AUTHORIZATION TO DISCHARGE UNDER THE ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

FOR GENERAL PERMIT AKG315200 - OIL AND GAS EXPLORATION, DEVELOPMENT, AND PRODUCTION IN STATE WATERS IN COOK INLET

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Wastewater Discharge Authorization Program

555 Cordova Street

Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. Part1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations.

Owners and operators of facilities engaged in oil and gas exploration, development, and production, within Offshore and Coastal Subcategories of the Oil and Gas Extraction Point Source Category (40 CFR 435, Subparts A and D), as well as non-oil and gas projects with similar discharges, located in Cook Inlet, are authorized to discharge to waters of the United States, only in accordance with effluent limits, monitoring requirements, and other conditions set forth herein.

A COPY OF THIS GENERAL PERMIT

MUST BE KEPT AT THE SITE WHERE DISCHARGES OCCUR.

This permit is effective *TBD*.

This permit and the authorization to discharge shall expire at midnight on *TBD*.

The applicant shall reapply for a permit reissuance on or before *TBD*, 180 days before the expiration of this permit.

PROPOSED FINAL	
Signature	Date
	Program Manager
Printed Name	Title

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

LIST OF ATTACHMENTS

SCHEDULE OF SUBMISSIONS

The Schedule of Submissions summarizes some of the required submissions and activities the applicant must complete and/or submit to the Alaska Department of Environmental Conservation (DEC or Department) Compliance and Enforcement Program (CEP) or the Wastewater Discharge Authorization Program (WDAP) during the term of this permit. All deadlines for the Schedule of Submissions are based on the date of electronic submittal or upon the postmark date of a hardcopy submittal. The applicant is responsible for all submissions and activities even if they are not summarized below.

Table 1: Schedule of Submissions

Section	Submittal	Frequency	Due Date	Submit to [a]
NOTICE OF INTENTS (NOIs) AND APPLICATIONS				
1.1.5	Short-form Notice of Intent (NOI) for an existing permittee under the 2007 general permit AKG315000 (2007 GP)	1/term	30 days after effective date	WDAP
1.1.4	NOIs, Drilling Fluids Plan (DFP), and Environmental Monitoring Program (EMP) Study Plan if applicable for new Mobile Offshore Drilling Units (MODUs) or existing MODUs seeking coverage for exploration at new location	1/term/site	45 days prior to proposed discharge	WDAP
1.1.6	NOI for new fixed platforms or shore-based coastal production facilities without request for produced water discharges	1/term	45 days prior to proposed discharge	WDAP
1.1.7	Individual permit application for new fixed platforms or shore-based coastal production facilities with request for produced water discharges	1/term	1 year prior to proposed discharge	WDAP
1.1.8	NOIs, Form 2M, and DFP, if applicable for horizontal directional drilling discharges	1/term	120 days prior to proposed discharge	WDAP
1.1.9	NOIs and DFP, if applicable, for geotechnical surveys	1/term	45 days prior to proposed discharge	WDAP
1.2	NOI for Reissuance and Administrative Extension	1/term	180 days before expiration of this Permit	WDAP
PLANS AND REPORTS				
5.2.2 and 5.2.6	Best Management Practices (BMP) Plan Certification	1/term and annual	Within 120 Days of the Effective Date of this Permit or Authorization and prior to January 31st each year for certification of revisions	CEP

Section	Submittal	Frequency	Due Date	Submit to [a]
5.5	Drilling Fluids Plan	1/term/site	If applicable, with or prior to NOI	WDAP
5.4.2	EMP Study Plan	1/site	If applicable, with or prior to NOI	WDAP
5.6	Domestic Wastewater Characterization Sampling and Analysis Plan	1/term	Second Year of Permit	WDAP
5.4.5	EMP Reports	1/year/site	January 31st each year following EMP sample event	WDAP/CEP
5.3	End-of-Well (EOW) Report	1/Well	January 31st each year following well completion	WDAP/CEP
5.3	End-of-Project (EOP) Report	1/Project	January 31st each year following project completion	WDAP/CEP
2.6.4	Miscellaneous Discharges Chemical Inventory	Annual	January 31st each year following chemical use	CEP
2.11.3	Electronic Discharge Monitoring Reports (eDMRs)	1/month	28th day following the discharge period [b]	CEP
5.1	Quality Assurance Project Plan Certification (QAPP)	1/term	Within 120 days of the Effective Date of this Permit or Authorization	CEP
WRITTEN REQUESTS REQUIRING DEPARTMENT APPROVALS				
2.6.6.2	Chronic Whole Effluent Toxicity (WET) Frequency Reduction for Discharges 005, 009 or 014	1/term per platform	Upon demonstration of two consecutive sample results below Pollution Reduction Action levels and adequate representativeness	WDAP
2.7.9	Chronic WET and Metals Frequency Reduction for Discharge 015	1/term per Facility	Upon demonstration of four consecutive sample results below WET Notification Levels and Compliance with Metal Limits	WDAP
2.10.1	Chronic WET Most Sensitive Invertebrate Approval	1/term	Based on initial screening of Invertebrate Species	WDAP
2.10.1	Substitution for Chronic WET Invertebrate Based on Availability	As needed	Based on Laboratory Corroboration of Availability	WDAP
2.10.3.4	Modification to WET dilution series	As Needed	Based on Observed Toxicity of Previous WET Results	WDAP
NOTIFICATIONS				
2.6.5	Notification of Exceedance of Chronic WET PR BMP Revision Action Levels for Miscellaneous Discharges 005, 009, or 014	1/Event	Within one week of receipt of sample results indicating an exceedance occurred.	WDAP

Section	Submittal	Frequency	Due Date	Submit to [a]
2.1.6	Notification of MODU Seasonally Unmanned Status	1/Event	Within 30 days prior to discontinuing monitoring.	WDAP
2.1.6	Notification of Exploration Well Drilling Cessation or Rig Relocation	1/Event	Within seven days of recommencing discharges or before relocating MODU to new site or staging location.	WDAP
2.7.10	Notification of Exceedance of Chronic WET Notification Levels for Produced Water Discharges 015	1/Event	Within one week of receipt of sample results indicating an exceedance occurred	WDAP
2.9.3 and 5.2.9.5	Notification of sheen potentially associated with hydrostatic test water discharge for non-hydrocarbon infrastructure	1/Event	Within 24-hours of observation of sheen	WDAP/CEP
Appendix A 3.4.1	Oral notification of noncompliance	As Necessary	Within 24 hours from the time the applicant becomes aware of the circumstances of noncompliance	CEP
Appendix A 3.4.1	Written documentation of noncompliance	As Necessary	Within five days after the applicant becomes aware of the circumstances	CEP

a) See Appendix A, Section 1.1 for addresses.

b) This due date and electronic submittal requirement per Section 2.11.3.3 and 2.11.4.1 supersedes the date shown in Appendix A – Standard Conditions, Section 3.2 on Page A-9.

1.0 PERMIT COVERAGE

1.1 Coverage Eligibility and Notification Requirements

1.1.1 AKG315200 - Oil and Gas Exploration, Development, and Production Facilities in State Waters in Cook Inlet General Permit (Permit) authorizes certain discharges and sets effluent limits, monitoring requirements, and other limitations primarily for the oil and gas industry. However, coverage under the Permit is not limited to the oil and gas industry and can support other industry sectors based on an understanding that they include discharges that are similar in characteristics (e.g., drilling fluids and drill cuttings associated with geotechnical surveys or horizontal direction drilling, deck drainage, and certain miscellaneous discharges).

1.1.2 Authorization to discharge requires written notification from the Department that coverage has been granted, that a mixing zone has been authorized (if applicable), and that a specific permit authorization number has been assigned to the operation.

1.1.3 Existing mobile offshore drilling units (MODUs) used for oil and gas exploration in Cook Inlet that have coverage under the AKG315100 – Mobile Oil and Gas Exploration Facilities in State Waters in Cook Inlet (Exploration GP) or AK0053690 – Cook Inlet Energy, LLC Sabre Oil and Gas Exploration Project will be granted automatic coverage upon the effective date of this Permit. Within 30 days of the effective date of this Permit, DEC will terminate existing authorizations under the Exploration GP and issue a replacement authorization under this Permit.

1.1.4 Applicants for new MODUs or existing MODUs conducting oil and gas exploration at new locations in Cook Inlet (new applicants) that meet the criteria for coverage under this permit will be granted coverage upon submittal of a complete NOI, a Drilling Fluids Plan (DFP) per Section 5.5.1 (if applicable), and Environmental Monitoring Program (EMP) Plan per Section 5.4.1 (if applicable). The NOI and supporting documents must be submitted at least 45 days prior to planned discharges.

1.1.5 Within 30 days of effective date of this Permit, existing ***fixed*** development and production platforms and shore-based coastal production facilities currently authorized under the administratively extended general permit AKG315000 – Oil and Gas Exploration Development and Production Facilities in Cook Inlet that was issued in 2007 (2007 GP) will be required to reapply for coverage by submitting a Short Form Notice of Intent (NOI) for coverage under this Permit.

1.1.6 New fixed development and production platforms or shore-based coastal production facilities that do not propose to discharge produced water may seek coverage under this Permit by submitting an NOI to DEC. NOIs and supporting documents must be submitted at least 45 days prior to proposed discharge.

1.1.7 New or existing that are proposing to discharge produced water for the first time, or seeking authorization to increase existing produced water discharges, must submit an individual permit application (Form 1, Form 2C, and Form 2M) for DEC evaluation for coverage under this Permit. If appropriate per Section 1.3, DEC may issue authorization under this Permit after developing a Statement of Basis following administrative procedures in the most current versions of 18 AAC 15, 18 AAC 70, and 18 AAC 83. Alternatively, DEC may require an

individual permit coverage per Section 1.4. Individual application and supporting documents must be submitted at least 1 year prior to proposed discharge.

1.1.8 An applicant proposing to discharge drilling fluids and drill cuttings associated with horizontal direction drilling (HDD) to Cook Inlet must submit an NOI, a DFP (if applicable per Section 5.5.1), and a mixing zone application (Form 2M) for DEC evaluation. If appropriate per Section 1.3, DEC will issue an authorization under this Permit after developing a Statement of Basis following administrative procedures in the most current versions of 18 AAC 15, 18 AAC 70, and 18 AAC 83.

1.1.9 An applicant proposing to discharge drilling fluids and drill cuttings associated with geotechnical surveys to Cook Inlet must submit an NOI and a DFP (if applicable per Section 5.5.1), for DEC evaluation per Section 1.3.

1.1.10 An existing permittee with an authorization under this Permit may revise their authorization by submitting an updated NOI to the Department.

1.2 Permit Expiration

This permit will expire at midnight on ***TBD***. A permittee wishing to continue coverage under a reissued permit must submit a renewal NOI at least 180 days prior to the expiration of this permit, as described in Standard Conditions, Appendix A, Part 1.3.

1.3 Notice of Intent Review and Permit Coverage Determination Process

1.3.1 An applicant must submit a complete NOI form (See Attachment 1) and all required plans, engineering reports, and (if applicable) individual permit applications for evaluation under this Section.

1.3.2 The Department will review an NOI, or individual application per Section 1.1.7, for completeness and accuracy. If an NOI is found to be incomplete, the Department will notify the applicant of additional information or changes needed to the submittal.

1.3.3 The Department will review NOIs, or individual permit applications per Section 1.1.7, and make a determination regarding the appropriateness of granting coverage under this Permit at a proposed discharge location or area of operation.

1.3.3.1 Location coordinates provided in the NOI or individual permit application for each proposed discharge location or area of operation will be used as one criterion to determine if a discharge is prohibited by this permit or would require application for an Alaska Pollutant Discharge Elimination System (APDES) individual permit per Section 1.4.

1.3.4 The Department will review the NOI to authorize mixing zones per Section 3.0.

1.3.4.1 When authorizing a mixing zone under this Permit, the Department will consider whether the discharges requested are consistent with permit conditions.

1.3.4.2 In situations where the requested discharges are inconsistent with permit conditions or this Permit does not adequately consider the requirements of authorizing a mixing zone (e.g., produced water or HDD), DEC may authorize a mixing zone after developing a Statement of Basis following administrative procedures in the most current versions of 18 AAC 15, 18 AAC 70, and 18 AAC 83 and including appropriate conditions in the authorization.

1.3.5 Upon completion of the NOI or individual permit application review, the Department will either:

1.3.5.1 Prepare and transmit a written coverage determination specifying whether the information is sufficient to authorize mixing zones per Section 3.0; or

1.3.5.2 Notify the applicant of needed changes to the NOI or application submittal; or

1.3.5.3 Deny coverage under the permit and require an applicant to submit an individual permit application.

1.4 Requiring an Individual Permit

1.4.1 The Department may require an applicant submitting an NOI for authorization to discharge under a general permit to apply for and obtain coverage under an individual permit, or any interested person may petition the Department to take this action.

1.4.2 The Department will notify the applicant submitting an NOI in writing by certified mail that an individual permit application is required. If an applicant fails to submit an individual permit application by the date required in the notification, coverage under this Permit is automatically terminated at the end of the day specified for application submittal.

1.4.3 An applicant authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The applicant shall submit an individual permit application (APDES permit application Form 1 and Form 2C and Form 2M if applicable) with reasons supporting the request to the Department at the address in Appendix A, Part 1.1.1.

1.4.4 When an individual permit is issued to an applicant otherwise covered by this Permit, the applicability of this permit to the applicant is automatically terminated on the effective date of the individual permit.

1.4.5 When an individual permit is denied to an applicant otherwise covered by this Permit, the applicant is automatically reinstated under this Permit on the date of such denial, unless the applicant cannot meet the conditions of the permit or otherwise specified by the Department.

1.4.6 An applicant excluded from this Permit solely because the applicant already has an individual permit may request that the individual permit be revoked and that the applicant be covered by this permit. Upon revocation of the individual permit, and if the applicant can comply with the terms of this Permit, this permit shall apply to the applicant.

1.5 Authorized Discharges

1.5.1 This Permit authorizes and places conditions on discharges from oil and gas exploration, development, and production facilities (including shore-based coastal facilities) that discharge to Cook Inlet (See Figure 1) under the Offshore and Coastal Subcategories of the Oil and Gas Extraction Point Source Category (40 CFR 435, Subparts A and D) as adopted by reference at 18 AAC 83.010(g)(3). In addition, this Permit authorizes discharges from non-oil and gas facilities discharging wastewater with similar characteristics to those from oil and gas facilities including drilling fluids and drill cuttings from geotechnical surveys and HDD projects that discharge to Cook Inlet.

1.5.2 Permittees may request authorization for the following discharges under this Permit:

Discharge Number	Discharge Description
001	Drilling Fluids and Drill Cuttings
002	Deck Drainage
003	Domestic Wastewater
004	Graywater
005	Desalination Unit Wastes
006	Blowout Preventer Fluid
007	Boiler Blowdown
008	Fire Control System Test Water
009	Noncontact Cooling Water
010	Uncontaminated Ballast Water
011	Bilge Water
012	Excess Cement Slurry
013	Mud, Cuttings, and Cement at the Seafloor
014	Waterflooding (Filter Backwash)
015	Produced Water
016	Completion Fluids
017	Workover Fluids
018	Well Treatment Fluids
019	Test Fluids
020	Hydrostatic Test Water

1.6 Area and Depth Prohibitions

1.6.1 The area of coverage for the permit is generally depicted in Figure 1 in Appendix D. Note, discharges of drilling fluids and drill cuttings from HDD and geotechnical projects are open to all state waters of Cook Inlet. An applicant should contact DEC if there is uncertainty whether discharges will be located in a prohibited area. However, the applicant is ultimately responsible for clearly identifying sites in the NOI process with respect to prohibited areas to demonstrate applicability of coverage under the permit.

1.6.2 Offshore and coastal facilities are prohibited from discharging Drilling Fluids and Drill Cuttings shoreward of 10 meter mean lower low water (MLLW) isobaths.

1.6.3 Offshore and coastal facilities are prohibited from discharging shoreward of the 5 meter isobaths.

1.6.3.1 Oil and gas facilities are prohibited from discharging shoreward of the 5.5 meter isobaths at the following locations:

1.6.3.1.1 Clam Gulch CHA adjacent to Sales 32, 40, 46A, and 49; and

1.6.3.1.2 Crescent River northward to a point one-half mile north of Redoubt Point adjacent to Sales 35 and 49.

1.6.4 This Permit prohibits discharges from offshore or coastal facilities at the following locations in the area of coverage, with certain exceptions as described in Section 1.6.4.5.

1.6.4.1 Within the boundaries or within 4,000 meters of a coastal marsh, river delta, river mouth, designated State Game Refuge (SGR) except Trading Bay SGR per Section 1.6.4.5.1, State Game Sanctuary, State Critical Habitat Area (CHA) except active leases identified in Section 1.6.4.5.2, National Park, or Former Area Meriting Special Attention (AMSA). For this Permit, a coastal marsh is defined as the seaward edge of emergent wetland vegetation. The following are located in the vicinity of this Permit coverage area:

Protected Area Designations:	**Protected Area Names**
State Game Refuges:	Susitna Flats Palmer Hay Flats Trading Bay
State Critical Habitat Areas:	Kalgin Island Redoubt Bay Clam Gulch Kachemak Bay
National Park:	Lake Clark
Former AMSA:	Port Graham/Nanwalek

The legal descriptions of state specialty areas are found in AS 16.20 Conservation and Protection of Alaska Fish and Game. Further Information can be obtained from: Alaska Department of Fish and Game (ADF&G):

333 Raspberry Road
Anchorage, AK 99501
Phone (907) 267-2342

Or, ADF&G Division of Habitat Soldotna Office:

514 Funny River Road
Soldotna, AK 99669
Phone (907) 714-2475

1.6.4.2 In Kamishak Bay, west of the line from Cape Douglas to Chinitna Point.

1.6.4.3 In Chinitna Bay, inside of the line between the points of the shoreline at latitude 59˚52’45” N, longitude 152˚48’18” W on the north and latitude 59˚46’12” N, longitude 153˚00’24” W on the south (Figure 1).

1.6.4.4 In Tuxedni Bay, inside of the lines on either side of Chisik Island (Figure 1).

1.6.4.4.1 From latitude 60˚04’06” N, longitude 152˚34’12” W on the mainland to the southern tip of Chisik Island (latitude 60˚05’45” N, longitude 152˚33’30” W).

1.6.4.4.2 From the point on the mainland at latitude 60˚13’45” N, longitude 152˚32’42” W to the point on the north side of Snug Harbor on Chisik Island (latitude 60˚06’36” N, longitude 152˚32’54” W).

1.6.4.5 Specific exceptions to area prohibitions

1.6.4.5.1 Oil and gas facilities that meet the requirements for permit coverage per Section 1.3 may discharge within 1,000 meters of the boundary of the Trading Bay SGR.

1.6.4.5.2 Discharges within 1,000 meters of the Redoubt Bay CHA may be allowed from oil and gas facilities located in lease tracts 390,368.00 (Kustatan) or 381,203.00 (Osprey) if the requirements for permit coverage are met (See Section 1.3).

