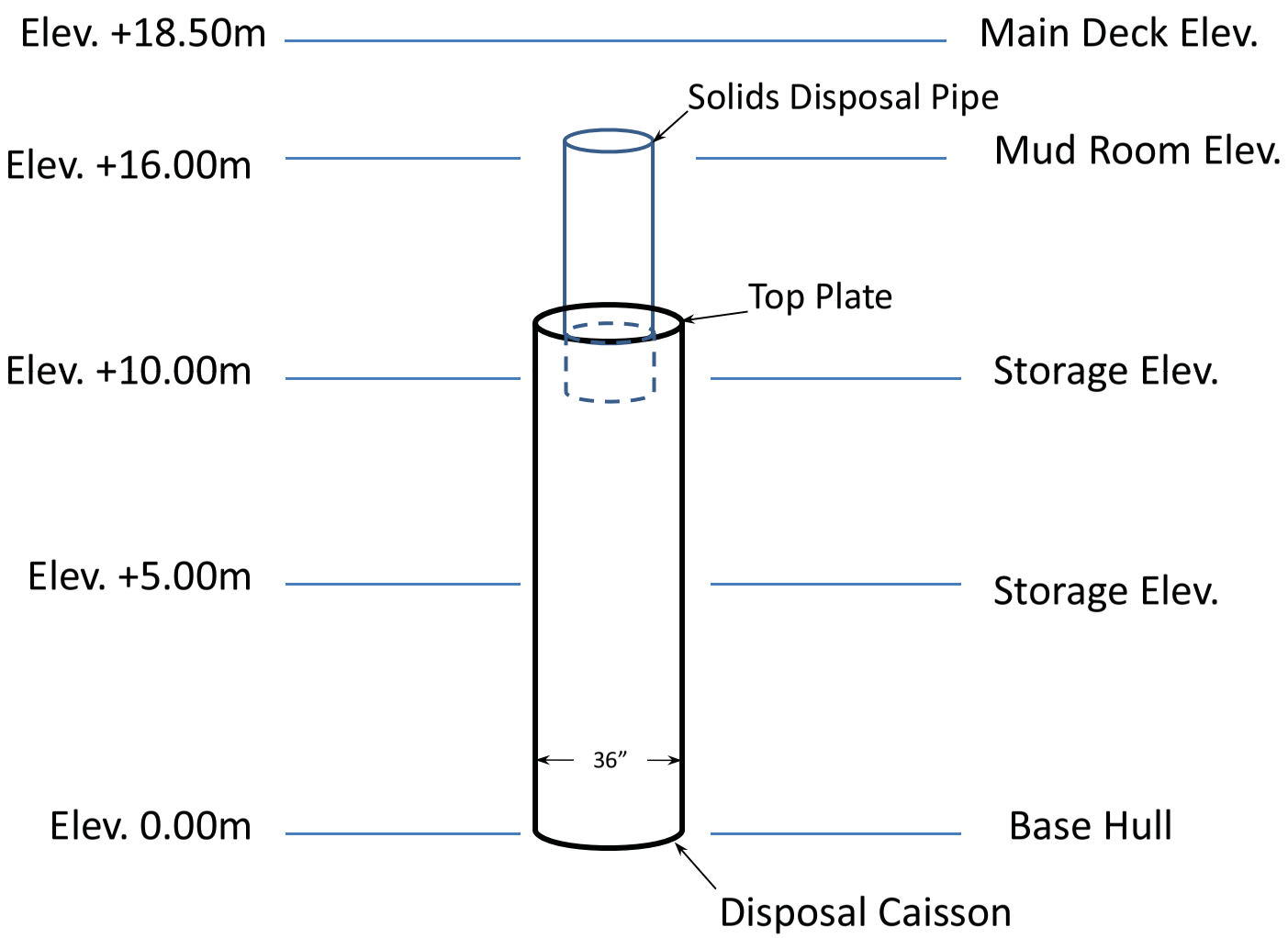

CDU Kulluk Disposal Caisson As Seen Draft
CDU Kulluk Disposal Caisson Draft
Drawing by David Lausas - Marine Supervisor
Lee Parrott - Watchkeeper
21 Nov. 2006
NOTE : Red = Not Sure or Unknown
Pink = Different Systems
Compartment: 10P-1C
Water Maker No.1 (Old Unit)
Water Maker No.2 (New Unit)
Pump
Pump
Strainer
Strainer
Sea Water In
Desalination Unit (Water Maker)
Engine Room Cooling Water Return (Non-Contact)
S.W. Cooling Return Ring Main
S.W. Supply Ring Main
Regulator Unit
Mud Cooler
To Manifold In Moon Pool, Feeds Main Mud Cooler, Mud Pump Room & can Dis. In Moon Pool
Anchor Winch House
Back Pressure Valve Unit
Cool S.W. Return Main Back Pressure Control Valve (PCV) Overboard Discharge
Mud Pit Drain
Mud Pits
Mud Plt Drain (Sea Direct)
Trip Tank Drain
Venting Main Deck Moonpool
Return Ring Main Overboard Distcharge
Marked as Mud CLR Cool Overboard Dis.
Deck Drains - Ring Main
S.W. Supply Ring Main
Dilution Ditch
Air Vent
Treated Sewage Discharge
Closed
Drain
Drain Header from Non-Hazardous Areas
Air Vent
Caisson - 10 Meters Deep
Top of water column
Flexible Hose
Disposal Caisson
Olly Water Seperator
Drilling Water
Disposal Caisson Eductor
To Disposal Caisson Observation Tank
Hazard Drains
Boiler Blow-Off
Oily Water Seperator
Olly Water Separator Surge Tank
Olly Water Separator
Drain to Bilge (10S - 1B)
Treated Sewage Dis. P. Suc.
S.W. Supply to other Locations
Sanitary Waste
Domestic Waste
Sanitary/Domestic Waste (Sewage Treatment Unit)
Other Drainage Unknown
Sewage Treatment Unit #2
Sewage Treatment Unit #1
Unknown
Treated Sewage Holding Tank
Pump
Pump
Drain to Bilge
Bilge P Suc. from 10m Level (P)
5P - 1B & 3P - 1C
5P - 4B, Pump Room
5P - 7B & 3P - 7C
5P - 10B
5P - 12C & 3S - 11C
Bilge P. Suc. Cross Connect
Port Bilge System (Port Pump Rm.)
Bilge P & Ballast P Suc. Cross Connect
Pump
Strainer
Tles Into Ballast System Discharge
Bilge P. Suc. Cross Connect
5S - 7B
5S - 10C
3S - 4C & Survival Anchor Chain
3S - 1B
5S - 4B, Pump Room
Bilge P Suc. from 10 Meter Level (S)
Starboard Bilge System (Stbd. Pump Rm.)
Pump
Strainer
S Bilge P & Ballast S Suc. Cross Connect
Tles Into Ballast System Discharge
Port Ballast Pump Room
Strainer
Ballast Port Sea Suction (Low)
Port Ballast Pump Room Bilge Suction
Pump
Pump
Overboard Discharge
Ballast Port Sea Suction (High)
5P - 2C
5P - 2C
5P - 4C
5P - 4C
5P - 7C
5P - 7C
Sanitary Flush System (Press. Vessel)
Sanitary Pumps
Regulator
Regulator
Starboard Ballast Pump Room
Connects to Bilge System
Ballast Starboard Sea Suction (Low)
Strainer
Port Ballast Pump Room Bilge Suction
Overboard Discharge
Pump
Pump
Ballast Stbd. Sea Suction (High)
Ballast Pump Suction Cross Connect
5S - 10C
5S - 10C
5S - 7C
5S - 7C
5S - 4C
5S - 4C
5S - 2C
5S - 2C

Attachment C

CDU *Kulluk* Disposal Caisson



CDU *Kulluk*
Elevation


Elev. +18.50m
Main Deck Elev.
Solids Disposal Pipe
Elev. +16.00m
Mud Room Elev.
Top Plate
Elev. +10.00m
Storage Elev.
Elev. +5.00m
Storage Elev.
36”
