



Shell Exploration & Production Company

May 7, 2009

Mr. Mike Lidgard
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/>

RE: Notice of Intent (NOI), NPDES General Permit AKG-28-0000
2010 Outer Continental Shelf Lease Exploration Plan, Camden Bay, Alaska
Dillship M/V *Frontier Discoverer*
Lease Number OCS-Y-1941, Lease Block 6610

Dear Mr. Lidgard:

By this Notice of Intent (NOI), Shell Offshore Inc. (Shell) hereby serves its required formal notice of intent to discharge under NPDES General Permit AKG-28-0000 during its 2010 OCS exploration drilling program in Camden Bay, Alaska. Permitted discharges will be as described in the attached materials and at the location specified therein. This NOI and accompanying materials is submitted in satisfaction of the requirements of 40 CFR 55.4 (a) and (b) for an OCS source.

If you have questions regarding this NOI, or about Shell's 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,

A handwritten signature in dark ink, appearing to read "Susan Childs".

Susan Childs
Regulatory Affairs Manager, Alaska

Attachments - Notice of Intent (NOI) Information Sheet
Location Map
Projected generated Solid and Liquid Wastes & Disposal method
Waste Feed Lines

cc: *Diane Soderlund, USEPA Region 10, Alaska Operations*
Cindy Godsey, USEPA Region 10, Alaska Operations
Jeff Walker, MMS Alaska
Don Perrin, Alaska DNR
Administrative Record

ATTACHMENT 1

**NOTICE OF INTENT (NOI) INFORMATION 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:	Frontier 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, 2010		Stationary Facilities	Latitude:		
Expected Duration of Operation:	approximately 40 days per well site			Longitude:		
Facility Type <i>(check applicable type)</i>	<input type="checkbox"/>	Jackup	Mobile Facilities	Initial Latitude:	70° 27' 01.6193"	
	<input checked="" type="checkbox"/>	Drill Ship		Initial Longitude:	145° 49' 32.0650"	
	<input type="checkbox"/>	Semisubmersible				
	<input type="checkbox"/>	Other (specify):				
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						
<input type="checkbox"/>	Chukchi Sea		<input type="checkbox"/>	Other (specify): <input type="checkbox"/>		
<input checked="" type="checkbox"/>	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'

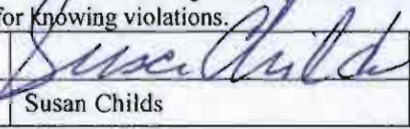
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Discharges (check all that apply)					
<input checked="" type="checkbox"/>	001 Drilling Mud and Cuttings	Water Depth:	120'		
<input checked="" type="checkbox"/>	002 Deck Drainage	Water Depth:	120'		
<input checked="" type="checkbox"/>	003 Sanitary Waste	Water Depth:	120'		
<input checked="" type="checkbox"/>	004 Domestic Waste	Water Depth:	120'		
<input checked="" type="checkbox"/>	005 Desalination Unit Waste	Water Depth:	120'		
<input checked="" type="checkbox"/>	006 Blowout Preventer Fluid	Water Depth:	120'		
<input type="checkbox"/>	007 Boiler Blowdown	Water Depth:			
<input type="checkbox"/>	008 Fire Control System Test Water	Water Depth:			
<input checked="" type="checkbox"/>	009 Non-Contact Cooling Water	Water Depth:	120'		
<input checked="" type="checkbox"/>	010 Uncontaminated Ballast Water	Water Depth:	120'		
<input checked="" type="checkbox"/>	011 Bilge Water	Water Depth:	120'		
<input checked="" type="checkbox"/>	012 Excess Cement Slurry	Water Depth:	120'		
<input checked="" type="checkbox"/>	013 Mud, Cuttings, Cement and Seafloor	Water Depth:	120'		
<input type="checkbox"/>	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 10, 2010	Hole Diameter or Estimated Total Discharge Volume:	36" diameter at surface, reducing through 4 stages to 8.5" at depth		
Drilling Fluid					
Category (check all that apply)	<input checked="" type="checkbox"/>	Water-based	Group (check all that apply)	<input type="checkbox"/>	Lignosulfonate
	<input type="checkbox"/>	Oil-based		<input type="checkbox"/>	Lime
	<input type="checkbox"/>	Synthetic-based		<input type="checkbox"/>	Gyp
	<input type="checkbox"/>	Other (specify):		<input checked="" type="checkbox"/>	Sea-water
			<input checked="" type="checkbox"/>	Saltwater	
			<input type="checkbox"/>	Saturated Saltwater	
			<input checked="" type="checkbox"/>	Nondispersed (Viscosifier/Polymer) PH/PA	