1.6.4.5.3 Discharges of Class B2 drilling fluids and drill cuttings between 4,000 meters to 1,000 meters of Trading Bay SGR or Redoubt Bay CHA require an Environmental Monitoring Program (EMP) per Section 5.4 and a Drilling Fluid Plan per Section 5.5

1.6.5 Discharges from oil and gas facilities, (including shore-based coastal facilities) are prohibited within tracts identified as being within Critical Beluga Habit Area 1 in the Alaska Department of Natural Resources (DNR), Division of Oil and Gas (DOG) Mitigation Measure: Cook Inlet Areawide 2017W, revised April 2017.

1.6.6 For this Permit, oil and gas facilities (including shore-based coastal facilities) are prohibited to discharge in coastal waters and the territorial sea on the west side of Cook inlet south of the baseline at Kalgin Island except for within the most current lease area boundaries established by DNR, DOG and subject to other prohibitions to sensitive areas in this section (See Figure 1).

2.0 LIMITS AND MONITORING REQUIREMENTS

2.1 Requirements for all Discharges

2.1.1 During the effective period of this permit, the permittee is authorized to discharge pollutants within the area of coverage set forth in Section 1.6.1 and Appendix D, in accordance with the limits and conditions set forth herein.

2.1.2 This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in this Permit or application (NOI) processes.

2.1.3 The permittee must collect all effluent samples from the effluent stream of each discharge after the last treatment unit prior to discharge into the receiving waters, except as otherwise required by discharge-specific sections of this permit.

2.1.4 The permittee must comply with the effluent limits in this permit at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

2.1.5 The permittee is not required to conduct monitoring for fixed production platform facilities when they are unmanned. The permittee must provide written notification to DEC that the facility will be unmanned 30 days prior to terminating monitoring requirements.

2.1.6 The permittee is not required to conduct monitoring for MODUs when they are seasonally unmanned or when the MODU is not in their operational control. The permittee must provide written notice to DEC Permitting at least seven days prior to recommencing discharges after cessation of seasonal drilling activities or when relocating to a different drilling site, staging location, or overwinter storage location.

2.1.7 All discharges, whether alone or in combination, must not make the water unfit or unsafe; cause a film, sheen, or discoloration on the water surface or adjoining shoreline; cause leaching of toxic or deleterious substance, or cause a sludge, solid, or emulsion to be deposited beneath or upon the water surface, water column, on the bottom, or adjoining shoreline.

2.1.8 The permittee must minimize the discharge of surfactants, dispersants, and detergents except as necessary to comply with the safety requirements of the Occupational Health and Safety Administration or other agencies having jurisdiction. The discharge of dispersants to marine waters in response to oil or other hazardous waste spills is not authorized by this Permit.

2.1.9 The permittee shall not discharge diesel oil, halogenated phenol compounds, trisodium nitrilotriacetic acid, sodium chromate, or sodium dichromate.

2.1.10 If any discharges are comingled, the most stringent effluent limit for each individual discharge shall be applied to the resulting discharge. If the individual discharge is not authorized, the comingled discharge is not authorized.

2.1.11 The discharge of maintenance waste such as removed paint and materials associated with surface preparation and coating applications is prohibited. Such materials shall be contained, collected, and properly disposed. Prior to conducting sandblasting or similar maintenance activities, operators must develop and implement a Best Management Practices (BMP) plan (Section 5.2) for the containment, collection and disposal of waste materials.

2.2 Requirements for Drilling Fluids and Drill Cuttings (Discharge 001)

2.2.1 Requirements for all Drilling Fluids and Drill Cuttings Discharges.

2.2.1.1 The discharge of non-aqueous based drilling fluids (NAF) is prohibited except for situations where such fluids adhere to drill cuttings at facilities within the Territorial Seas, as defined per 40 CFR 435 (See Table 4 and noted Sections).

2.2.1.2 Exemptions to the zero discharge of non-aqueous drilling fluids which adhere to drill cuttings based on technical limitations may be granted per 40 CFR 435, Appendix A of Subpart D Coastal Subcategory.

2.2.1.3 Classification of drilling fluids for Oil and Gas exploration, development, and production and HDD or geotechnical (geotech) drilling projects for conducting geotechnical or HDD discharged to marine waters of Cook Inlet covered by this Permit are described in Table 2.

Table 2: Drilling Fluid Classifications System

Use and Classification		Fluid Characteristics per Classification			
Use	Class [1]	Suspended Particulate Phase (SPP) toxicity 50 percent lethal concentration (LC_{50}) in parts per million (ppm) [2]	Base Fluid (Water or Synthetic)	Number of Ingredients [3]	Barite (Yes/No)
Oil and Gas	B1	≥ 750,000	Water	≤ 2	No
	B2	≥ 30,000	Water	> 2	Yes or No
	B3	≥ 30,000	NAF/Synthetic	> 2	Yes
Geotech and HDD	C1	≥ 750,000	Water	≤ 2	No
	C2	> 500,000	Water	> 2	No
	C3	> 500,000	Water	> 2	Yes

Notes:

1. Class A fluids are for discharges to freshwater and are not included in the Table 2 because this permit authorizes only marine discharges to Cook Inlet.
2. SPP LC_{50} toxicity must be analyzed for all Class B fluids and C3 fluids. Class C1 and C2 fluids may be estimated per Section 5.5.3.4.1or analyzed to demonstrate compliance with classifications.
3. Freshwater or seawater (water) is not counted as an ingredient.

2.2.2 Effluent Limitations and Monitoring Requirements for Class B Drilling Fluids and Drill Cuttings for Oil and Gas Exploration, Development, and Production (Discharge 001).

In addition to any applicable requirements in Section 2.1 and Section 2.2.1 the permittee must comply with the effluent limitations and monitoring requirements when using drilling fluids for Oil and Gas exploration, development, and production activities. Effluent limits and monitoring requirements for Class B1 and B2 fluids (Water-based Fluid Systems) are summarized in Table 3. Effluent limits and monitoring requirements for Class B3 (NAF-based systems) are summarized in Table 4.

Table 3: Effluent Limitations and Monitoring Requirements for Water-Based Drilling Fluids (and Drill Cuttings for Oil and Gas Exploration, Development, and Production (Discharge 001)

Pollutant Parameter	Effluent Limitations	Monitoring Requirements	
	Average Monthly and Maximum Daily Limits	Measurement Frequency	Sample Type
Flow Million Gallons per Day (mgd) 2.2.2.1.1	Report	Monthly	Estimate
Depth Dependent Discharge Rates 0 to 5 meters 2.2.2.1.2 >5 to 20 meters >20 to 40 meters >40 meters	No discharge 500 barrels per hour (bbl/hr) 750 bbl/hr 1,000 bbl/hr	Continuous during discharge	Estimate
SPP toxicity 96 hour LC_{50} 2.2.2.1.3	≥ 30,000 parts per million (ppm)	Monthly, End-of-Well (EOW) and Pill 2.2.2.1.7 and 2.2.2.1.16	Grab
Free oil 2.2.2.1.4	No discharge	Daily	Grab
Diesel oil 2.2.2.1.5	No discharge	Event/EOW	Grab
Mercury 2.2.2.1.6	1 mg per kilogram (mg/kg)	Once per well	Grab
Cadmium 2.2.2.1.6	3 mg/kg	Once per well	Grab
Barite Metals 2.2.4.2	Report EOW	Event/Once per well	Grab

Table 4: Effluent Limitations and Monitoring Requirements for Non-aqueous Fluids Adhered to Drill Cuttings for Oil and Gas Exploration, Development, and Production (Discharge 001)

Base Fluid 2.2.2.1.8 or Cuttings	Pollutant Parameter	Effluent Limitations	Monitoring Requirements	
		Average Monthly and Maximum Daily Limits	Measurement Frequency	Sample Type
NAF Stock Base Fluid	Flow (mgd) 2.2.2.1.1	Report	Monthly	Estimate
	Mercury 2.2.2.1.6	1 mg/kg	Annual	Grab
	Cadmium 2.2.2.1.6	3 mg/kg	Annual	Grab
	Polynuclear Aromatic Hydrocarbons (PAH) 2.2.2.1.9	mass ratio < $1x10^{-5}$	Annual	Grab
	Sediment toxicity ratio 2.2.2.1.10	ratio < 1.0	Annual	Grab
	Biodegradation rate 2.2.2.1.11	ratio < 1.0	Annual	Grab
NAF Adhered to Drill Cuttings	Volume (MG) 2.2.2.1.1	Report	Monthly	Estimate
	Free Oil 2.2.2.1.4	No discharge	Daily	Grab
	Diesel oil 2.2.2.1.5	No discharge	Daily	Grab
	SPP toxicity 96 hour LC_{50} 2.2.2.1.3	≥ 30,000 ppm	Monthly, EOW and Pill 2.2.2.1.7 and 2.2.2.1.16	Grab
	Sediment toxicity ratio 2.2.2.1.12	ratio < 1.0	Annual	Grab
	Formation oil 2.2.2.1.13	No discharge	Daily	Grab
	C_{16}-C_{18} internal olefin stock	6.9 g NAF base fluid/100 g wet drill cuttings 2.2.2.1.14	Daily 2.2.2.1.15	Grab

	C_{12}-C_{14} ester or C_8 ester stock	9.4 g NAF base Fluid/100 g wet drill cuttings [2.2.2.1.14]	Daily [2.2.2.1.15]	Grab

Note: Table Notes that apply to both Table 3 and Table 4 are described below.

2.2.2.1.1 Report on monthly Discharge Monitoring Reports (DMRs) estimates of both the maximum daily volumes and the average daily discharge volumes by dividing the monthly total volume discharged by the number of days discharges occurred. Report the total monthly volumes in the End of Well Report (EOW), see Section 5.3.

2.2.2.1.2 Depth-dependent discharge rates are based on MLLW levels at the location of discharge.

2.2.2.1.3 Per Environmental Protection Agency (EPA) Method 1619 - Drilling Fluids Toxicity Test. See 40 CFR 435, Subpart A, Appendix 2. At the EOW, a sample must be collected for toxicity testing where no mineral oil is used. This sample can also serve as the monthly monitoring sample.

2.2.2.1.4 The permittee must perform the Static Sheen Test (EPA Method 1617) on separate samples of drilling fluids and drill cuttings, on samples collected each day of discharge and prior to bulk discharges. For discharge below ice or during periods of unstable or broken ice, water temperature for the Static Sheen Test must approximate surface water temperatures at ice breakup. Whenever fluids or cuttings fail the Static Sheen Test, and a discharge has occurred in the past 24 hours, the permittee is required to analyze an undiluted sample of the material which failed the test to determine the presence or absence of diesel oil. The determination and reporting results must be performed according to Section 2.2.2.1.5.

2.2.2.1.5 Compliance with the prohibition of diesel oil must be demonstrated by gas chromatography (GC) analysis of drilling fluids collected from the mud used at the greatest well depth ("EOW" sample) and of any drilling fluids or drill cuttings which fail the daily Static Sheen Test per Section 2.2.2.1.4. In all cases, the determination of the presence or absence of diesel oil must be based on a comparison of the fingerprint of the sample and of the diesel oil in storage at the facility. The method for analysis must be EPA SW846 Method 8015C (2007). Gas chromatography/mass spectrometry (GC/MS) may be used if an instance should arise where the permittee and DEC determine that greater resolution of the drilling fluid "fingerprint" is needed for a particular drilling fluid sample. If the permittee elects to confirm the results of Method 8015C, the GC/MS methods described in EPA 821-R-92-008 may be used. The results and raw data, including the spectra, from the GC analysis must be provided to DEC by written report (1) within 30 days of a positive result with the Static Sheen Test when a discharge has occurred, or (2) for the EOW sample, with EOW Report per Section 5.3.

2.2.2.1.6 The permittee must analyze a representative sample of stock barite once prior to drilling each well and submit the results for total mercury and total cadmium on the DMR for the month in which drilling of the well commenced. Analyses must be conducted using EPA Methods 245.5 or 7471b for mercury and 200.7 for cadmium and results expressed as mg/kg (dry weight) of barite. If more than one well is drilled at a site, new analyses are not required for subsequent wells if no new supplies of

barite have been received since the previous analysis. In this case, a comment must be included in the DMR stating that no stock new barite was received since the last reported analysis. A permittee may also provide certification, as documented by the supplier(s), that the barite meets the above limits. The concentration of mercury and cadmium in stock barite must be reported on the DMR as documented by the supplier with the supplier certification included as a DMR attachment.

2.2.2.1.7 At EOW, a sample must be collected for toxicity testing where no mineral oil is used. This sample can also serve as the monthly sample.

Note: Additional table notes that apply only to Class B3 in Table 4 are described below.

2.2.2.1.8 Applicable stock base fluids include C_{16}-C_{18} internal olefin, C_{12}-C_{14} ester, or C_8 esters.

2.2.2.1.9 PAH mass ratio = [mass (g) of PAH (as phenanthrene)] ÷ [mass (g) of stock base fluid] as determined by EPA Method 1654, Revision A, entitled "PAH Content of Oil by HPLC/UV," December 1992.

2.2.2.1.10 Base fluid sediment toxicity ratio = [10-day LC_{50} of C_{16}-C_{18} internal olefin, C_{12}-C_{14} ester or C_8 ester] ÷ [10-day LC_{50} of stock base fluid] as determined by ASTM E 1367-99 method: "Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods," 1992, after preparing the sediment according to the method specified at 40 CFR 435, Subpart A, Appendix 3. Results of up to three tests may be averaged to determine compliance, using two samples from the same lot of stock fluids. Equivalent aliquots of one homogenized sample must be split by laboratory (parts 1A and 1B) and tested separately if averaging is used. Permittees may show compliance based on test results from part 1A or from the rounded arithmetic average of the test results from part 1A and 1B. Permittees may also test the second sample for compliance. Where the second sample is analyzed, operators will determine compliance using the arithmetic average of the results from all three tests. Permittees shall report the appropriate number on the DMR and attach documentation showing how the number was calculated and all applicable test reports.

2.2.2.1.11 Biodegradation rate ratio = [cumulative gas production (ml) of C_{16}-C_{18} internal olefin, C_{12}-C_{14} ester or C_8 ester] ÷ [cumulative gas production (ml) of stock base fluid], both at 275 days as determined by ISO 11734:1995 method: "Water quality - Evaluation of the 'ultimate' anaerobic biodegradability of organic compounds in digested sludge--Method by measurement of the biogas production (1995 edition)" as modified for the marine environment. Compliance with the biodegradation limit will be determined using the following ratio:

$$\frac{\%\ \text{Theoretical gas production of reference fluid}}{\%\ \text{Theoretical gas production of NAF}} \leq 1.0$$

Where: NAF = stock base fluid being tested for compliance.

Results of up to three tests may be averaged to determine compliance, using two samples from the same lot of stock fluids. Equivalent aliquots of one homogenized sample must be split by laboratory (parts 1A and 1B) and tested separately if averaging is used. Permittees may show compliance based on test results from part 1A or from the rounded arithmetic average of the test results from part 1A and 1B. Permittees may also test the second sample for compliance. Where the second sample is analyzed, operators will determine compliance using the arithmetic average of the results from all three tests. Permittees shall report the appropriate number on the DMR. With the DMR, the permittee must submit documentation showing how the number was calculated and all applicable test reports.

2.2.2.1.12 Drilling fluid sediment toxicity ratio = [4-day LC_{50} of C_{16}-C_{18} internal olefin] ÷ [4-day LC_{50} of drilling fluid removed from drill cuttings at the solids control equipment] as determined by American Standard Test Methods (ASTM) E 1367-99 method: "Standard Guide for Conducting Static Sediment Toxicity Tests with Marine and Estuarine Amphipods" (1999), after preparing the sediment according to the method specified in Appendix E of this permit. Results of up to three tests may be averaged to determine compliance, using two grab samples collected no more than 15 minutes apart. Equivalent aliquots of the first, homogenized sample must be split by the laboratory (parts 1A and 1B) and tested separately if averaging is used. Permittees may show compliance based on test results from part 1A or from the rounded arithmetic average of the test results from parts 1A and 1B. Permittees may also test the second sample for compliance with this limit. Where the second sample is analyzed, operators will determine compliance using the arithmetic average of the results from all three tests. Permittees shall report the appropriate number on the DMR. With the DMR, the permittee must submit documentation showing how the number was calculated and all applicable test reports.

2.2.2.1.13 As determined before drilling fluids are shipped offshore, no discharge is determined by the GC/MS compliance assurance method (Appendix 5 of 40 CFR 435, Subpart A), and, prior to discharge it is determined by the Reverse Phase Extraction (RPE) method (Appendix 6 of 40 CFR 435, Subpart A) applied to drilling fluid removed from drill cuttings.

The GC/MS method reports results for the GC/MS test as percent crude contamination when calibrated for a specific crude oil. In order to define an applicable pass/fail limit to cover a variety of crude oils, the same crude oil used in calibration of the RPE test shall be used to calibrate the GC/MS test results to a standardized ratio of the target aromatic ION Scan 105. Based on the performance of a range of crude oils against standardized ratio, a value will be selected as a pass/fail standard which will represent detection of crude oil.

If the operator wishes to confirm the results of the RPE method, the operator may use the GC/MS compliance assurance method. Results from the GC/MS compliance assurance method shall supersede the results of the RPE method (Appendix 6 of 40 CFR 435, Subpart A).

2.2.2.1.14 The approved test method for permit compliance is identified as: the American Petroleum Institute (API) Retort Test Method described in Appendix 7 of

40 CFR 435, Subpart A. The required sampling, handling, and documentation procedures are listed in Addendum A of 40 CFR 435, Subpart A, Appendix 7.

2.2.2.1.15 Monitoring shall be performed at least once per day when generating new cuttings. Operators conducting fast drilling (i.e., greater than 500 linear feet advancement of the drill bit per day using non-aqueous fluids) shall collect and analyze one set of drill cuttings samples per 500 linear feet drilled, with a maximum of three sets per day. Operators shall collect a single discrete drill cuttings sample for each point of discharge to the ocean. The weighted average of the results of all discharge points for each sampling interval will be used to determine compliance.

Note: Other Requirements for Class B Fluids Not Referenced in Table 3 and Table 4 are described below.

2.2.2.1.16 Mineral Oil Pills for Class B Fluids

The discharge of residual amounts of mineral oil pills (mineral oil plus additives) is authorized by this general permit provided that the mineral oil pill and at least a 50 barrels (bbl) buffer of drilling fluid on either side of the pill are removed from the circulating drilling fluid system and not discharged to waters of the US. If more than one pill is applied to a single well, the previous pill and buffer must be removed prior to application of a subsequent pill.