Elev. 0.00m
Base Hull
Disposal Caisson

NPDES Authorization

AKG-28-0005

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Reply To
Attn Of: OWW-130

April 20, 2010

Susan Childs
Regulatory Affairs Manager, Alaska
Shell Exploration & Production Company
3601 C Street, Suite 1000
Anchorage, Alaska 99503

RE: Coverage for Shell Exploration & Production Company under the National Pollutant Discharge Elimination System (NPDES) General Permit for Oil and Gas Exploration Activities on the Outer Continental Shelf and Contiguous State Waters for Discharges into the Beaufort Sea, Alaska (AKG-28-0005)

Dear Ms. Childs:

On May 7, 2009, the U.S. Environmental Protection Agency (EPA) received two Notices of Intent (NOIs) from Shell Exploration & Production Company (Shell) for authorization to discharge into the Beaufort Sea. Specifically, the NOIs requested permit coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit, AKG-28-0000 (Arctic GP), for wastewater discharges from Shell's proposed exploration activities planned for the 2010 Outer Continental Shelf (OCS) drilling season with the drillship *Frontier Discoverer*.

On November 5, 2009, EPA requested additional information from Shell to determine whether the requested discharges could be covered under the Arctic GP. EPA received the supplemental information on December 1, 2009.

Pursuant to Part I.D.3 of the Arctic GP, Shell is authorized the following discharges into the Beaufort Sea from the two proposed drill sites, Sivulliq (Lease Block 6658) and Torpedo (Lease Block 6610), subject to the terms and conditions of the Arctic GP:

Discharge Number	Discharge Description
001	Drilling Fluids and Drilling Cuttings
002	Deck Drainage
003	Sanitary Wastes
004	Domestic Wastes
005	Desalination Unit Wastes
006	Blowout Preventer Fluid
009	Non-contact Cooling Water
010	Uncontaminated Ballast Water
011	Bilge Water
012	Excess Cement Slurry
013	Muds, Cuttings, Cement at Seafloor

Please note the effluent limitations and monitoring requirements in Part II and the monitoring, recording and reporting requirements in Part III of the Arctic GP. Discharge Monitoring Reports must be submitted monthly by the 10th day of the following month.

The permit number assigned to this operation is AKG-28-0005. Please use this number in all future correspondence and reports. A copy of the Arctic GP is enclosed and is also available on EPA's webpage at http://epa.gov/r10earth/waterpermits.htm under general permits. Facilities discharging under the authority of the Arctic GP must keep a copy of the permit and this coverage letter at the facility where the discharges occur, or retain a copy at the nearest administrative or field office managing the operation.

If you have any questions regarding this coverage letter or the Arctic GP, please do not hesitate to contact Hanh Shaw of my staff at shaw.hanh@epa.gov or (206) 553-0171.

Sincerely,

[signed April 20, 2010]

Michael J. Lidgard, Manager
NPDES Permits Unit

Enclosure