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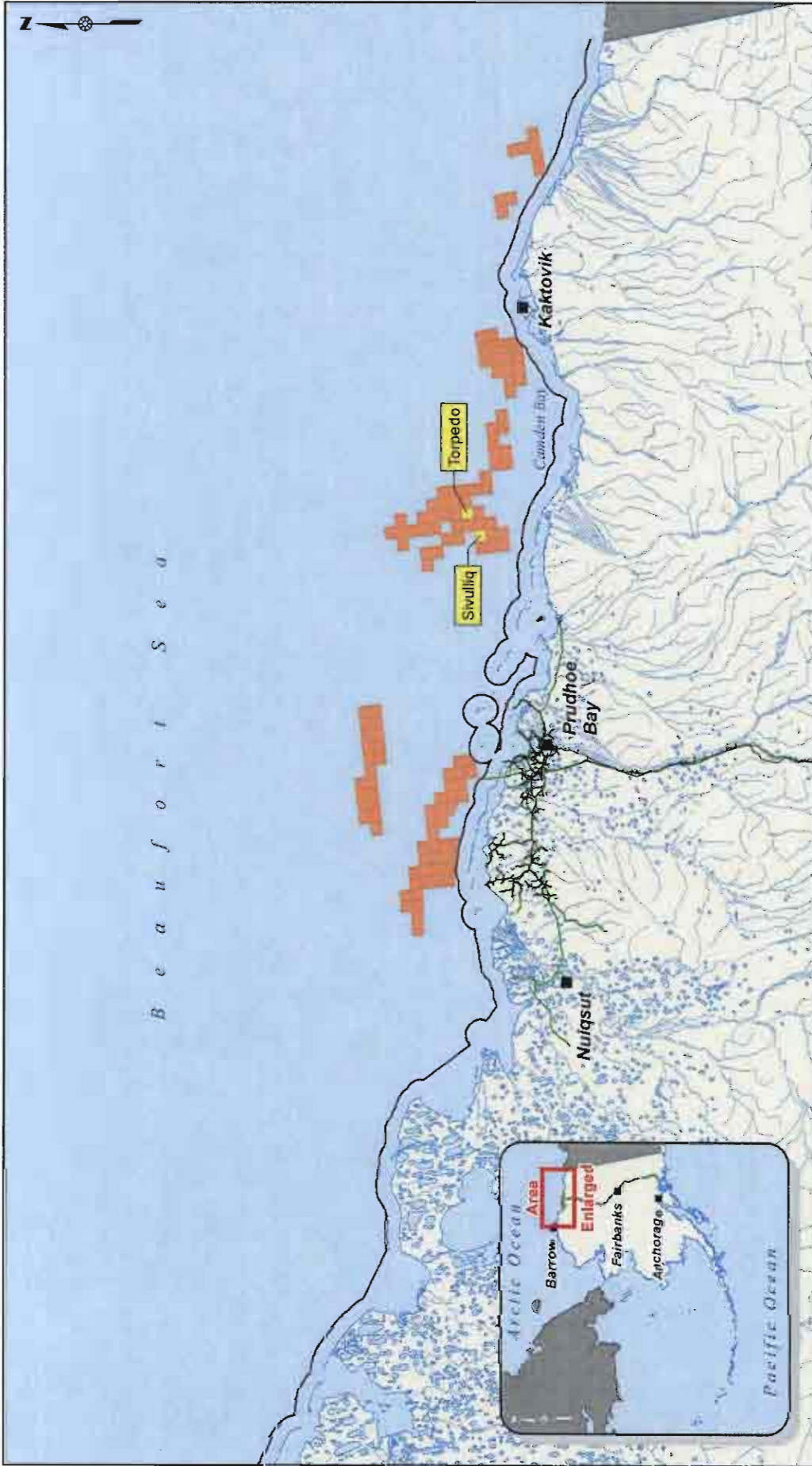
Zone of Deposit Request <i>(applicable to those discharges within state of Alaska waters)</i>				
Are you requesting a Zone of Deposit from ADEC?	<input type="checkbox"/>	Yes <i>(continue filling out this section)</i>	<input checked="" type="checkbox"/>	No <i>(skip this section and proceed to Special Conditions, below)</i>
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 <i>(applicable to those discharges within state of Alaska waters)</i>				
Are you requesting a mixing zone from ADEC?	<input type="checkbox"/>	Yes <i>(continue filling out this section)</i>	<input checked="" type="checkbox"/>	No <i>(skip this section and proceed to Special Conditions, below)</i>
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.				