Residual mineral oil concentration in the discharged fluid must not exceed two percent volume/volume as determined by Appendix 7 to Subpart A of 40 CFR 435 (Derived from American Petroleum Institute (API) Recommended Practice 13B-2)(EPA Method 1674). The permittee must report the following information in the EOW Report (See Section 5.3) if drilling fluid containing residual mineral oil pill (after pill and buffer removal) is discharged:

a) Dates of pill application, recovery, and discharge;

b) Results of the Drilling Fluids Toxicity Test on samples of the fluid before each pill is added and after removal of each pill and buffer (taken when residual mineral oil pill concentration is expected to be greatest);

c) Name of spotting compound and mineral oil product used;

d) Volumes of spotting compound, mineral oil, water, and barite in the pill;

e) Total volume of fluid circulating prior to pill application, volume of pill formulated, and volume of pill circulated;

f) Volume of pill recovered, volume of mud buffer recovered, and volume of fluid circulating after pill and buffer recovery;

g) Percent recovery of the pill (include calculations);

h) Estimated concentrations of residual spotting compound and mineral oil in the sample of mud discharged, as determined from amounts added and total mud volume circulating prior to pill application;

i) Measured oil content of the mud samples, as determined by the API retort method; and

j) Metals analysis of a sample representing the highest percentage of mineral oil discharged per Section 2.2.4.2.

k) An itemization of other drilling fluid components and specialty additives contained in the discharged fluid concentrations reported in gallons per bbl (gal/bbl) or pounds per bbl (lbs/bbl).

2.2.2.1.17 The permittee is limited to drilling discharges from no more than five oil and gas exploration wells (Class B Fluids) at a single exploration site unless written approval is provided by DEC on a case-by-case basis. The permittee must submit the following information to DEC in writing for consideration for approval of the discharge from additional wells:

a) Number of additional wells;

b) Technical analysis of additional impacts to the receiving waters;

c) Drilling fluid category and group for each well; and

d) Well information for each additional well, including well name, number latitude, longitude, beginning drill date, and hole diameter.

2.2.3 Effluent Limitations and Monitoring Requirements for Class C Drilling Fluids and Drill Cuttings used in geotechnical surveys or HDD.

In addition to any applicable requirements in Section 2.1 and Section 2.2.1 the permittee must comply with the effluent limitations and monitoring requirements for Class C Drilling Fluids and Drill Cuttings as summarized in Table 5 and detailed in noted subsections to this Section.

Table 5: Effluent Limitations and Monitoring Requirements for Class C1-C3 Drilling Fluids used in HDD/Geotechnical Drilling Activities (Discharge 001)

Pollutant Parameter	Effluent Limitations	Monitoring Requirements	
		Frequency	Sample Type
Volume Million Gallons (MG) 2.2.3.1	Report	Monthly	Estimate
Oil and Grease (Sheen) 2.2.3.1	No discharge	Twice/Day	Visual
Stock Barite Mercury 2.2.3.3	1 mg/kg	Once per well	Grab
Stock Barite Cadmium 2.2.3.3	3 mg/kg	Once per well	Grab
Barite Metals 2.2.4.2	Report EOP	Once per well	Grab

2.2.3.1 Fluid Volume and Inadvertent Releases. The permittee must maintain a daily log while conducting drilling using Class C1, C2, or C3 drilling fluids (e.g., for HDD and geotechnical projects) to record daily visual observations (i.e., observation for visual sheen) and estimated discharge volumes. The daily log must be maintained onsite and made available to DEC upon request. For HDD projects, visual observations must be made at low tide conditions when the borehole advances beyond the shoreline to observe for inadvertent releases of drilling fluids. The permittee must notify DEC as soon as possible upon observation of an inadvertent release and implement procedures included in the DFP to stop the release (See Section 5.5.3.3).

Report on DMRs estimates of the maximum daily volumes and the average daily discharge volumes by dividing the monthly total volume discharged by the number of days discharges occurred. Report the total monthly volumes and estimates of lost fluids in the End of Project (EOP) Report, (See Section 5.3).

2.2.3.2 Observation of Receiving Water for Visual Sheen. The permittee must monitor for sheen by observing the surface of the receiving water in the vicinity of the discharge during daylight hours at low and high slack tides. Observations must be made daily while drilling and after discharge and recorded in a daily operating log. The daily log must be maintained on site and made available to DEC upon request. Visual sheen tests must also be recorded and submitted in the EOP Report (See Section 5.3).

2.2.3.3 Mercury and Cadmium. For Class C3 Fluids, the permittee must analyze a representative sample of stock barite once prior to initiating the drilling program and submit the results for total mercury and total cadmium on the DMR for the month in which drilling commenced. Analyses must be conducted using EPA Methods 245.5 or 7471b for mercury and 200.7 for cadmium and results expressed as mg/kg (dry weight) of barite. If more than one geotechnical or HDD boring is drilled using same stock barite, new analyses are not required for subsequent wells if no new supplies of barite have been received since the previous analysis. In this case, a comment must be included in the DMR stating that no new barite was received since the last reported analysis. A permittee may also provide certification, as documented by the supplier(s), that the barite meets the above limits. The concentration of mercury and cadmium in stock barite must be reported on the DMR as documented by the supplier.

2.2.4 Monitoring Requirements.

2.2.4.1 Chemical Inventory: For drilling fluid systems discharged, the permittee must maintain an inclusive chemical inventory of all constituents added downhole, including all drilling fluid additives used to meet specific drilling requirements. This information is reported as part of the EOW or EOP report described in Section 5.3.

2.2.4.2 Metals Analysis: For all drilling fluid systems using barite (Class B2 and Class C3 with barite), the permittee must analyze each discharged fluid system for the following metals: barium, cadmium, chromium, copper, mercury, zinc, and lead. Analyses for total recoverable concentrations must be conducted and reported for each metal utilizing the methods specified in 40 CFR 136. The results must be reported in “mg/kg of whole mud (dry weight)” and the moisture content (percent by weight) of the original drilling fluid sample. Samples must be collected when the residual mineral oil concentration is at its maximum value (See Section 2.2.2.1.16). If no mineral oil is used, the analysis must be done on a drilling fluid sample from the mud system used at the greatest well depth for Class B2 Fluids. For Class C3 Fluids, the sample must be collected just prior to daylighting for HDD projects and for geotechnical projects a single sample that represents the deepest borehole in the program must be collected. All samples must be collected prior to any pre-dilution. The metal analysis must be submitted in the EOW or EOP Report (See Section 5.3).

2.3 Requirements for Deck Drainage (Discharge 002)

2.3.1 Effluent Limitations and Monitoring Requirements.

In addition to the restrictions set out in Section 2.1, the permittee must comply with the following effluent limitations and monitoring requirements. The Permittee must limit and monitor deck drainage discharges per Table 6 .

Table 6: Effluent Limits and Monitoring Requirements for Deck Drainage (Discharge 002)

Parameter (Units)	Effluent Limitations	Monitoring Requirements	
		Frequency	Type
Total Flow Volume (mgd) [2.3.2]	Report	Monthly	Estimated
Oil and Grease (Sheen) [2.3.3]	No Discharge	Daily	Visual

2.3.2 Total Flow Volume

The Permit requires flow to be estimated or measured daily, maintained in a log at the facility, and made available to DEC upon request. The total monthly volume must be reported on the DMR.

2.3.3 Oil and Grease (Sheen)

The permittee must ensure that deck drainage contaminated with oil and grease is processed through an oil-water separator, or other oil removal process, prior to discharge. Daily while discharging, the permittee must observe the receiving water surface during a time when observation of the water surface is possible and record observations in a daily log maintained onsite. If conditions prevent observations, the permittee may use the Static Sheen Test (EPA Method 1617). Static Sheen Test equipment must be maintained onsite.

2.3.4 Drain Separation BMPs

Per Section 5.2.9.1, the permittee must develop BMPs to ensure deck drainage that is contaminated with oil and grease is processed through an oil-water separator, or other similar treatment process, prior to discharge.

2.4 Requirements for Domestic Wastewater (Discharge 003)

The permitting of domestic wastewater in this Permit requires an understanding of certain terminology associated with implementation of Effluent Limitation Guidelines for Oil and Gas Production. The following definitions, also found in Appendix C, provide the information necessary to apply the limits in Table 7:

- A Type I Marine Sanitation Device (MSD) refers to an onboard sewage treatment system that uses a physical and chemical process consisting of maceration and chlorination for destruction of five-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) measured in milligrams per liter (mg/L).
- A Type II MSD or MSD with a biological treatment unit (MSD/BTU) are used to destroy BOD_5 and TSS.
- BTUs without the MSD descriptor refer to a biological system that is not part of an MSD.

In addition to the above treatment system designations, the following two designations provide information about how the facility is occupied:

- The M10 designation refers to an offshore facility that is continuously manned by 10 or more persons.
- The M9IM designation refers to an offshore facility that is continuous manned by nine or fewer persons or intermittently manned by any number of persons.

2.4.1 Effluent Limitations and Monitoring Requirements.

In addition to the restrictions set out in Section 2.1, the permittee must comply with the following effluent limitations and monitoring requirements in Table 7.

Table 7: Effluent Limitations and Monitoring Requirements for Domestic Wastewater (Discharge 003)

Discharge Category	Effluent Parameter (Units)	Effluent Limitations		Monitoring Requirements	
		MDL	AML	Frequency	Sample Type
All Domestic Wastewater, Discharges [2.4.3]	Flow Volume (mgd) [2.4.2]	Report	Report	1/Month	Estimate
	TRC (mg/L)	1.0 mg/L Minimum [2.4.4]	-	1/Month	Grab
	TRC (mg/L)	1.0 mg/L [2.4.5]	-	1/Month	Grab
	Floating Solids [2.4.6]	No Discharge		1/Day	Observation
M10 MSD and MSD/BTUs	BOD_5 (mg/L)	60 mg/l	30 mg/l	1/Month	Grab
	TSS (mg/L)	67 mg/l	51 mg/l	1/Month	Grab
M9IM MSD and MSD/BTUs	BOD_5 (mg/L)	60 mg/l	30 mg/l	1/Month	Grab
	TSS (mg/L)	67 mg/l	51 mg/l	1/Month	Grab
M10 BTUs	BOD_5 (mg/L)	60 mg/l	30 mg/l	1/Month	Grab
	TSS [2.4.7] (mg/L)	60 mg/l	30 mg/l	1/Month	Grab
M9IM BTUs	BOD_5 (mg/L)	90 mg/l	48 mg/l	1/Month	Grab
	TSS [2.4.7] (mg/L)	108 mg/l	56 mg/l	1/Month	Grab

Note: Table notes refer to permit sections below this Table.

2.4.2 Total Flow Volume.

This Permit requires effluent flow volume to be to measured or estimated for each month a discharge occurs with the average monthly and maximum daily flow reported on the DMR.

2.4.3 Comingled Graywater and Treated Blackwater.

In cases where treated domestic wastewater and graywater are commingled prior to discharge, the combined discharge is considered domestic wastewater per 18 AAC 72 and the limitations in Table 7 apply to the commingled discharge. See Section 5.6 for additional reporting requirements for domestic wastewater and graywater.

2.4.4 Total Residual Chlorine Minimum (Post-Chlorination before Dechlorination).

The 1.0 mg/L minimum TRC concentration is a surrogate parameter for fecal coliform and enterococci. Maintain as close to the minimum limit concentration of 1.0 mg/L as practicable and measure immediately after chlorination. If the treatment system does not use chlorine (i.e., BTUs with ultraviolet disinfection), then the TRC limit is not applicable.

2.4.5 Total Residual Chlorine Maximum (Post-Dechlorination).

The 1.0 mg/L maximum daily limit is measured immediately prior to discharge after a required dechlorination step. If the treatment system does not use chlorine (i.e., BTUs with ultraviolet disinfection), then the TRC limit is not applicable.

2.4.6 Floating Solids, Foam, and Garbage.

This Permit prohibits the discharge of floating solids, foam, and garbage as determined by a visual observation of the receiving water surface at a minimum frequency of once per day during daylight at the time of maximum estimated discharge (e.g., following morning or midday meals). Monitoring of the observations must be recorded in a daily operating log and made available to DEC upon request.

2.4.7 TSS Limit for BTUs.

Compliance with the TSS limit for BTUs can be net value for those facilities that use filtered seawater for flushing and treat with BTUs. The TSS of the effluent may be reported as the net value by subtracting the TSS value of the intake water from the TSS value of the effluent. Report the TSS value of the intake water in the comment section of the DMR. Samples collected to determine the TSS value of the intake water must be taken on the same day, and during the same time period that the effluent sample is taken. Intake water samples must be taken at the point where the water enters the facility prior to mixing with other flows. Influent samples must be taken at the same frequency that effluent samples are taken.

2.5 Requirements for Graywater (Discharge 004)

Graywater is considered domestic wastewater and any new facility must meet the requirements in the most current version of 18 AAC 72 to be discharged separately from domestic wastewater under Discharge 004 of this Permit. Existing facilities with an existing authorization to discharge graywater may continue to discharge but must conduct a characterization study per Section 5.6 during the term of this Permit.

2.5.1 Effluent Limits and Monitoring Requirements

In addition to meeting the requirements in Section 2.1, the permittee must limit and monitor graywater discharges per Table 8.

Table 8: Effluent Limits and Monitoring Requirements for Graywater (004)

Parameter (Unit)	Effluent Limitations	Monitoring Requirements	
		Frequency	Sample Type
Flow (mgd) [2.5.2]	Report	Monthly	Estimate or Measured
Floating solids, foam, garbage [2.5.3]	No Discharge	Daily	Observation
Oil and grease (sheen) [2.5.4]	No Discharge	Daily	Visual
Total Residual Chlorine (mg/L) [2.5.5]	Maximum 1.0	Monthly	Grab

2.5.2 Total Flow Volume.

This Permit requires effluent flow volume to be measured or estimated for each month a discharge occurs with the average daily flow reported on the DMR.

2.5.3 Floating Solids, Foam, and Garbage.

This Permit prohibits the discharge of floating solids, foam, and garbage as determined by a visual observation of the receiving water surface at a minimum frequency of once per day during daylight at the time of maximum estimated discharge (e.g., following morning or midday meals). Monitoring of the observations must be recorded in a daily operating log and made available to DEC upon request.

2.5.4 Oil and Grease (Visible Sheen).

This Permit prohibits the discharge of oil and grease as determined by a visible sheen on the receiving water surface per 18 AAC 70.020(17). Receiving water observations must be conducted once per day during daylight at the time of maximum estimated discharge (e.g., following morning or midday meals). Observations must be recorded in a daily operating log and made available to DEC upon request.

2.5.5 Total Residual Chlorine Maximum.

For facilities that use an MSD to treat graywater to greater than primary treatment, this Permit establishes a maximum concentration limit of 1.0 mg/L TRC after dechlorination and prior to discharge. If the facility uses a treatment system other than an MSD to meet the primary treatment requirement, the 1.0 mg/l maximum TRC limit does not apply.

2.5.6 Discharge-Specific BMPs.

To support the narrative limits for floating solids, foam, garbage, and oil and grease the permittee must develop specific housekeeping BMPs to minimize introduction of deleterious substances at the source. For graywater discharges treated with MSDs, the permittee must also develop specific BMPs to ensure proper operation and maintenance of the dechlorination system (See Section 5.2.9.2).

2.6 Requirements for Miscellaneous Discharges (Discharges 005-014)

2.6.1 Effluent Limitations and Monitoring Requirements.

In addition to the restrictions set out in Section 2.1, the discharge of desalination unit wastes (Discharge 005); blowout preventer fluid (Discharge 006); boiler blowdown (Discharge 007): fire control system test water (Discharge 008); non-contact cooling water (Discharge 009); uncontaminated ballast water (Discharge 010); bilge water (Discharge 011); excess cement slurry (Discharge 012); mud, cuttings, and cement at the seafloor (Discharge 013); and waterflooding (Discharge 014) must comply with the following effluent limitations and monitoring requirements in Table 9:

Table 9: Effluent Limitations and Monitoring Requirements for Miscellaneous (Discharges 005-014)

Parameter (Units)	Effluent Limitations	Monitoring Requirements	
		Frequency	Sample Type
Maximum Daily Flow Volume (mgd) [2.6.2]	Report	Monthly	Estimate
Oil and Grease (Sheen) [2.6.3]	No Discharge	Once/Week	Visual
Chemical Additives [2.6.4]	Report	Once/Year	Calculate
Chronic Whole Effluent Toxicity (WET) (Chronic Toxicity Unit (TU_c)) [2.6.5, 2.6.6 and 2.10]	Report	Varies	Grab or [2.6.6.3] Composite

2.6.2 Maximum Daily Flow

This Permit requires the permittee to record estimated or measured daily flow volumes consistently (e.g., approximately the same time daily) in a daily log maintained onsite and report the maximum daily volume during a given month in mgd on the DMR. If chemicals have been added, the permittee must conduct a chemical inventory per Section 2.6.4.

2.6.3 Oil and Grease (Visible Sheen)

The prohibition of free oil applies to the miscellaneous discharges blowout preventer fluid (Discharge 006), uncontaminated ballast water (Discharge 010), bilge water (Discharge 011), excess cement slurry (Discharge 012), and mud, cuttings, cement at the seafloor (Discharge 013). Compliance is based on observation of a visible sheen on the water surface during slack tide while discharging during daylight or by Static Sheen Test at the permittees option. Static Sheen Test equipment must be maintained at the facility. The permittee must ensure that contaminated ballast water (Discharge 010) or bilge water (Discharge 011) be processed through an oil-water separator, or similar process to remove oil and grease, prior to discharge. For discharges of blowout preventer test fluid (Discharge 006), uncontaminated ballast water (Discharge 010), excess cement slurry (Discharge 012), and drilling fluids, drill cuttings and cement at the seafloor (Discharge 013) the permittee must develop specific BMPs to support the no discharge of free oil limitation (See Section 5.2.9.3).

2.6.4 Chemical Use Optimization and Inventory

The permittee is allowed to use chemical additives in miscellaneous discharges but in a manner that does not exceed the most stringent of the following four constraints:

a) The maximum concentrations and any other conditions specified in the EPA product registration labeling if the chemical is an EPA registered chemical;

b) The maximum manufacturer's recommended concentration;

c) 500 mg/L; or

d) The estimated chronic toxicity based on the mixed concentration of each individual chemical in the waste stream should not be greater than Pollution Reduction Action Level for Discharges 005 – Desalination Waste, 009 - Noncontact Cooling Water, and 014 - Waterflooding. The chronic toxicity estimate can be based on the most limiting 25 % effect concentration (EC_{25}) listed from the aquatic toxicological information obtained in safety data sheet (SDS) for the chemical, if available. Note that when only acute toxicity data is provided on an SDS, the permittee must use a reported acute to chronic ratio (ACR) for that chemical and species, or a default ACR of 10, to estimate the TU_c of the mixture. If no toxicological information is available, the chemical is not included in the estimate.

Per this Section, the permittee must also maintain an inclusive chemical inventory of all constituents added to these discharges, including the time, dose, and frequency of each chemical additive used and actually discharged. The permittee must submit these inventory records to DEC annually by January 31 of each year.

2.6.5 Specific Pollution Reduction BMPs and BMP Revision Action Levels

In addition to the standard BMP components listed in Permit Section 5.2.5, DEC requires that the BMP Plan include a specific BMP per Section 5.2.9.4 (e.g., a chemical-dosing matrix) to optimize the use of chemicals and to minimize the potential for chronic toxicity in discharges of desalination waste (Discharge 005), noncontact cooling water (Discharge 009) and waterflooding (Discharge 014) that are required to monitor for chronic WET per Sections 2.6.6 and 2.10. Hence, this requirement applies to any individual, or commingled, discharges of desalination waste, noncontact cooling water and waterflooding that have chemical additives and discharge greater than 10,000 gallons per day. In addition, the permittee must make revisions to existing BMPs should any single chronic WET result exceed the Pollution Reduction (PR) BMP Revision Action Levels (or PR Action Levels) specified in Table 10, Table 11 and Table 12.

Table 10: PR Action Levels for Unspecified Surface (Discharges 005, 009 and 014)

Permitted Discharge Rate (mgd)	Action Level (TU_c)
$0.01 \leq 0.02$	531
$0.02 \leq 0.05$	448
$0.05 \leq 0.1$	358
$0.1 \leq 0.5$	303
$0.5 \leq 1.0$	204
$1.0 \leq 2.5$	173
$2.5 \leq 5.0$	138
> 5.0	116

Table 11: PR Action Levels for Unspecified Submerged (Discharges 005, 009 and 014)

Permitted Discharge Rate (mgd)	Action Level (TU_c)
$0.01 \leq 0.02$	329
$0.02 \leq 0.05$	263
$0.05 \leq 0.1$	195
$0.1 \leq 0.5$	156
$0.5 \leq 1.0$	92
$1.0 \leq 2.5$	74
$2.5 \leq 5.0$	55
> 5.0	44

Existing facilities covered by this Permit will have PR BMP Revision Action Levels as shown in Table 12. For any new or existing platforms or MODUs that do not have a PR BMP Revision Action Level specified in Table 12, the appropriate PR BMP Revision Action Level in Table 10 and Table 11 will be based on the maximum flow rate among the miscellaneous discharges included in the NOI and issued in the authorization letter prior to discharge.

Table 12: PR Action Levels for Specified Platforms or MODUs (Discharges 005, 009 and 014)

Platform or MODU	Discharge Type	Action Level (TU_c)
Granite Point	Surface	152
King Salmon	Surface	128
Monopod	Surface	129
Grayling	Surface	116
Dolly Varden	Surface	115
Osprey	Submerged	127
Randolph Yost	Surface	173
Spartan 151	Surface	189
Steelhead	Submerged	73
MGS-A	Surface	283
MGS-C	Submerged	136

If a PR BMP Revision Action Level is exceeded, the permittee must revise the BMP to achieve less toxicity. These BMPs could be operational or physical modifications to the chemical dosing system. Exceeding a PR BMP Revision Action Level also initiates a requirement for the permittee to evaluate the system and initiate an update to line drawings as part of the BMP Plan revision. Regardless of exceeding a PR BMP Revision Action Level, the permittees will be required to submit updated line drawings of the discharge piping systems with the next application for reissuance for each authorized discharge of desalination waste, noncontact cooling water, or waterflooding where chemicals are used and the discharge is greater than 10,000 gpd. The updated line drawings will also be used to evaluate the written

requests for reducing WET monitoring frequency. If the discharge of chemicals is eliminated, chronic WET testing is not required and line drawings will not be required in the application.

The permittee must notify DEC in writing within one week of obtaining chronic WET results that exceed a chronic WET PR BMP Revision Action Level and submit a letter within 60 days of obtaining the chronic WET results specifying what BMP revisions will be implemented prior to the next scheduled chronic WET monitoring event. If BMPs require modification to the physical system, updated line diagrams must be developed and submitted to DEC as an attachment to the letter. The revised BMP must be implemented to satisfy compliance with this specific BMP requirement for pollution reduction. Revisions must continue until the PR BMP Plan Action Level is achieved. As explained in the fact sheet, an exceedance of a PR BMP Revision Action Level does not constitute a violation of water quality standards because the intermittent use of chemicals will not exceed the chronic WET criterion for an exposure period of four days required for there to be chronic affects in the receiving environment (See Fact Sheet Section 4.5.10 for further explanation). Accordingly, compliance and enforcement is limited to whether the permittee has satisfied incremental PR BMP Revisions in an attempt to lower toxicity below the action level.

If the permittee demonstrates that sampling procedures were adequate to collect a representative sample and toxicity results do not exceed PR BMP Revision Action Levels in two consecutive WET monitoring events, the permittee can submit a written request for monitoring frequency reduction for Department approval. Written requests must include updated line diagrams, the Quality Assurance Project Plan (QAPP) specific to sample collection, and cover letter describing the pollution reduction methods used to reduce chronic toxicity. Only one step reduction may be granted by DEC during the term of the Permit.

2.6.6 Specific Chronic WET Testing Requirements for Miscellaneous Discharges

Chronic WET monitoring applies to Desalination Units (005), Non-contact Cooling Water (009), and Waterflooding (014) if chemical additives are used and greater than 0.010 mgd (10,000 gpd) is discharged per day, including discharges that may be commingled and discharged accumulatively (See Section 2.1.10).

2.6.6.1 Test Species: For miscellaneous discharges that have chemical additives and discharge 0.010 mgd (10,000 gpd) or more per day, after the initial screening required per Permit Section 2.10.1.1 the permittee is required to conduct chronic WET monitoring on one invertebrate species on frequency established in Section 2.10.2.

2.6.6.2 Monitoring Frequency: When WET monitoring is required based on the condition of chemical use and daily flow exceeding 10,000 gpd, the following frequencies must be adhered to:

2.6.6.2.1 For MODUs, the frequency is annual per authorizations when discharges occur. Hence, a MODU that discharges under two authorizations in a given year must conduct two chronic WET tests.

2.6.6.2.2 For fixed platforms, the monitoring frequency is semi-annual with a minimum of 120 days between any two sample events. After two consecutive chronic WET results are below the PR BMP Revision Action Levels (See Section 2.6.5), the permittee may submit a written request to reduce the frequency to annual. Approval is also contingent upon collection of representative samples of the effluent per Section 2.6.6.3)

2.6.6.3 Sample Collection: The permittee must evaluate chemical dosing practices versus sample collection methods and timing in order to ensure the collected sample is representative of the toxicity of the dosing. For example, for continuous discharges with continuous chemical injection rates a grab or composite sample could result in collection of a representative sample. However, if the discharge is intermittent and/or chemical dosing is discontinuous, the permittee must evaluate the timing and duration of peak concentrations in the effluent to properly time sample events to obtain a representative sample. Each facility that monitors chronic WET under this section must have a QAPP that specifies this procedure (See Section 5.1.2.4). Requests for chronic WET monitoring frequency reductions must include submittal requirements in Section 2.6.5 and this procedure and a narrative addressing representativeness of the sampling events.

2.7 Requirements for Produced Water (Discharge 015)

In addition to the restrictions set out in Section 2.1, the permittee must comply with the following general effluent limitations and facility-specific effluent limits and monitoring requirements noted in Table 13 through Table 20.

2.7.1 Rerouting Platform Produced Water to Shore-based Coastal Treatment Facilities.

In situations where fixed platforms are not able to treat produced water and discharge at the facility, the permittee may route their produced water discharge to shore-based coastal facilities for treatment and discharge. In addition to submitting a DMR with the "no discharge" box marked, the permittee must indicate in the comment section that produced water was rerouted to a specific shore-based coastal treatment facility.

2.7.2 Trading Bay Production Facility Groundwater.

Trading Bay Production Facility (TBPF) is authorized to discharge treated ground water extracted pursuant to State Compliance Order #91-2301-053-02 as part of the produced water waste stream. The produced water limitations and monitoring requirements apply to the combined waste stream of treated ground water and produced water.

2.7.3 Commingling Waste Streams.

The permittee is allowed to commingle certain waste streams for the purpose of treating and disposing in compliance with the limitations in this Section. These waste streams include, deck drainage (Discharge 002), completion fluids (Discharge 016), workover fluids (Discharge 017), well treatment fluids (Discharge 018), test fluids (Discharge 019), hydrostatic test water (Discharge 020), and incidental spills (See Section 2.7.4) or excavation dewatering in, or near to, sites contaminated with petroleum hydrocarbons (See Section 2.7.5). Where commingling of the waste streams is prior to treatment, the produced water limitations and monitoring requirements apply to the commingled waste stream with produced water after treatment in the produced water treatment system.

2.7.4 Spill Clean-Up

Water that is collected as a result of spill clean-up can be treated as produced water and discharged with the produced water waste stream. The permittee must include their intent, referencing this Permit section, in the spill report required by the DEC Division of Spill Prevention and Response.

2.7.5 Contaminated Excavation Dewatering

Water contaminated with hydrocarbons that is collected as a result of dewatering excavations to install or repair ancillary underground infrastructure can be treated as produced water and discharged with the produced water waste stream. The permittee must contact the DEC Contaminated Sites Program to verify site contamination is consistent with the hydrocarbons in the produced water stream treated at the shore-based coastal facility. The permittee must also submit a written request to the Oil and Gas Section in the DEC Wastewater Discharge Authorization Program to obtain written approval on a case-by-case basis.

2.7.6 Commingling for Line Freeze Protection

If excess waterflooding water is added to the produced water discharge in order to minimize the possibility of line freezing, then the discharge must be considered produced water for monitoring purposes. The estimated waterflooding flow rate must be reported in the comment section of the DMR.

2.7.7 Facility-Specific Effluent Limitations and Monitoring Requirements.

Facility-specific effluent limits and monitoring requirements for Flow, pH, Oil and Grease, TAH, TAqH, Total Recoverable Copper, Total Recoverable Manganese, Total Recoverable Silver, Total Recoverable Zinc, Total Mercury, and Chronic WET are provided in Table 13 through Table 20. For table notes, refer to sections following Table 20.

Table 13: TBPF Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter (Units)	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	8.4	l/Week	Estimate or Measure
pH (Standard Units (SU))	6.0 < pH < 9.0		1/Week	Grab
Oil and Grease (mg/L) [2.7.8]	42 mg/l	29 mg/l	1/Week	Grab
TAH (mg/L)	17	12	l/Month	Grab
Copper (µg/L)	22	12	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Silver (µg/L)	Report		l/Quarter	Grab or Composite
Zinc (mg/L)	Report		l/Quarter	Grab or Composite
Mercury (µg/L)	Report		l/Quarter	Grab or Composite
Manganese (mg/L)	Report		l/Quarter	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		l/Quarter	Grab or Composite

Table 14: MGS Onshore Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.84	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Week	Grab
Oil and Grease (mg/L) [2.7.8]	42	29	1/Week	Grab
TAH (mg/L)	28	20	l/Month	Grab
Silver (µg/L)	48	19	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Copper (µg/L)	Report		l/Quarter	Grab or Composite
Zinc (mg/L)	Report		l/Quarter	Grab or Composite
Mercury (µg/L)	Report		l/Quarter	Grab or Composite
Manganese (mg/L)	Report		l/Quarter	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		1/Quarter	Grab or Composite

Table 15: Granite Point Tank Farm Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.1932	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Week	Grab
Oil and Grease (mg/L) [2.7.8]	42	29	1/Week	Grab
TAH (mg/L)	20	14	l/Month	Grab
Copper (µg/L)	54	21	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Silver (µg/L)	Report		2/Year	Grab or Composite
Zinc (mg/L)	Report		2/Year	Grab or Composite
Mercury (µg/L)	Report		2/Year	Grab or Composite
Manganese (mg/L)	Report		2/Year	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		2/Year	Grab or Composite

Table 16: Baker Platform Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.045	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Month	Grab
Oil and Grease (Sheen) [2.7.8]	Report		1/Week	Visual
Oil and Grease (mg/L)	42	29	1/Week	Grab
TAH (mg/L)	47	34	l/Month	Grab
Zinc (mg/L)	13	6	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Copper (µg/L)	Report		2/Year	Grab or Composite
Silver (µg/L)	Report		2/Year	Grab or Composite
Mercury (µg/L)	Report		2/Year	Grab or Composite
Manganese (mg/L)	Report		2/Year	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		2/Year	Grab or Composite

Table 17: Bruce Platform Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.0252	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Month	Grab
Oil and Grease (Sheen) [2.7.8]	Report		1/Week	Visual
Oil and Grease (mg/L)	42	29	1/Week	Grab
TAH (mg/L)	46	31	l/Month	Grab
Zinc (mg/L)	25	10	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Copper (µg/L)	Report		2/Year	Grab or Composite
Silver (µg/L)	Report		2/Year	Grab or Composite
Mercury (µg/L)	Report		2/Year	Grab or Composite
Manganese (mg/L)	Report		2/Year	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		2/Year	Grab or Composite

Table 18: Dillon Platform Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.1935	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Month	Grab
Oil and Grease (Sheen) [2.7.8]	Report		1/Week	Visual
Oil and Grease (mg/L)	42	29	1/Week	Grab
TAH (mg/L)	42	31	l/Month	Grab
Silver (µg/L)	48	19	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Copper (µg/L)	Report		2/Year	Grab or Composite
Zinc (mg/L)	Report		2/Year	Grab or Composite
Mercury (µg/L)	Report		2/Year	Grab or Composite
Manganese (mg/L)	Report		2/Year	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		2/Year	Grab or Composite

Table 19: Tyonek A Platform Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.038	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Month	Grab
Oil and Grease (Sheen) [2.7.8]	Report		1/Week	Visual
Oil and Grease (mg/L)	42	29	1/Week	Grab
TAH (mg/L)	0.14	0.09	l/Month	Grab
Copper (µg/L)	1,033	328	l/Quarter	Grab or Composite
TAqH (mg/L)	Report		l/Quarter	Grab
Silver (µg/L)	Report		2/Year	Grab or Composite
Zinc (mg/L)	Report		2/Year	Grab or Composite
Mercury (µg/L)	Report		2/Year	Grab or Composite
Manganese (mg/L)	Report		2/Year	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		2/Year	Grab or Composite

Table 20: Osprey Platform Effluent Limitations and Monitoring Requirements for Produced Water Discharges

Parameter	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Flow Rate (mgd)	Report	0.07707	l/Week	Estimate or Measure
pH (SU)	6.0 < pH < 9.0		1/Week	Grab
Oil and Grease (Sheen) [2.7.8]	Report		1/Week	Visual
Oil and Grease (mg/L)	42	29	1/Week	Grab
TAH (mg/L)	9.0	7.7	l/Week	Grab
Copper (µg/L)	195	97	l/Week	Grab or Composite
TAqH (mg/L)	Report		1/Week	Grab
Silver (µg/L)	Report		1/Quarter	Grab or Composite
Zinc (µg/L)	Report		1/Quarter	Grab or Composite
Mercury (µg/L)	Report		1/Quarter	Grab or Composite
Manganese (mg/L)	Report		1/Quarter	Grab or Composite
WET (TU_c) [2.7.9, 2.7.10 and 2.10]	Report		1/Quarter	Grab or Composite

2.7.8 Visual Sheen and Supplemental Oil and Grease Monitoring

While discharging from platforms, the permittee shall monitor for oil and grease using visual observations of the receiving water surface in the vicinity of the discharge during periods of the day when observation of a sheen on the water surface is possible. This requirement does not apply to shore-based coastal facilities (i.e., TBPF, MGS Onshore, and GPTF) or unmanned platforms. Upon observation of a sheen, a supplemental oil and grease sample must be collected and analyzed.

2.7.9 Metal and Chronic WET Monitoring Coordination and Frequency Reductions

Monitoring for TAH, TAqH, and metals must be conducted simultaneously at the time of chronic WET sample collection. The minimum required frequency for chronic WET can be reduced after four consecutive sample events where the chronic WET results are below the notification levels in Table 21.

Table 21: Produced Water Chronic Whole Effluent Toxicity Notification Levels

Facility	Chronic WET Notification Level (TU_c)
TBPF	512
MGS Onshore	334
GPTF	279
Baker Platform	155
Bruce Platform	224
Dillon Platform	243
Tyonek A	141

When the chronic WET results are below notification levels in four consecutive monitoring events, the permittee may submit a written request to reduce the minimum sampling

frequency. Upon receiving DEC approval, the minimum frequency can be reduced from quarterly to twice per year and the minimum frequency of twice per year can be reduced to once per year. Only one reduction can be approved during the permit term. The Osprey Platform must monitor metals and chronic WET quarterly during the full first term of coverage under the Permit.

2.7.10 Specific Chronic WET Monitoring and Reporting Requirements for Produced Water

Per the frequency specified Tables 13 through 20, the permittee is required to conduct chronic WET monitoring for both a vertebrate and invertebrate species discussed in Sections 2.10.1.1 and 2.10.1.2, respectively. The TAH, TAqH, and metals required to be monitored at various frequencies must be analyzed concurrently when chronic WET samples are collected. Should any chronic WET result exceed the Notification Levels in Table 21, the permittee must research the anomalously high toxicity event and provide written notification to DEC within one week of obtaining results and provide information on any unusual circumstances and assessment as to what may have caused exceeding the notification level. The permittee must repeat the chronic WET and metals monitoring within 30-days of notifying DEC and submit a follow up written notification of the subsequent results. Based on these results, DEC may require additional monitoring per Section 2.11.2.3.

2.8 Requirements for Well Treatment, Completion, Workover, and Test Fluids (Discharges 016-019)

The discharge of well completion fluids, workover fluids, treatment fluids, and test fluids must meet maximum daily limits (MDL) and average monthly limits (AML) for oil and grease, pH limits, and narrative limitations. Per Sections 2.1.10 and 2.7.3, well completion, workover, treatment and test fluids can be treated and discharged with produced water. Otherwise, the permittee must limit and monitor discharges of well completion fluids (Discharge 016), workover fluids (Discharge 017), treatment fluids (Discharge 018), and test fluids (Discharge 019) per Table 22 in addition to complying with requirements in Section 2.1.

Table 22: Effluent Limits and Monitoring Requirements for Well Completion, Workover, Treatment, and Test Fluids (Discharges 016, 017, 018, and 019)

Parameter (Units)	Effluent Limitations		Monitoring Requirements	
	MDL	AML	Frequency	Sample Type
Discharge Frequency [0]	Report		Once/Well/Fluid	Occurrences
Maximum Daily Volume (mgd) [2.8.2]	Report		Once/Day	Estimate
Oil and Grease (mg/L) [2.8.3]	42	29	Once/Well/Fluid	Grab
Free Oil [2.8.4]	No discharge		Once/Well/Fluid	Grab
Oil-based Fluids [2.8.5]	No discharge		----	----
pH (SU) [2.8.6]	6.0 to 9.0		Once/Well/Fluid	Grab
(TAH) (µg/L) [2.8.7]	Report		Once/Well/Fluid	Grab
(TAqH) (µg/L) [2.8.7]	Report		Once/Well/Fluid	Grab
Chemical Inventory [2.8.8]	Report		Once/Well/Fluid	Grab

2.8.1 Discharge Frequency

Well completion, workover, treatment, and test fluids are not discharged continuously or regularly during the drilling process. As such, the discharge frequency, number of discharge events during the month, is required to be reported on monthly DMRs for each separate fluid type discharged.