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Special Conditions (<i>provide justification for all that are not required, completed or provided</i>)					
Special Monitoring	<input type="checkbox"/>	Required	<input checked="" type="checkbox"/>	Not Required	Justification:
Exploration Plans	<input type="checkbox"/>	Attached	<input checked="" type="checkbox"/>	Not Provided	Justification: Submitted to MMS
Biological Surveys	<input type="checkbox"/>	Attached	<input checked="" type="checkbox"/>	Not Provided	Justification:
Environmental Report(s)	<input type="checkbox"/>	Attached	<input checked="" type="checkbox"/>	Not Provided	Justification: Submitted to MMS as part of the Exploration Plan
Drilling Fluid Plan	<input type="checkbox"/>	Complete	<input checked="" type="checkbox"/>	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:	5/07/09
Printed Name:	Susan Childs			Title:	Regulatory Affairs Manager
Mail Completed NOI to EPA and ADEC at the following addresses:					
US EPA 1200 6 th Avenue, M/S OWW-130 Seattle, WA 98101			ADEC, Water Division 555 Cordova Street Anchorage, Alaska 99501		



B e e a u f o r t S e a



2010 Exploration Plan Block (Yellow box)

Shell OCS Lease Block (Orange box)

■ Village

— Road

— Pipeline

— State-Federal Water Boundary



PLANNED EXPLORATION DRILLING PROGRAM

2010 Camden Bay Exploration Plan

SCALE: 0 15 30 60 Miles

FIGURE: 1-1



ASRC Energy Services
A subsidiary of Arctic Slope Regional Corporation
REGULATORY AND TECHNICAL SERVICES

Table 1 Projected ocean discharges – Torpedo Prospect Drill Site H

Type of Waste	Total Amount to be Discharged*	Discharge Rate	Discharge Method
Drill Cuttings	3,393 bbl/well (Cuttings only; no drilling muds used)	679 bbl/day* (discharged over 5 days)	Deposited at the seafloor
Spent drilling fluids	2,881 bbl/well (when multiple wells drilled in same season, same water based mud system will be transferred to next well)	82 bbl/day* (discharged over 35 days; includes discharge of excess water base fluid at end of the season, approx 1500 bbl)	Discharged to water through disposal caisson diluted 30:1 with seawater
Drill cuttings from water base drilling interval	1,381 bbl/well	39 bbl/day* (discharged over 35 days)	Discharged to water through disposal caisson diluted 30:1 with seawater
Excess cement	50 bbl/well	two occasions at 1 bbl/min	Discharged at seafloor during 30-inch and 20-inch cementing operations
Cooling water	1,800,000 bbl/well	45,000 bbl/day	Discharged to the water at several sites
Sanitary waste	236 bbl/well	27 bbl/day	Treated in the MSD prior to discharge to meet NPDES limits (based on 124 people at 9 gal/person/day)
Domestic waste	3,307 bbl/well	83 bbl/day	Discharged to water through disposal caisson below the water's surface (based on 124 people at 28 gal/person/day) Food wastes will not be discharged, they will be incinerated onboard
Desalination unit brine water	5,000 bbl/well	125 bbl/day	Discharged through disposal caisson below the water's surface
Deck drainage	200 bbl/well	5 bbl/day (dependent on rainfall)	Drains to oily water separator. Uncontaminated water discharged through disposal caisson below water's surface. Oily water is stored onboard in waste oil tank, then transferred by boat to an approved treatment/disposal facility.
Ballast water	24,800 bbl/well	620 bbl/day	Discharged through disposal caisson below the water's surface
Firewater bypass	0 bbl	0 bbl/day	No routine firewater system testing anticipated
Bilge water	1,000 bbl/well	25 bbl/day	Treated in an oil/water separator; uncontaminated water discharged to sea through the disposal caisson, oily water is stored onboard then transferred by boat to an approved treatment/disposal site
BOP fluid	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 and 36" section; 35 days to complete the remainder of the well