2.8.2 Flow

This Permit requires the permittee to record estimated or measured daily flow volumes consistently (e.g., approximately the same time daily) in a daily log and report the maximum daily volume during a given month in mgd on the DMR for each fluid type discharged. Daily logs must be kept onsite and made available upon request by DEC. Total flow volumes for each fluid type must be reported in the EOW Report.

2.8.3 Oil and Grease Limits

Unless commingled with produced water, all completion, workover, treatment, and test fluids must be processed through an OWS, or other oil removal process, prior to discharge and samples must be collected after the final treatment step.

2.8.4 No Free Oil

This Permit includes a prohibition of the discharge of free oil for the well completion, workover, treatment, and test fluids discharge as demonstrated by passing the Static Sheen Test (EPA Method 1617).

2.8.5 Oil-Based Fluids.

This Permit includes a prohibition of the discharge of oil-based fluids for the well completion, workover, treatment, and test fluids discharges.

2.8.6 pH.

This Permit includes a limit on pH of not less than 6.0 SU and not greater than 9.0 SU for completion, workover, treatment, and test fluid discharges. Samples must be collected downstream of the last treatment step prior to discharge.

2.8.7 TAH and TAqH Monitoring

This Permit requires monitoring for TAH and TAqH and reporting for information purposes. One grab sample must be collected from each well after the last treatment step for each separate fluid type discharged.

2.8.8 Chemical Inventory

For each fluid type discharged, the permittee must maintain an inclusive chemical inventory including the type and volume of all constituents added, including all completion, workover, treatment, and test fluid additives used and submit with the EOW Report, if applicable, or separately if appropriate.

2.9 Requirements for Hydrostatic Test Water (Discharge 020)

Per Section 2.1.10 and 2.7.3, hydrostatic test water can be treated and discharged with produced water. Otherwise, the permittee must limit and monitor discharges of hydrostatic test water (Discharge 020) per Table 23 in addition to complying with requirements in Section 2.1.

Table 23: Effluent Limitations and Requirements for Hydrostatic Test Water (Discharge 020)

Parameter (Units)	Effluent Limits	Monitoring Requirements	
		Frequency	Sample Type
Flow Volumes [2.9.1] (MGD)	Report	Daily	Estimate or Measured
pH (S.U.)	$6.5 \leq pH \leq 8.5$	Daily	Grab
Oil and Grease (Sheen) [2.9.2]	No Discharge	Daily	Visual
Turbidity (NTU)	25	Daily	Grab
TAH (µg/L) [2.9.3 and 2.9.4]	10	Per Event/Discharge	Grab or Composite
TAqH (µg/L)) [2.9.3 and 2.9.4]	15	Per Event/Discharge	Grab or Composite

2.9.1 Flow Volumes.

Discharges or disposal of hydrostatic test water must be estimated or measured to determine daily flow volumes and be recorded in operating logs along with daily observations for sheen. Daily logs must be kept onsite and made available upon request by DEC. Report daily maximum for the month on the DMR and total monthly volumes in the comments section.

2.9.2 Oil and Grease Visual

Once per discharge event, the permittee must observe the receiving water surface during a time when observation of the water surface is possible and record observations in a daily log maintained onsite. If conditions prevent observations, the permittee may use the Static Sheen Test (EPA Method 1617). Static Sheen Test equipment must be maintained onsite.

2.9.3 TAH and TAqH for New/Uncontaminated Infrastructure.

TAH and TAqH monitoring is not required for all new/unused infrastructure (i.e. tanks, pipelines, or similar vessels) are not expected to have hydrocarbons (e.g., potable water systems per Section 2.9.5). In situations where new or unused infrastructure is being hydrostatically tested, TAqH and TAH shall be monitored if a visual sheen is detected in the discharge. If a sheen is detected, the permittee shall notify DEC within 24-hours, cease discharging, evaluate the source of the sheen, and collected a sample for TAH and TAqH. Based on information provided at the time, DEC may require specific BMPs for treatment devices to be implemented to prevent an oily sheen discharge (See Section 5.2.9.5).

2.9.4 TAH and TAqH for Existing Infrastructure Exposed to Hydrocarbons.

Existing infrastructure that is known to have been in contact with petroleum is anticipated to have dissolved hydrocarbons and possibly free oil. The permittee can route potentially contaminated hydrostatic test water through produced water systems for treatment and discharge per Section 2.7.3. Alternatively, the permittee must implement BMPs to remove free and dissolved phase hydrocarbons prior to discharge. Compliance sampling for the TAH and TAqH limits can be achieved by collecting a single representative grab sample for volumes less than or equal to 500,000 gallons. Permittees discharging greater than

500,000 gallons must collect a composite sample of eight grab samples collected at equal intervals during the discharge event as described in the QAPP.

2.9.5 Potable Water Discharges.

Authorization of Hydrostatic Test Water includes discharges associated with flushing potable water systems and incidental discharges (e.g., leaks) that require repairs. In these instances, the permittee reports an estimated flow volume of the discharge on the DMR and indicates the volume is "potable water" in the comment section of the DMR. If the flush is to remove sediment from tanks and pipelines, the permittee must also monitor for turbidity in addition to sheen and pH and report results on the DMR along with a comment "potable water flush." In situations where a sample cannot be collected due to access issues, the permittee may instead use NODI Code F – Insufficient Flow for Sampling.

2.10 Chronic WET Monitoring Requirements

The permittee must conduct chronic WET testing per this section while applying discharge-specific requirements for miscellaneous discharges in in Section 2.6.6 that superseded the test species, sampling frequencies, and sample collection requirements of this section. See also specific chronic WET monitoring and reporting requirements for produced water in Section 2.7.10.

2.10.1 Test Species and Methods

The permittee is required to conduct chronic WET testing on one vertebrate and one invertebrate species unless otherwise stated in discharge specific sections of this Permit. The permittee must conduct the WET testing to screen for the most sensitive invertebrate species in Section 2.10.1.2 once per permit term for each discharge (i.e., desalination waste, noncontact cooling water, waterflooding, and produced water). The elimination of the less sensitive species over more sensitive invertebrate species must be approved by DEC in writing for use in subsequent chronic WET tests. Upon identification of the most sensitive test species, the permittee may submit a written request to eliminate the less sensitive species in subsequent WET analysis for DEC approval. DEC can also approve written requests to substitute the less sensitive species during periods when the more sensitive species is unavailable. The permittee shall not make any changes to the selection of test species or dilution series without prior written DEC approval except as provided in Sections 2.10.1.1 and 2.10.1.2.

2.10.1.1 Vertebrate (survival and growth): *Atherinops affinis* (topsmelt). In the event that topsmelt is not available, *Menidia beryllina* (inland silverside) may be used as a substitute. The permittee shall document the use of substitute species in the DMR for the testing.

2.10.1.2 Invertebrate: For larval development tests, the permittee must use bivalve species *Crassostrea gigas* (Pacific Oyster) or *Mytilus spp*. (mussel) and *Americamysis bahia* (formally *Mysidopsis bahia*, mysid shrimp) for survival and growth. Due to seasonal variability, testing may be performed during reliable spawning periods (e.g., December through February for mussels and June through August for oysters).

2.10.2 Monitoring Frequency.

See discharge-specific sections for frequency requirements.

2.10.3 Procedures.

The permittee must conduct chronic WET testing using the following procedures.

2.10.3.1 Methods and Endpoints: For the shrimp and alternate fish species, inland silverside, the presence of chronic toxicity must be estimated as specified in *EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition* (EPA-821-R-02-014). For the bivalve species and topsmelt, chronic toxicity must be estimated as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136). The WET testing will determine the 25-percent (%) effect concentration (EC_{25}) endpoint estimate of the effluent concentration that would cause a 25 % reduction in normal embryo development for the bivalves or in survival for fish and/or mysid shrimp. The WET testing will also determine the inhibition concentration (IC_{25}) point estimate of the effluent concentration that would cause a 25 % reduction in the growth of the fish and/or mysid shrimp.

2.10.3.2 Reporting Results: Results must be reported on the DMR using TU_c, where $TU_c = 100/EC_{25}$ or $100/IC_{25}$. The reported EC_{25} or IC_{25} must be the lowest point estimate calculated for the applicable survival, growth or normal embryo development endpoints. The permittee must report the no observed effect concentrations (NOECs) in the full WET test report. DEC may compare this information with the IC_{25} during reissuance of this Permit.

2.10.3.3 Acute Toxicity Estimates: Although acute WET testing is not required, the permittee must provide an estimate of acute toxicity based on observations of mortality when appropriate (e.g., vertebrates). Acute toxicity estimates, if available, must be documented in the full report.

2.10.3.4 Dilution Series: A series of at least five dilutions and a control must be tested. The recommended initial dilution series to screen for toxicity is 6.25, 12.5, 25, 50, and 75% along with a control of dilution water (0% effluent). In subsequent tests, the dilution series should be modified to bracket toxicity endpoints observed during previous tests. DEC may provide written direction to modify the previous dilution series or the permittee may request written approval from DEC to modify the dilution series based on previous test results.

2.10.3.5 Hold Times: WET sample holding times are established at 36 hours and samples must not exceed a hold time of 72 hours. The permittee must document the conditions that resulted in the need for the holding time to exceed 36 hours and the potential effect on the test results.

2.10.3.6 Additional Quality Assurance Procedures: In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures must be followed:

a) If organisms are not cultured by the testing laboratory, concurrent testing with reference toxicants must be conducted, unless the test organism supplier provides control chart data from at least the previous five months of reference

toxicant testing. Where organisms are cultured by the testing laboratory, monthly reference toxicant testing is sufficient.

b) If either of the reference toxicant tests or the effluent tests does not meet all test acceptability criteria as specified in the test methods manual, then the permittee shall re-sample and re-test within the following month.

c) Control and dilution water must be receiving water, or salinity adjusted lab water. If the dilution water used is different from the culture water, a second control, using culture water must also be used.

2.10.4 WET Reporting.

2.10.4.1 DMRs and Full Report Deliverables: The permittee shall submit chronic WET test results on next month's DMR following the month of sample collection. The permittee must also submit the full WET Toxicity Report as an attachment to the DMR per Section 2.11.4.1.

2.10.4.2 Full Report Preparation: The report of results shall include all relevant information outlined in Section 10 of Report Preparation in the U.S. EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition (EPA-821-R-02-014).

2.10.4.3 Additional Reporting Information: In addition to toxicity test results, the permittee shall report:

a) The date and time of sample collection and initiation of each test,

b) The discharge flow rate at the time of sample collection, and

c) A list of corrosion inhibitors, biocides, algaecides, clarifying agents, or other additives being used by the facility for miscellaneous discharges (005, 009, and 014) that could potentially be in the effluent during the 30-day period preceding sampling.

2.11 Reporting of Monitoring Requirements

2.11.1 Monitoring Requirements

2.11.1.1 The permittee shall use current calibrated equipment when taking field measurements and shall use bottles and sampling procedures provided, or approved, by a laboratory when taking samples for laboratory analysis.

2.11.1.2 Samples and measurements shall be representative of the volume and nature of the monitored discharge.

2.11.1.3 Additional monitoring parameters and increased monitoring frequency may be required by the Department on a case-by-case basis.

2.11.1.4 All flow monitoring results shall be recorded daily. The permittee shall maintain records of all information resulting from any visual inspections, including documentation of visual observation(s) of floating solids, foam, garbage, and oily sheen for three years.

2.11.2 Additional Effluent Monitoring

2.11.2.1 Monitoring for effluent limitations must use methods with method detection limits that are less than the effluent limitations or are sufficiently sensitive. Monitoring effluent or receiving water for the purpose of comparing to water quality criteria must use methods that are less than the applicable criteria or are sufficiently sensitive. See Appendix C for definition of sufficiently sensitive.

2.11.2.2 The permittee also has the option of taking more frequent samples than required under the Permit. These additional samples must be used for averaging if they are conducted using the Department approved test methods (generally found in 18 AAC 70 and 40 CFR 136 [adopted by reference in 18 AAC 83.010]). The results of any additional monitoring must be included in the calculation and reporting of the data on DMRs as required by the Permit and Standard Conditions Part 3.2 and 3.3 (Appendix A).

2.11.2.3 DEC may require additional monitoring of effluent or receiving water for facility or site-specific purposes, including, but not limited to: obtaining data to support NOI or applications, demonstrating of water quality protection, obtaining data to evaluate ambient water quality, evaluating causes for elevated parameters in the effluent, and conducting chronic WET toxicity identification and reduction. If additional monitoring is required, DEC will provide the permittee or applicant the request in writing.

2.11.3 Discharge Monitoring Reports

2.11.3.1 Monitoring required in Section 2.0 shall be summarized each month on the DEC DMR Form provided to the permittee or a Department-approved equivalent that provides the same information in a similar format.

2.11.3.2 This Permit requires the permittee to submit DMRs required in Section 2.6.1 even for months when discharges do not occur. The Permittee must submit a DMR with the box checked indicating no discharge has occurred.

2.11.3.3 The DMR must be submitted to DEC by the 28th day of the following calendar month as postmarked, faxed, e-mailed, or signed electronically and mailed to the address in Appendix A, Part 1.1.2.

2.11.4 Electronic Reporting

2.11.4.1 E-Reporting Rule - Phase I (DMRs).

The permittee must submit a DMR for each month by the 28th day of the following month. DMRs shall be submitted electronically through NetDMR per Phase I of the E Reporting Rule (40 CFR 127). For access to the NetDMR Portal, go to https://cdxnodengn.epa.gov/oeca-netdmr-web/action/login. DMRs submitted in compliance with the E-Reporting Rule are not required to be submitted as described in Appendix A - Standard Conditions and Permit Section 2.11.3 unless requested or approved by the Department. Any DMR data required by the Permit that cannot be reported in a NetDMR field (e.g. mixing zone receiving water data, etc…), shall be included as an attachment to the NetDMR submittal. DEC has established an e-Reporting Information website at http://dec.alaska.gov/water/compliance/electronic-

reporting-rule/ which contains general information about this new reporting format. Training modules and webinars for NetDMR can be found at https://netdmr.zendesk.com/home.

2.11.4.2 E-Reporting Rule - Phase II (Other Reports).

Phase II of the E-Reporting rule will integrate electronic reporting for all other reports required by the Permit (e.g., Annual Reports and Certifications) and implementation is expected to begin during the permit term. Permittees should monitor DEC's E-Reporting website at http://dec.alaska.gov/water/compliance/electronic-reporting-rule/ for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports required by the Permit may be submitted in accordance with Appendix A - Standard Conditions.

2.11.5 The permittee must sign and certify all DMRs, reports, and other submittals in accordance with signatory requirements in Section 1.12 of Appendix A - Standard Conditions.

2.11.6 For all effluent monitoring, with the exception of total residual chlorine, the permittee must use EPA-approved methods under 40 CFR, Part 136, adopted by reference at 18 AAC 83.010(f), that can achieve a method detection limit less than the effluent limit. For a parameter without an effluent limit in this Permit, the permittee must use the most sensitive method detection limit from an EPA-approved analytical test method necessary for compliance monitoring.

2.11.7 For purposes of reporting on the DMR for a single sample, if a value is less than the method detection limit, the permittee must report "less than [numeric value of the method detection limit]," and if a value is less than a minimum level (ML) ,the permittee must report "less than [numeric value of ML]."

For purposes of calculating a monthly average, zero (0) may be assigned for a value less than the method detection limit, and [numeric value of the method detection limit] may be assigned for a value between the method detection limit and the ML. If the average value is less than the method detection limit, the permittee must report "less than [numeric value of the method detection limit]," and if the average value is less than the ML, the permittee must report "less than [numeric value of ML]." If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level, ML, in assessing compliance.

3.0 Mixing Zones

3.1 Drilling Fluids and Drill Cuttings (Discharge 001)

3.1.1 For all fixed oil and gas production platforms or MODUs discharging Drillings Fluids and Drill Cuttings associated with Oil and Gas Exploration, Development, or Production, a standard 100 meter radii, cylindrical chronic mixing zone that extends from the sea surface to the seafloor is authorized for the following parameters based on the drilling fluid classifications:

3.1.1.1 For Class B1 Fluids, the authorized parameter is turbidity.

3.1.1.2 For Class B2 or B3 Fluids, the authorized parameters are turbidity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc.

3.1.2 For discharges of Drilling Fluids and Drill Cuttings associated with geotechnical surveys, a standard 1,856 meter long (928 meters in each current direction) by 105 meters wide chronic mixing zone that extends from the sea surface to the seafloor is and having a chronic dilution factor of 3,000 is authorized for the following parameters based on the drilling fluid classification:

3.1.2.1 For Class C1 or C2 Fluids, the authorized parameter is turbidity.

3.1.2.2 For Class C3 Fluids, the authorized parameters are turbidity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc.

3.1.3 For discharges of Class C1, C2, or C3 Drilling Fluids and Drill Cuttings associated with HDD the applicant is required to submit a project-specific mixing zone application (Form 2M or another format approved by DEC) for Department evaluation. DEC will evaluate the mixing zone application according to the most recent EPA-approved version of the mixing zone regulations in 18 AAC 70 and issue a 30-day public notice of a Statement of Basis and the Departments final determination to authorize a mixing zone per 18 AAC 83 and 18 AAC 15. The mixing zone authorization, if approved, will be included with the authorization to discharge under this Permit.

3.2 Domestic Wastewater (Discharge 003) and Graywater (Discharge 004)

3.2.1 Mixing zones are authorized for TRC (chronic and acute) and FC bacteria, and EC bacteria (chronic only) for discharges of graywater and domestic wastewater as follows:

3.2.1.1 A standard 35-meter radii cylindrical chronic mixing zone and an 18-meter radii cylindrical acute mixing zone will be authorized through the NOI process: Anna, Baker, Bruce, Dillon, Dolly Varden, Grayling, King Salmon, Monopod, Osprey, Steelhead, and Tyonek. These cylindrical mixing zones extend from the sea surface to the seafloor and have a chronic dilution factor of 133 and an acute dilution factor or 77, respectively.

3.2.1.2 For the fixed platform MGS A, 123-meter radii chronic and a 94-meter radii acute, cylindrical mixing zones extending from the sea surface to the seafloor with a chronic dilution factor of 133 and an acute dilution factor of 77, respectively, will be authorized through the NOI process.

3.2.1.3 For the fixed platform MGS C, a 127-meter radii chronic and a 78-meter radii acute, cylindrical mixing zones extending from the sea surface to the seafloor are authorized with a chronic dilution factor of 133 and an acute dilution factor of 77, respectively, will be authorized through the NOI process.

3.2.1.4 For the fixed platform Granite Point, a 213-meter radii chronic and a 155-meter radii acute, cylindrical mixing zones extending from the sea surface to the seafloor are authorized with a chronic dilution factor of 133 and an acute dilution factor of 77, respectively, will be authorized through the NOI process.

3.2.1.5 For the fixed platform Julius R and any MODU attached to the platform to conduct development or production drilling, a 20-meter radii chronic and an 11-meter radii acute, cylindrical mixing zones extending from the sea surface to the seafloor are authorized with a chronic dilution factor of 133 and an acute dilution factor of 77, respectively, will be authorized through the NOI process.

3.2.1.6 For the automatically authorized MODUs identified in Section 1.1.3, a standard 35-meter radii cylindrical chronic mixing zone and an 18-meter radii cylindrical acute mixing zone with a chronic dilution factor of 133 and an acute dilution factor or 77, are authorized.

3.2.1.7 New fixed platforms and MODUs or existing MODUs applying for a new Domestic Wastewater (003) or Graywater (004) discharge authorization, may request a standard 35-meter radii cylindrical chronic mixing zone and an 18-meter radii cylindrical acute mixing extending from the sea surface to the seafloor with a chronic dilution factor of 133 and an acute dilution factor or 77, respectively. The standard size mixing zones will be authorized if the critical discharge and receiving water conditions provided in the NOI process is consistent with those critical conditions used to in the development of the standard size mixing zones.

3.2.1.8 New fixed platforms or exploration MODUs that do not meet requirements for standard mixing zone coverage through the NOI process are required to submit a project-specific mixing zone application (Form 2M or another format approved by DEC) with the NOI for Department evaluation. DEC will evaluate the mixing zone application according to the most recent EPA-approved version of the mixing zone regulations in 18 AAC 70 and issue a 30-day public notice of a Statement of Basis and the Departments final determination to authorize a mixing zone per 18 AAC 83 and 18 AAC 15. The mixing zone authorization, if approved, will be included with the authorization to discharge under this Permit after following public notice procedures.

3.3 Miscellaneous Discharges 005 through 014

3.3.1 For authorizations of chronic mixing zones under this section for Miscellaneous Discharges 005 through 014, the following describes the listing of parameters authorized per each specific discharge type:

3.3.1.1 Discharge 005: Desalination Unit Wastes for chronic WET;

3.3.1.2 Discharge 006: Blowout Preventer Fluid for chronic WET;

3.3.1.3 Discharge 007: Boiler Blowdown for chronic WET;

3.3.1.4 Discharge 008: Fire Control System Test Water for chronic WET;

3.3.1.5 Discharge 009: Non-contact Cooling Water for TRC, temperature, and chronic WET;

3.3.1.6 Discharge 010: Uncontaminated Ballast Water for chronic WET;

3.3.1.7 Discharge 011: Bilge Water for chronic WET;

3.3.1.8 Discharge 012: Excess Cement Slurry for chronic WET;

3.3.1.9 Discharge 013: Muds, Cuttings, and Cement at the Seafloor for Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc; and

3.3.1.10 Discharge 014: Waterflooding Wastewater for TRC and Chronic WET.

3.3.2 Table 24 provides a listing of chronic mixing zones for existing facilities with their associated chronic dilution factors (DF_c) for Miscellaneous Discharges 005 through 014 under this Permit. MODUs listed in the table will be authorized through the NOI process (See Section 1.1.3).

Table 24: Facility-Specific Mixing Zones for Miscellaneous Discharges 005 through 014

Facility	Flow (MGD)	Discharge Condition	MZ Radii (m)	DF_c
GPP	1.7	Surface	100	152
King Salmon Platform	3.36	Surface	100	128
Monopod Platform	3.33	Surface	100	129
Grayling Platform	5.14	Surface	100	116
Dolly Varden	5.21	Surface	100	115
Spartan 151 MODU	0.132	Surface	100	189
Randolph Yost MODU	2.1	Surface	100	173
Osprey Platform	0.189	Submerged	100	127
Steelhead Platform	0.804	Submerged	300	189
MGS – A Platform	0.132	Surface	300	443
MGS – C Platform	0.132	Submerged	300	1,119

3.3.3 New geotechnical drilling facilities, exploration MODUs, or fixed platforms may request the standard 100 meter radii cylindrical mixing zone extending from the sea surface to seafloor for miscellaneous discharges identified in the NOI process. The permit authorization will specify which discharges are authorized to have a chronic mixing zone and the appropriate dilution factor based on the maximum daily discharge rate among the requested miscellaneous discharges provided in mgd and the equations:

3.3.3.1 Surface Discharges: $DF_c = 172.5 \times Flow^{-0.244}$

3.3.3.2 Submerged Discharges: $DF_c = 73.67 \times Flow^{-0.325}$

3.3.4 New geotechnical facilities, exploration MODUs, or fixed platforms that do not meet requirements for automatic mixing zone coverage through the NOI process are required to submit a facility-specific mixing zone application (Form 2M or another format approved by DEC) for Department evaluation. DEC will evaluate the mixing zone application according to the most recent EPA-approved version of the mixing zone regulations in 18 AAC 70 and issue a 30-day public notice of the Departments final determination to authorize a mixing zone per 18 AAC 83 and 18 AAC 15. The mixing zone authorization, if approved, will be included with the authorization to discharge under this Permit.

3.4 Discharge 015 – Produced Water from Fixed Platforms and Shore-based Facilities

3.4.1 Trading Bay Production Facility

Upon submittal of a complete NOI to the Department, the discharge of produced water from the TBPF is authorized to have a chronic mixing zone that is 4,521 meters long and 1,872 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 1,335 for the parameters ammonia, copper, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for copper and zinc that is 2 meters long and 81 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 4.5. The general orientation of these mixing zones are provide in Figure 3 in the Fact Sheet.

3.4.2 Middle Ground Shoal Onshore Facility

Upon submittal of a complete NOI to the Department, the discharge of produced water from the MGS Onshore Facility is authorized to have a chronic mixing zone that is 3,299 meters long and 966 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 2,180 for the parameters ammonia, copper, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for copper, zinc, and silver that is 126 meters long and 29 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 20.5. The general orientation of these mixing zones are provide in Figure 4 in the Fact Sheet.

3.4.3 Granite Point Tank Farm

Upon submittal of a complete NOI to the Department, the discharge of produced water from the GPTF Facility is authorized to have a chronic mixing zone that is 698 meters long and 546 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 2,175 for the parameters ammonia, copper, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for ammonia, copper, and zinc that is 10 meters long and 6.75 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 19.5. The general orientation of these mixing zones are provide in Figure 5 in the Fact Sheet.

3.4.4 Baker Platform

Upon submittal of a complete NOI to the Department, the discharge of produced water from the Baker Platform is authorized to have a chronic mixing zone that is 1,188 meters long and 444 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 3,390 for the parameters ammonia, copper, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for copper, silver, and zinc that is 86 meters long and 28 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 134. The general orientation of these mixing zones are provide in Figure 6 in the Fact Sheet.

3.4.5 Bruce Platform

Upon submittal of a complete NOI to the Department, the discharge of produced water from the Bruce Platform is authorized to have a chronic mixing zone that is 860 meters long and 370 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 3,395 for the parameters ammonia, copper, mercury, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for ammonia, copper, mercury, silver, and zinc

that is 160 meters long and 62 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 267. The general orientation of these mixing zones are provide in Figure 7 in the Fact Sheet.

3.4.6 Dillon Platform

Upon submittal of a complete NOI to the Department, the discharge of produced water from the Dillon Platform is authorized to have a chronic mixing zone that is 1,690 meters long and 856 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 3,390 for the parameters ammonia, copper, mercury, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for ammonia, copper, mercury, silver, and zinc that is 24 meters long and 14 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 24. The general orientation of these mixing zones are provide in Figure 8 in the Fact Sheet.

3.4.7 Tyonek A Platform

Upon submittal of a complete NOI to the Department, the discharge of produced water from the Tyonek A Platform is authorized to have a chronic mixing zone that is 278 meters long and 87 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 460 for the parameters ammonia, copper, TAH, and TAqH. In addition, an acute mixing zone is authorized for ammonia and copper that is 158 meters long and 56 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 165. The general orientation of these mixing zones are provide in Figure 9 in Fact Sheet.

3.4.8 Osprey Platform

Upon submittal of a complete NOI to the Department, the discharge of produced water from the Osprey Platform is authorized to have a chronic mixing zone that is 1,060 meters long and 348 meters wide that extends from the sea surface to the seafloor with a chronic dilution factor of 800 for the parameters copper, nickel, zinc, TAqH, and TAH. In addition, an acute mixing zone is authorized for copper, nickel, and zinc that is 13 meters long and 13 meters wide extending from the sea surface to the seafloor with an acute dilution factor of 40. The general orientation of these mixing zones are provide in Figure 10 in the Fact Sheet.

3.4.9 New Facilities or Existing Facilities with New Discharge

New fixed development and production platforms, shore-based coastal production facilities or existing facilities not included in Section 2.7.7 that are proposing to discharge produced water must submit a mixing zone application Form 2M along with Form 1 and 2C per Section 1.1.7 within 1 year prior discharging. If appropriate, DEC will issue a written authorization establishing specific conditions and the effective date of the authorization after developing a Statement of Basis following applicable administrative procedures in 18 AAC 15, 18 AAC 70, and 18 AAC 83. Alternatively, DEC may require an individual permit per Section 1.4.

3.5 Well Completion (Discharge 016), Workover (Discharge 017), Treatment (Discharge 018), and Test (Discharge 019) Fluids.

3.5.1 Exploration MODUs or fixed platforms that cannot commingle well completion, workover, treatment, or test fluids with produced water may obtain authorization of a 100 meter radii cylindrical mixing zone extending from the sea surface to the seafloor for pH, TAH, TAqH, chronic WET upon meeting the general permit requirements for coverage through the NOI process, including certification that commingling with produced water is not a practicable alternative.

4.0 Zones of Deposit

4.1 Discharges Authorized

Upon submittal of a complete NOI, a zone of deposit is authorized for Drilling Fluid and Drill Cutting Discharge (001), cement for Excess Cement Slurry (012) and Fluids, Cuttings, and Cement at the Seafloor (013).

4.2 Sizes and Orientation

This Permit authorizes a 100-meter radius, cylindrically shaped zone of deposit centered on the point of discharge for those listed in Section 4.1.

5.0 SPECIAL CONDITIONS

5.1 Quality Assurance Project Plan

The permittee shall develop a QAPP for all monitoring required by this Permit and provide to DEC upon request or as required per discharge-specific sections of this Permit (See Section 2.6.6.3). A QAPP for a specific discharge or monitoring event may be included in another plan (i.e., DFP or EMP Study Plans). These other plans must clearly state the intent for the applicable sections to comply with the QAPP requirements of this section.

The QAPP must be designed to assist in planning for the collection and analysis of effluent samples and field observations in support of this Permit and to help explain data anomalies whenever they occur. A generic DEC Wastewater Treatment Facility QAPP is available from DEC that can be populated with facility-specific components. If using the generic DEC template, the developed QAPP must be specific for the facility. The permittee must submit a letter to the Department stating that the plan has been implemented within 120 days of the effective date of the final Permit for existing facilities or the date of the authorization for new facilities

5.1.1 Throughout all sample collection and analysis activities, the permittee shall use DEC-approved quality assurance and quality control (QA/QC) procedures and chain-of-custody procedures, as described in the *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). The QAPP must be prepared in the format specified in these documents.

5.1.2 At a minimum, a QAPP must include:

5.1.2.1 Details on number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantification limits for each target compound, type and number of quality assurance field samples or observations, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;

5.1.2.2 Maps indicating the location of each sampling/observation point;

5.1.2.3 Qualification and training of personnel on the QAPP;

5.1.2.4 Sampling procedures specifically developed for the collection of chronic WET samples for the miscellaneous discharges of Desalination Waste (Discharge 005), Noncontact Cooling Water (Discharge 009) and Waterflooding (Discharge 014) that will result in collection of samples representing probable maximum batch chemical dosing concentrations at the sample port (See Section 2.6.5, 2.6.6.3and 5.2.9.3); and

5.1.2.5 Name, address, and telephone number of all laboratories used by or proposed to be used by the permittee.

5.1.3 The permittee shall amend the QAPP whenever sample collection, sample analysis, or other procedures addressed by the QAPP is modified. A revised QAPP does not require submittal to DEC unless required in discharge-specific sections of this Permit.

5.1.4 Copies of the QAPP must be kept on site and made available to DEC upon request. Electronic copies are appropriate so long as they are available during inspections.

5.2 Best Management Practices Plan

5.2.1 Purpose

Through implementation of the BMP Plan the permittee shall prevent or minimize the generation and the potential for release of pollutants from the facility to the lands and waters of the United States (U.S.) through normal and ancillary activities.

5.2.2 Development and Implementation Schedule

The permittee shall develop and implement a BMP Plan which achieves the objectives and the specific requirements listed below. Any existing BMP Plans may be modified for compliance with this Part. Upon revising the BMP Plan, the permittee must submit written certification that the BMP Plan has been developed and implemented within 120 days of the effective date of the Permit for existing facilities or of the date of authorization for new facilities. The permittee must also review and modify the BMP Plan annually per Section 5.2.6

5.2.3 Objectives

The permittee shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.

5.2.3.1 The number and quantity of pollutants and the toxicity of effluent generated, discharged, or potentially discharged at the facility must be minimized by the permittee to the extent feasible by managing each waste stream in the most appropriate manner.

5.2.3.2 Under the BMP Plan and especially within any standard operating procedures in the BMP Plan, the permittee shall ensure proper operation and maintenance of water management and wastewater treatment systems. BMP Plan elements must be developed in accordance with good operating practices.

5.2.3.3 Each facility component or system must be examined for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to lands and waters of the U.S. due to equipment failure, improper operation, natural phenomena such as rain, etc. The examination must include all normal operations and ancillary activities including material storage areas, storm water, in-plant transfer, material handling and process handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, or drainage from raw material storage.

5.2.4 Elements of the BMP Plan

The BMP Plan must be consistent with the objectives above and the general guidance contained in the *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004, October 1993) and *Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006) or any subsequent revision to these guidance documents.

5.2.5 Plan Components

The BMP Plan must include, at a minimum, the following items:

5.2.5.1 Statement of BMP Policy. The BMP Plan must include a statement of management commitment to provide the necessary financial, staff, equipment, and training resources to develop and implement the BMP Plan on a continuing basis.

5.2.5.2 The BMP Plan must establish a BMP Committee responsible for developing, implementing, and maintaining the BMP Plan. Specify the structure, functions, and procedures of the BMP Committee.

5.2.5.3 Description of potential pollutant sources.

5.2.5.4 Risk identification and assessment.

5.2.5.5 Standard operating procedures to achieve the above objectives and specific BMPs (see below).

5.2.5.5.1 Good Housekeeping;

5.2.5.5.2 Security;

5.2.5.5.3 Materials compatibility;

5.2.5.5.4 Record keeping and reporting;

5.2.5.5.5 Use of local containment devices such as liners, dikes, and drip pans where chemicals are being unpackaged and where wastes are being stored and transferred;

5.2.5.5.6 Apply chemical cleaning compounds and disinfectants in accordance with manufacturer instructions and suggested application rates;

5.2.5.5.7 Employee training on the BMP Plan and records of employee training date(s), etc.; and

5.2.5.5.8 Inspections and regular evaluation of BMP controls including evaluation of planned facility modifications to ensure that BMP Plan is considered and adjusted accordingly.

5.2.6 Review and Recertification

The BMP Plan must be reviewed and recertified as follows:

5.2.6.1 Annual review by the BMP Committee.

5.2.6.2 Certified statement the above reviews were completed and the BMP Plan fulfills the requirements set forth in this Permit. The statement must be certified by the dated signatures of each BMP Committee member. The statement must be submitted to DEC on or before January 31st of each year of operation under this Permit after the initial BMP Plan submittal (Section 5.2.2).

5.2.7 Documentation.

The permittee must maintain a copy of the BMP Plan at the facility and make it available to DEC or an authorized representative upon request. Electronic copies are appropriate so long as they are available during inspections.

5.2.8 BMP Plan Modification

5.2.8.1 The permittee must amend the BMP Plan whenever a change in the facility or in the operation of the facility materially increases the generation of pollutants or their release or potential release to receiving waters.

5.2.8.2 The permittee must amend the BMP Plan whenever the plan is found to be ineffective in achieving the general objective of preventing and minimizing the generation and the potential for the release of pollutants from the facility to waters of the U.S. Any changes to the BMP Plan must be consistent with the objectives and specific requirements listed above.

5.2.9 Specific BMPs

The BMP Plan must establish BMPs or other measures to achieve the objectives under Section 5.2.3 which ensure that the following specific requirements are met:

5.2.9.1 <u>BMPs for Deck Drainage</u>: The permittee must develop and implement BMPs for ensuring precipitation and melt water that is contaminated with oil and grease is processed through an oil-water separator, or other similar treatment process, prior to discharge.

5.2.9.2 BMPs for Graywater: Per Section 2.5.6, permittees shall develop and implement housekeeping BMPs which ensure discharges do not contain oil (e.g., cook oils), floating solids, foam or garbage and have minimal chemical cleaning compounds and disinfection products (e.g., chlorine) through adherence with manufacturer's instructions. In addition, for discharges of graywater treated using an MSD, or other system adding chlorine, the permittee must develop and implement operation and maintenance BMPs that ensure consistent and effective dechlorination to achieve appropriate chlorine levels (e.g., less than 1.0 mg/L).

5.2.9.3 BMPs for Miscellaneous Discharges Potentially Contaminated with Oil: Per Section 2.6.3, specific BMPs must be developed and implement to support the prohibition of free oil for the following miscellaneous discharges:

- Discharge 006 - Blowout Preventer Fluid
- Discharge 010 - Uncontaminated Ballast Water
- Discharge 012 - Excess Cement Slurry
- Discharge 013 - Fluids, Cuttings, and Cement at the Seafloor

5.2.9.4 Miscellaneous Discharges 005, 009 and 014 Pollution Reduction BMPs: Per Section 2.6.5 DEC requires that the BMP Plan include a specific BMP to optimize the use of chemicals (e.g., a chemical-dosing matrix) and to minimize the potential for chronic toxicity in discharges of desalination waste (Discharge 005), noncontact cooling water (Discharge 009) and waterflooding (Discharge 014) that are required to monitor for chronic WET. Upon exceeding chronic WET PR BMP Revision Action Levels, the permittee must modify this specific BMP to include BMP revisions to reduce subsequent chronic toxicity to below the PR BMP Revision Action Levels. Examples of BMP revisions include, but are not limited to, revamping the chemical dosing matrix or injection practices; substitution of less toxic chemicals; eliminating, reducing, or controlling spikes resulting from batch dosing; or alternative disposal options. BMPs must continue to be revised until the chronic WET PR BMP Revision Action Levels are attained. If the BMP revision involves significant physical changes to the treatment and disposal system, the permittee must describe these modifications in submittals required in Section 2.6.5 and submit update line diagrams reflecting these modifications with the next application for reissuance.

5.2.9.5 Hydrocarbon Treatment BMPs for Hydrostatic Test Water: If a visible sheen is detected in the discharge of hydrostatic test water, the permittee shall notify DEC per Section 2.9.3. Based on information provided at the time, DEC may require specific BMPs for treatment devices to be implemented to prevent an oily sheen discharge or exceedance of TAH and TAqH limits. For infrastructure that has previously been in contact with petroleum and is anticipated to have dissolved hydrocarbons and possibly free oil, the permittee must implement BMPs to remove free and dissolved phase hydrocarbons prior to discharge per Section 2.9.4. However, this specific BMP requirement is not subject to commingling with produced water per Section

5.2.9.6 BMPs for Cooling Water Intake Structures: This Permit incorporates 40 CFR 125, Subpart N the updated in 2014 and adopted by reference at 18 AAC 83.010(c)(9) for cooling water intake structures (CWIS) that requires new offshore oil and gas facilities to take measures to reduce entrainment and impingement of aquatic life associated with the construction and operation of CWIS. The CWIS regulation was promulgated to ensure that the location, design, construction, operation and capacity of CWIS reflect the best technology available to minimize adverse impacts to aquatic organisms.

The CWIS regulations apply to facilities that meet the definition of a "new facility" per 40 CFR 125.83 that have a point source discharge, intake 2 mgd of water, and use at least 25 percent of that water for cooling. Per CWIS regulations, the owner or operator of a new offshore oil and gas extraction facility must comply with: (i) Track I in 40 CFR 125.134(b) or Track II in 40 CFR, 125.134(c) if it is a fixed facility; or (ii) Track I in 40 CFR 125.134(b) if it is not a fixed facility (i.e., MODU). See Appendix F.

This Permit requires the permittee to select and implement technologies or operational measures to minimize impingement mortality and entrainment of fish and shellfish and include this information in the BMP Plan. The BMP Plan requirement gives the permittee discretion on what methods to select and how to implement those methods. However, the Department requires the CWIS BMP Plan be submitted with the NOI, if applicable, and retains the authority to impose more stringent conditions on a case-by-case basis, if such conditions are deemed necessary by the Department to comply with any provision of law in accordance with this Permit. Specifically, DEC can require the implementation of additional technologies and operational measures if there is information indicating the potential for specified aquatic organisms to pass through the hydraulic zone of influence of the cooling water intake structure.

5.3 End of Well (Class B Fluids) or End of Project (Class C Fluids) Reports

The permittee is required to submit an EOW or EOP Report by January 31st of each year following well or project completions. The permittee shall report the following for each drilling fluid system in the EOW or EOP Report:

5.3.1 Well or borehole designation, latitude and longitude of well/borehole entry and exist point if applicable (HDD); beginning and ending drill dates, and borehole diameter and associated depth (well or borehole) or length (HDD);

5.3.2 The base drilling fluid type;

5.3.3 An inclusive chemical inventory of all constituents added downhole, including all drilling fluid additives used to meet specific drilling requirements;

5.3.4 Any modifications to the drilling fluids system per the DFP, if applicable;

5.3.5 The total volumes of drilling fluid create and added downhole;

5.3.6 The estimated volumes of drilling fluid lost downhole at each site (if any);

5.3.7 Estimated total volumes of drilling fluids discharged to surface waters at each site location;

5.3.8 The maximum concentration of each constituent in the drilling fluid discharged to surface water;

5.3.9 Any control measures used to reduce or eliminate the release;

5.3.10 Any mitigation measures taken to eliminate or reduce adverse environmental impacts;

5.3.11 Any unusual observations reported to DEC;

5.3.12 Any supplemental information requested by DEC to be included during the project;

5.3.13 The use of surfactants, dispersants, and detergents per 2.1.8; and

5.3.14 The name and total amount of each chemical additive per 2.2.4.1, the results of the diesel oil analysis per 2.2.2.1.5, and metals analysis per 2.2.4.2.

For years where no wells or HDD drilling events occurred, the permittee must submit a statement in lieu of a report indicating such and whether future events are anticipated.

5.4 Environmental Monitoring Plan Requirements

5.4.1 Applicability

MODUs conducting oil and gas exploration and discharging Class B2 drilling fluids within 4,000 meters to 1,000 meters of Trading Bay SGR or the Redoubt Bay CHA must study the fate and effects of drilling fluids and/or cuttings discharges while operating in these areas. Sediment studies must also be completed at other exploration sites that have sediment deposits that can be reasonably sampled (e.g., sandy bedforms or littoral drift). Environmental monitoring requirements are not applicable to discharges of Class B1 (e.g., top holes for oil and gas exploration wells drilled without the use of barite) or Class C drilling fluids from geotechnical surveys or HDD projects. Approval to discharge is contingent on meeting the requirements to obtain coverage under the Permit per Section 1.3.

5.4.2 Environmental Monitoring Plan Study

Based on a site-by-site determination of applicability by DEC, operators of mobile exploratory facilities discharging drilling fluids and/or drill cuttings must submit a plan of study for environmental monitoring to DEC for review and comment with, or prior to, submission of an NOI.

5.4.3 Objectives

The objectives of the environmental monitoring must be to:

5.4.3.1 Monitor for drilling fluid discharge related impacts;

5.4.3.2 Determine statistically significant changes in sediment pollution concentrations and potential for sediment toxicity with time and distance from the discharge;

5.4.3.3 Monitor for discharge related impacts to the benthic community;

5.4.3.4 Assess whether any impacts warrant an adjustment of the monitoring program; and

5.4.3.5 Provide information for future permit reissuance.

5.4.4 Plan of Study.

The monitoring must include, but not be limited to, relevant hydrographic, sediment hydrocarbon, and heavy metal data from surveys conducted before and up to at least one year after drilling operations cease. The study must consider the specific characteristics of the discharged Class B drilling fluids (e.g., parameters with monitoring requirements or limitations described in Sections 2.2.2 and 2.2.4.2) on the observed effects on sediment, water, and benthic communities if present. The monitoring plan must address:

5.4.4.1 The monitoring objectives;

5.4.4.2 Appropriate null and alternative test hypotheses;

5.4.4.3 A statistically valid sampling design;

5.4.4.4 All monitoring procedures and methods;

5.4.4.5 A quality assurance/quality (QA/QC) control program;

5.4.4.6 A detailed discussion of how data will be used to meet, test, and evaluate the monitoring objectives; and

5.4.4.7 A summary of the results of previous environmental monitoring as they apply to the proposed program plan.

5.4.5 Reporting Requirements

The permittee must analyze the data and submit a report by January 31st following each year that an EMP sampling event occurred (i.e., Pre-drilling and Post-drilling Reports). The report must address the environmental monitoring objectives by using appropriate descriptive and analytical methods to test for and to describe any impacts of discharged drilling fluids on sediment pollutant concentrations, sediment quality, water quality, and the benthic community. The report must include all relevant QA/QC information, including but not limited to instrumentation, laboratory procedures, detection limits/precision requirements of the applied analyses, and sample collection methodology.

DEC will review the reports in accordance with the environmental monitoring objectives and evaluate it for compliance with the requirements of the permit. If revisions to the report are required, the permittee must submit a revised report to DEC within two months of DEC's request. The permittee will be required to correct, repeat, or expand EMPs which have not fulfilled the requirements of this Permit.

For years where no EMP sampling events occurred, the permittee must submit a statement in lieu of a report indicating such and whether future events are anticipated.

5.4.6 Modification to Monitoring Program.

The monitoring program may be modified if DEC determines that the modification is appropriate. The modified program may include changes in sampling stations, sampling times, and parameters.

5.4.7 Exemption.

DEC may grant a written exemption to this requirement if the permittee can satisfactorily demonstrate that information on the fate and effects of the discharge is available (e.g., EMP studies from previous wells at the location) or the discharge will not have significant impacts on the receiving environment in the area of discharge (e.g., sediment is not significantly present at the site due to scour). A site specific exemption request may be submitted to DEC in writing for Department approval.

5.5 Drilling Fluid Plan Requirements

5.5.1 Applicability

MODUs conducting oil and gas exploration and discharging Class B2 must develop and submit a DFP for Class B2 proposed to be discharged within 4,000 meters to 1,000 meters of Trading Bay SGR or the Redoubt Bay CHA or any Class C2 or C3 drilling fluid systems for HDD or geotechnical surveys. The applicant must submit the DFP for Department review and comment with, or prior to, submission of an NOI. Drilling fluids systems meeting Class B1 or C1 requirements do not require submittal of DFPs although DEC recommends permittees consider developing one as a contingency if additional chemical additives could be required during drilling and result in the fluid system to become reclassified and, thereby, initiate this requirement.

5.5.2 Implementation

The applicant must implement the written procedure in the DFP for the formulation and control of drilling fluid/chemical additive systems for each well or project. The DFP must specify the drilling fluid/chemical additive systems to be used. The plan must be implemented during drilling operations and a copy of the plan must be available on-site at the facility at all times. Electronic copies are appropriate so long as they are available during inspections. If applicable, the applicant must submit a copy of the completed DFP to DEC with the NOI.

5.5.3 Plan Requirements

At a minimum, the drilling fluid plan must include the following information:

5.5.3.1 Classification of drilling fluids proposed for discharge, the well or borehole designation, location, and any modified drilling fluid types as basic plan identification for each well or borehole to be drilled.

5.5.3.2 Specific to each well and drilling fluid type, provide a list including commercial product names, descriptions of the products, and the maximum proposed discharge concentrations for each product and chemical additive. Concentrations must be commonly stated in appropriate terms (e.g., lb/bbl, gal/bbl, % (wt), or % v/v (% volume oil per volume drilling fluid)). Each drilling fluid or additive system must be clearly labeled with respect to drilling fluid type (e.g., KCl/polymer drilling fluid, freshwater lignosulfonate drilling fluid). Components of the basic drilling fluid must be listed separately from specialty or contingency chemical additives which may be used.

5.5.3.3 For HDD projects, the DFP must include procedures that address observation for inadvertent releases at the shoreline, notification procedures to DEC, and methods to be implemented to stop the inadvertent release (e.g., additives to seal fractures, reduced operating pressure, etc.).

5.5.3.4 A record of the operator's determination of how discharge of drilling fluids and drill cuttings is expected to comply with the 30,000 ppm SPP toxicity limit for Class B2 drilling fluids or the SPP toxicity classification requirements of 500,000 ppm for Class C2 or C3 drilling fluids. Operator's determination must be based upon but not limited to, the following criteria:

5.5.3.4.1 Estimate of worst-case cumulative discharge toxicity based on additive toxicity estimations or commercially calculated discharge toxicity estimations (See Sprague and Logan, Environmental Pollution, Volume 19, No. 4, August 1979);

5.5.3.4.2 Estimations of discharge toxicity based on the use of mineral oil pills and subsequent discharge of residual mineral oil concentrations must be estimated separately from the proposed drilling fluid or additive system; and

5.5.3.4.3 Description of how overall toxicity is minimized, where possible.

5.5.3.5 A clearly stated procedure for determining whether or not a chemical additive not originally planned for or included in toxicity estimations may be used without resulting in a new drilling fluid classification, which could require additional limits or monitoring requirements (e.g., adding a third ingredient to a Class C1 Fluid or exceeding the SPP toxicity threshold for a Class B1 Fluid).

5.5.3.6 An outline of the drilling fluid planning process which must be consistent with other general permit requirements. Titles of personnel for preparing and implementing the drilling fluid planning process must be included in the DFP.

5.6 Domestic Wastewater Characterization and Treatment Study Requirements

To support limit development and evaluation of appropriate treatment levels in the reissuance of this Permit, permittees are required to develop a sampling and analysis plan (SAP) of domestic wastewater discharges (treated black water and graywater), develop updated conceptual line diagrams depicting both graywater and treated black water systems for each potentially affected facility, and provide recommendations for DEC consideration. Recommendations may include, but are not limited to, modified limitations based on recent characterization data that would be protective of human health and the environment, proposed modifications to existing practices or upgrades to existing collection, treatment and disposals systems to meet existing limits based on the most recent version of 18 AAC 72. The SAP must be submitted to DEC for review during the second year of the term of the Permit. A characterization report with line diagrams and recommendations must be submitted with the next application for reissuance.

Appendix A

Standard Conditions

APPENDIX A

STANDARD CONDITIONS

APDES PERMIT

NONDOMESTIC DISCHARGES

September 2011

TABLE OF CONTENTS

Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements. Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

Documents, reports, and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-3487
Email: DEC.Water.WQPermit@alaska.gov

1.1.2 Compliance and Enforcement Program

Documents and reports required under the permit and Appendix A relating to compliance are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 180 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

1.5 Duty to Mitigate

A permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;

1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;

1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and

1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least three years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:

1.11.2.1 All calibration and maintenance records,

1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,

1.11.2.3 All reports required by a permit,

1.11.2.4 Records of all data used to complete the application for a permit,

1.11.2.5 Field logbooks or visual monitoring logbooks,

1.11.2.6 Quality assurance chain of custody forms,

1.11.2.7 Copies of discharge monitoring reports, and

1.11.2.8 A copy of this APDES permit.

1.11.3 Records of monitoring information must include:

1.11.3.1 The date, exact place, and time of any sampling or measurement;

1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);

1.11.3.3 The date(s) and time any analysis was performed;

1.11.3.4 The name(s) of any individual(s) who performed any analysis;

1.11.3.5 Any analytical technique or method used; and

1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

1.12 Signature Requirement and Penalties

1.12.1 Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2) and (c)(3), and AS 46.03.790(g).

1.12.2 In accordance with 18 AAC 83.385, an APDES permit application must be signed as follows:

1.12.2.1 For a corporation, a responsible corporate officer shall sign the application; in this subsection, a responsible corporate officer means:

1.12.2.1.1 A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

1.12.2.1.2 The manager of one of more manufacturing, production, or operating facilities, if

1.12.2.1.2.1 The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;

1.12.2.1.2.2 The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

1.12.2.1.2.3 Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

1.12.2.2 For a partnership or sole proprietorship, by the general partner or the proprietor, respectively, shall sign the application

1.12.2.3 For a municipality, state, federal, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means:

1.12.2.3.1 The chief executive officer of the agency; or

1.12.2.3.2 A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

1.12.3 Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1.12.3.1 The authorization is made in writing by a person described in Appendix A, Part 1.12.2;

1.12.3.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility; or an individual or position having overall responsibility for environmental matters for the company; and

1.12.3.3 The written authorization is submitted to the Department to the Permitting Program address in Appendix A, Part 1.1.1.

1.12.4 If an authorization under Appendix A, Part 1.12.3 is no longer effective because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Appendix A, Part 1.12.3 must be submitted to the Department before or together with any report, information, or application to be signed by an authorized representative.

1.12.5 Any person signing a document under Appendix A, Part 1.12.2 or Part 1.12.3 shall certify as follows:

"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."

1.13 Proprietary or Confidential Information

1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words “confidential business information” on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.

1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.

1.13.3 A permittee’s claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee

from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under state laws addressing oil and hazardous substances.

1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (http://www.dnr.state.ak.us/parks/oha/), is to be notified immediately at (907) 269-8721.

1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

2.0 Special Reporting Obligations

2.1 Planned Changes

2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:

2.1.1.1 The alteration or addition may make the facility a "new source" under one or more of the criteria in 18 AAC 83.990(44); or

2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.

2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.

2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.2 Anticipated Noncompliance

2.2.1 A permittee shall give seven days' notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.

2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.3 Transfers

2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.

2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.4 Compliance Schedules

2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.

2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.5 Corrective Information

2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.

2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.6 Bypass of Treatment Facilities

2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

2.6.2 Notice of bypass

2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.

2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.

2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

2.6.3.1 Does not cause an effluent limitation to be exceeded, and

2.6.3.2 Is for essential maintenance to assure efficient operation.

2.7 Upset Conditions

2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of Appendix A, Part 2.7.2 are met.

2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;

2.7.2.2 The permitted facility was at the time being properly operated;

2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and

2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.

2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

2.8.1 In addition to the reporting requirements under 18 AAC 83.410, an existing manufacturing, commercial, mining, and silvicultural discharger shall notify the Department as soon as that discharger knows or has reason to believe that any activity has occurred or will occur that would result in:

2.8.1.1 The discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.1.1 One hundred micrograms per liter (100 µg/L);

2.8.1.1.2 Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile, 500 micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol, and one milligram per liter (1 mg/L) for antimony;

2.8.1.1.3 Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.1.4 The level established by the Department in accordance with 18 AAC 83.445.

2.8.1.2 Any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.2.1 Five hundred micrograms per liter (500 µg/L);

2.8.1.2.2 One milligram per liter (1 mg/L) for antimony;

2.8.1.2.3 Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.2.4 The level established by the Department in accordance with 18 AAC 83.445.

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

3.2 Reporting of Monitoring Results

At intervals specified in the permit, monitoring results must be reported on the EPA discharge monitoring report (DMR) form, as revised as of March 1999, adopted by reference.

3.2.1 Monitoring results shall be summarized each month on the DMR or an approved equivalent report. The permittee must submit reports monthly postmarked by the 15th day of the following month.

3.2.2 The permittee must sign and certify all DMRs and all other reports in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. All signed and certified legible original DMRs and all other documents and reports must be submitted to the Department at the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

3.2.3 If, during the period when this permit is effective, the Department makes available electronic reporting, the permittee may, as an alternative to the requirements of Appendix A, Part 3.2.2, submit monthly DMRs electronically by the 15th day of the following month in accordance with guidance provided by the Department. The permittee must certify all DMRs and other reports, in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. The permittee must retain the legible originals of these documents and make them available to the Department upon request.

3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

3.4.1 A report must be made:

3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and

3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.

3.4.2 A report must include the following information:

3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;

3.4.2.2 The period of noncompliance, including exact dates and times;

3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and

3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3.4.3 An event that must be reported within 24 hours includes:

3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).

3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).

3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.

3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.

3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4 by submitting the written report via e-mail, if the following conditions are met:

3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;

3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;

3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12.3 and 1.12.5.;

3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the e-mail; and

3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.

3.4.6 The e-mail and PDF written report will satisfy the written report submission requirements of this permit provided the e-mail is received by the Department within five days after the time the permittee becomes aware of the noncompliance event and the e-mail and written report satisfy the criteria of Part 3.4.5. The e-mail address to report noncompliance is: dec-wqreporting@alaska.gov

3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2 (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. Permittees should read the applicable statutes for further substantive and procedural details.

4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful order of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the State for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues, and that shall reflect, when applicable:

4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

4.1.2 Reasonable costs incurred by the State in detection, investigation, and attempted correction of the violation;

4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and

4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

4.2 Injunctive Relief

4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.

4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);

4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);

4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);

4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or

4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,00; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(B), (c)(2), and (c)(3)).

Appendix B

Acronyms

The following acronyms are common terms that may be found in an Alaska Pollutant Discharge Elimination System (APDES) permit.

18 AAC 15	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 15: Administrative Procedures
18 AAC 60	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 60: Solid Waste Management
18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards
18 AAC 72	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal
18 AAC 83	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System

All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database http://www.legis.state.ak.us/cgi-bin/folioisa.dll/aac

40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
ACR	Acute to Chronic Ratio
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AML	Average Monthly Limit
APDES	Alaska Pollutant Discharge Elimination System
API	American Petroleum Institute
AS	Alaska Statutes
AS 46.03	Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/default.htm
AMSA	Area Meriting Special Attention
ASTM	American Standard Test Methods
bbl	Barrels
BOD_5	Biochemical Oxygen Demand, 5-day

BOP	Blowout Preventer
BMP	Best Management Practice
BPJ	Best Professional Judgment
BPT	Best Practicable Control Technology (currently available)
BTUs	British Thermal Units or Biological Treatment Units
CEP	DEC Compliance and Enforcement Program
CFR	Code of Federal Regulations
CHA	Critical Habitat Area
CIE	Cook Inlet Energy
CORMIX	Cornell Mixing Zone Model
COST	Continental Outer Stratigraphic Test
CIPL	Cook Inlet Pipeline Company
CPF	Cosmopolitan Production Facility
CWA	Clean Water Act
CWIS	Cooling water intake structures
DEC	Alaska Department of Environmental Conservation
DFP	Drilling Fluid Plan
DMR	Discharge Monitoring Report
DNR	Alaska Department of Natural Resources
DOG	Division of Oil and Gas
eDMR	Electronic Discharge Monitoring Report
EFH	Essential Fish Habitat
ELGs	Effluent Limitation Guidelines
EMAP	Environmental Monitoring and Assessment Program
EMP	Environmental Monitoring Program

EOP	End-of-Project
EOW	End-of-Well
EC	Enterococci Bacteria
EC_{25}	25 Percent Effect Concentration
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FC	Fecal Coliform Bacteria
Furie GPF	Furie Gas Production Facility
FWS	Fish and Wildlife Service
GC	Gas Chromatography
GP	General Permit
gpd	Gallons per Day
GPTF	Granite Point Tank Farm
GPP	Granite Point Platform
HDD	Horizontal Directional Drilling
IC_{25}	25 Percent Inhibition Concentration
ICIEMAP	Integrated Cook Inlet Monitoring and Assessment Program
ICIS	Integrated Compliance Information System
KABATA	Knik Arm Bridge and Toll Authority
KCl	Potassium Chloride
KLU	Kitchen Lights Unit
KPF	Kustatan Production Facility
KPL	Kenai Pipeline
lbs	Pounds
LC_{50}	50 Percent Lethal Concentration

LNG	Liquefied Natural Gas
M10	Facilities continuously staffed with 10 or more people
M9IM	Facilities that are intermittently staffed or have a regular staff of nine or fewer people
MDL	Maximum Daily Limit
MG	Million Gallons
MGD	Million Gallons Per Day
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MS	Mass Spectrometry
MSD	Marine Sanitation Device
μg/L	Micrograms per Liter
MGS	Middle Ground Shoal
MODU	Mobile Offshore Drilling Unit
MZ	Mixing Zone
NAF	Non-aqueous Fluid
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Admospheric Administation
NOEC	No Observed Effects Concentration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Units
ODCE	Ocean Discharge Criteria Evaluation
OWS	Oil-Water Separator
PAH	Polynuclear Aromatic Hydrocarbons
POC	Parameter of Concern

PR	Pollution Reduction
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RPE	Reverse Phase Extraction
SDS	Safety Data Sheets
SGR	State Game Refuge
SPP	Sediment Particulate Phase
SU	Standard Units
TAH	Total Aromatic Hydrocarbons
TAqH	Total Aqueous Hydrocarbons
TBELs	Technology Based Effluent Limits
TMDL	Total Maximum Daily Load
TBPF	Trading Bay Production Facility
TIE	Toxicity Identification Evaluation
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TU_c	Chronic Toxicity Unit
UIC	Underground Injection Control
U.S.C.	United States Code
USFWS	United States Fish & Wildlife Service
WDAP	DEC Wastewater Discharge Authorization Program
WET	Whole Effluent Toxicity
WQBEL	Water Quality-based Effluent Limit
WQS	Water Quality Standards

Appendix C

Definitions

The following are common definitions of terms associated with APDES permits. Not all the terms listed may appear in a permit. Consult the footnote references for a complete list of terms and definitions.

Alaska Pollutant Discharge Elimination System (APDES)[a]	Means the state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345
Annual	Means once per calendar year
Average	Means an arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities
Average Monthly Limitation[a]	Means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured for that month.
Ballast Water	Means harbor or seawater added or removed to maintain the proper ballast floater level and ship draft or to preload legs of a jack-up rig to secure it to the seafloor.
Best Management Practices (BMPs)[a]	Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
Bilge Water	Means water which collects in the lower internal parts of a drill rig or drilling vessel hull.
Biochemical Oxygen Demand (BOD)[c]	Means the amount, in milligrams per liter, of oxygen used in the biochemical oxidation of organic matter in five days at 20° C
Biocide	Means any chemical agent used for controlling the growth of or destroying nuisance organisms (e.g., bacteria, algae, and fungi).

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

Blowout Preventer Fluid	Means fluid used to actuate hydraulic equipment on the blowout preventer.
Boiler Blowdown	Means the discharge of water, minerals, and chemical additives, such as oxygen scavengers and de-scalers, from boiler drums
Bypass[a]	Means the intentional diversion of waste streams from any portion of a treatment facility
Clean Water Act (CWA)[a]	Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972
Coastal	Means any location in or on a water of the United States landward of the inner boundary of the territorial seas.
Color[b]	Means the condition that results in the visual sensations of hue and intensity as measured after turbidity is removed
Commissioner[a]	Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee
Composite Samples	Composite samples must consist of at least eight equal volume grab samples at equal time intervals. A 24-hour composite sample means a combination of at least eight discrete samples of equal volume collected at equal time intervals over a 24-hour period at the same location. A "flow proportional composite" sample means a combination of at least eight discrete samples collected at equal time intervals over a 24-hour period with each sample volume proportioned according to the flow volume. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.
Contact Recreation[b]	Means activities in which there is direct and intimate contact with water. Contact recreation includes swimming, diving, and water skiing. Contact recreation does not include wading.
Cooling Water	Means once-through noncontact cooling water or circulating noncontact cooling water that is discharge to accommodate make-up cooling water intake.
Criterion[b]	Means a set concentration or limit of a water quality parameter that, when not exceeded, will protect an organism, a population of organisms, a community of organisms, or a

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

	prescribed water use with a reasonable degree of safety. A criterion might be a narrative statement instead of a numerical concentration or limit.
Daily Discharge[a]	Means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably and consistently (e.g., measured at approximately the same time each day) represents the calendar day for the purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with a limitation expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
Deck Drainage	Means any waste resulting from platform washings, deck washings, spillage, rainwater, melt water, and runoff from curbs, gutters, and drains including drip pans and work areas within facilities subject to this permit.
Department[a]	Means the Alaska Department of Environmental Conservation
Desalination Waste	Means wastewater associated with the process of creating fresh water from seawater.
Development Facility	Means operations that are engaged in the drilling and completion of production wells. These operations may occur prior to or simultaneously with production operations.
Diesel Oil	Means the grade of distillate fuel oil, as specified in the American Society for Testing and Materials Standard Specification for Diesel Fuel Oils D975-91 that is typically used as the continuous phase in conventional oil-based drilling fluids. For the purpose of this permit, "diesel oil" includes the fuel oil present at the facility.
Design Flow[a]	Means the wastewater flow rate that the plant was designed to handle
Director[a]	Means the commissioner or the commissioner's designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director
Discharge[a]	When used without qualification, discharge means the discharge of a pollutant
Discharge of a Pollutant[a]	Means any addition of any pollutant or combination of pollutants to waters of the United States from any point source or to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

	transportation. Discharge includes any addition of pollutants into waters of the United States from surface runoff that is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person that do not lead to a treatment works; discharges through pipes, sewers, or other conveyances leading into privately owned treatment works; and does not include an addition of pollutants by any indirect discharger.
Domestic Wastewater[c]	Means waterborne human wastes or graywater derived from dwellings, commercial buildings, institutions, or similar structures. "Domestic wastewater" includes the contents of individual removable containers used to collect and temporarily store human wastes.
Drill Cuttings	Means particles generated by drilling into subsurface geological formations and carried out from the wellbore with the drilling fluid. Examples of drill cuttings include small pieces of rock varying is size and texture from fine silt to gravel. Drill cuttings are generally generated from solids control equipment and settle out and accumulate in quiescent areas in the solids control equipment or other equipment processing drilling fluid.
Drilling Fluid	Means the circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure. The classes of drilling fluids are water-based fluid and non-aqueous drilling fluid.
Drilling Fluid System	For this Permit, drilling fluid system means a drilling fluid formulation designed specifically to perform for anticipated borehole conditions. If borehole conditions change that require a significant reformulation (e.g., switching from potassium/polymer to a lignosulfate fluid), it constitutes a new drilling fluid system. In contrast, the use of an additive does not constitute a new fluid system.
EC_{25}	Means a point estimate of the toxicant concentration that would cause an observable adverse effect on a quantal, “all or nothing,” response (e.g., death, immobilization, or serious incapacitation) in 25 percent of the test organisms, calculated by point estimation techniques.
Enhanced Mineral Oil	For the purposes of this permit, means a petroleum distillate which has been highly purified and is distinguished from diesel oil and conventional mineral oil in having a lower polycyclic aromatic hydrocarbon (PAH) content. Typically, conventional mineral oils have a PAH content on the order of 0.35 weight percent expressed as phenanthrene, whereas enhanced mineral oils typically have a PAH content of 0.001 or lower weight percent PAH expressed as phenenthrene.

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

Enhanced Mineral Oil Drilling Fluid	Means "drilling fluid" that has an enhanced mineral oil as its continuous phase with water as the dispersed phase.
Effluent[b]	Means the segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment
Estimated	Means a way to estimate the discharge volume. Approvable estimations include, but are not limited to, the number of persons per day at the facility, volume of potable water produced per day, lift station run time, etc.
Excess Cement Slurry	Means the excess cement and wastes from equipment washdown after a cementing operation.
Excluded area	Means an area not authorized as a receiving water under a permit
Exploration Facility	For the purposes of this permit, means any fixed platform or mobile offshore drilling unit (MODU) that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs. Any exploratory MODU that is not currently covered under AKG35100 – Mobile Oil and Gas Exploration Facilities in State Waters in Cook Inlet is a "new" mobile exploration facility.
Fecal Coliform Bacteria (FC)[b]	Bacteria that can ferment lactose at 44.5° + 0.2°C to produce gas in a multiple tube procedure. Fecal coliform bacteria also means all bacteria that produce blue colonies in a membrane filtration procedure within 24 ± 2 hours of incubation at 44.5° + 0.2°C in an M-FC broth.
Filter Backwash	Means wastewater generated when filters are cleaned and maintained.
Fire Control System Test Water	Means the water released during the training of personnel in fire protection and the testing and maintenance of fire protection equipment.
Fish[b]	Means any of the group of cold-blooded vertebrates that live in water and have permanent gills for breathing and fins for locomotion

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

Fixed Platform	A platform extending above and supported by the sea bed by means of piling, spread footings or other means with the intended purpose of remaining stationary over an extended period. For this Permit, mobile offshore drilling units (MODUs) that are periodically used at or near a fixed platform are considered part of the fixed platform.
Formation Oil	Means the oil from a producing formation which is detected in the drilling fluid, as determined by the GC/MS compliance assurance method, EPA Method 1655, when the drilling fluid is analyzed before being shipped offshore, and as determined by the RPE method, EPA Method 1670, when the drilling fluid is analyzed at the offshore point of discharge.
Garbage	Means all kinds of victual, domestic, and operational waste, excluding fresh fish and part thereof, generated during the normal operation and liable to be disposed of continuously or periodically except dishwater, graywater, and those substances that are defined or listed in other Annexes to MARPOL 73/78.
Geometric Mean	The geometric mean is the N^{th} root of the product of N. All sample results of zero will use a value of 1 for calculation of the geometric mean. Example geometric mean calculation: $\sqrt[4]{12x23x34x990} = 55$.
Geotechnical Drilling	For the purpose of this permit means a geotechnical survey that uses riser stem technology to circulate water-based drilled fluids to the water surface for reuse.
Geotechnical Facility	For the purposes of this permit means any floating, moored, or stationary vessel, jack-up or lift barge actively conducting geotechnical surveying in open water.
Geotechnical Survey	For the purpose of this permit means any subsurface investigation that collects sediment samples to assess the structural properties of subsurface soil condition for potential placement of structures such as oil and gas production and drilling platforms, gravel islands, anchor structures for floating exploration drilling vessels, ports and harbors, and potentially buried pipeline corridors
Grab Sample	Means a single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place
Graywater[c]	Means wastewater from a laundry, kitchen, sink, shower, bath, or other domestic source that does not contain excrement, urine, or combined storm water

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

Horizontal Direction Drilling	For this Permit, Horizontal Directional Drilling (HDD) means drilling for the purpose of installing an underground oil and gas pipeline or conduit using a rotary drill bit that can affect the direction of the drilling path near horizontal. HDD activities for this Permit may also include discharges from a facility conducting associated activities, such as pulling pipe or conduit through the HDD borehole.
Hydrostatic Test Water	For this permit, means water used to pressure test the integrity of pipelines, tanks, or equipment. It can also include the flushing of tanks, utility lines, pipelines, or other equipment or fluids associated with pipeline cleaning, maintenance, and pigging operations. For the purposes of this permit, is also includes incidental discharge of potable water or water purposefully flushed from potable water systems.
IC_{25}	Means a point estimate of the toxicant concentration that causes a 25 percent reduction (p) in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (the EPA Interpolation Method).
Influent	Means untreated wastewater before it enters the first treatment process of a wastewater treatment works
LC_{50}	Means the concentration of effluent that is acutely toxic to 50 percent of the test organisms exposed.
Marine Sanitation Device	Means a sanitary wastewater treatment system specifically designed to meet U.S. Coast Guard requirements.
M9IM	Means those offshore facilities continuously manned by nine (9) or fewer persons or only intermittently manned by any number of persons.
M10	Means those offshore facilities continuously manned by ten (10) or more persons.
Maintenance Waste	Means materials collected while maintaining and operating the facility, including, but not limited to, soot, machinery deposits, scraped paint, deck sweepings, wiping wastes, and rags.
Maximum Daily Limitation[a]	Means the highest allowable “daily discharge”

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

Mean[b]	Means the average of values obtained over a specified period and, for fecal coliform analysis, is computed as a geometric mean
Measured	Means the actual volume of wastewater discharged using appropriate mechanical or electronic equipment to provide a totalized reading. Measure does not provide a recorded measurement of instantaneous rates.
Milligrams per Liter (mg/L)[b]	Means the concentration at which one thousandth of a gram (10^{-3} g) is found in a volume of one liter. It is approximately equal to the unit "parts per million (ppm)," formerly of common use.
Mineral Oil	Means a class of low volatility petroleum product, generally of lower aromatic hydrocarbon content and lower toxicity than diesel oil.
Mineral Oil Pills	Means a slug of mineral circulated in the drilling fluid system in attempt to free stuck pipe. Pills generally consist of two parts; a spotting compound (also called mineral oil spots).
Mixing Zone[b]	Means a volume of water adjacent to a discharge in which wastes discharged mix with the receiving water
Mobile Offshore Drilling Unit	Mobile Offshore Drilling Units (MODUS) are semisubmersibles, drilling vessels, jack-up rigs, submersibles, ultra-deep water units, etc. that are used in drilling operations. For this permit, MODUs used at or near a fixed facility to perform oil and gas operations are considered part of the fixed facility once the MODU is secured to the seafloor. When operations are complete and the securing mechanism (i.e., legs or anchor) is raised, the MODU is no longer considered part of the fixed facility.
Month	Means the time period from the 1st of a calendar month through the last day in the month
Monthly Average	Means the average of daily discharges over a monitoring month calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month
Muds, Cuttings, Cement at seafloor	Means the materials discharged at the surface of the ocean floor in the early phases of drilling operations, before the well casing is set, and during well abandonment and plugging.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual

New Facility	Means a facility that has not operated in the area specified in the Notice of intent (NOI) prior to the submission of the NOI.
New Source	For the purposes of this permit, means any facility or activity that initiates the process of surveying, clearing or preparing an area of the water body floor for the purpose of constructing or placing a development or production facility on or over the site after New Source Performance Standards have been promulgated. For Offshore Subcategory facilities, New Source Performance Standards were promulgated on March 4, 1993 (see 58 FR 12454). For Coastal Subcategory facilities that date was December 16, 1996 (see 61 FR 66125).
Non-aqueous drilling fluid (NAF)	Means "drilling fluid" that has water-immiscible fluid as its continuous phase and the suspending medium for solids, such as oleaginous materials (e.g., mineral oil, enhanced mineral oil, paraffinic oil, C16-C18 internal olefins, and C8-C16 fatty acid/2-ethylhexyl esters.
Noncontact Cooling Water	Water used to reduce temperature and does not come into direct contact with any raw material, intermediate product, water product (other than heat), or finished product.
Offshore	Means offshore of the inner boundary of the territorial seas.
Oil-based Drilling Fluid	Means "drilling fluid" that has diesel oil, mineral oil, or some other oil, but neither a synthetic material nor enhanced mineral oil, as its continuous phase with water as the dispersed phase.
Open waters	Means ponds, lakes, streams, rivers, and marine waters not covered by ice.
PAH	Means polynuclear aromatic hydrocarbons.
Per Day	Means through a 24-hour period.
Permittee	Means a company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit
pH[g]	Means a measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in mg/L. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

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Primary Treatment [c]	Means wastewater treatment that: (a) will subsequently discharge wastewater to land or waters that are not waters of the United States and substantially removes all floating and settleable solids; or uses fine screens with 0.04-inch or smaller openings; or (b) will subsequently discharge wastewater to waters of the United States and uses screening, sedimentation, and skimming adequate to remove at least 30 percent of the biochemical oxygen demanding material and of the suspended solids in the treatment works influent; and disinfection, where appropriate.
Principal Executive Officer[a]	Means the chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of division of the agency
Pollutant[a]	Means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water
Produced Water	Means fluid extracted from a hydrocarbon reserve during development or production. The fluids is generally a mixture of oil, water and natural gas. This may include formation water, injection water, and any chemicals added downhole or during the oil/water separation process. For this Permit, produced water may also include commingling of other facility sources of wastewater with characteristics including, deck drainage, completion fluids, workover fluids, well treatment fluids, test fluids, hydrostatic test water, and incidental spills, or excavation dewatering in, or near to, sites contaminated with petroleum hydrocarbons.
Production Facility	For this Permit means any mobile or fixed structure, or other structures such as subsea completion components of shore-based coastal facilities, involved in the active recovery of hydrocarbons from production formations. These operations may occur simultaneously with or following development operations. In addition, for this Permit a Production Facility includes well plugging and abandonment activities using a mobile offshore drilling unit.
Receiving Waterbody	Means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface water, natural or artificial, public or private, inland or coastal, fresh or

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

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	salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state. (See "Waters of the U.S." at 18 AAC 83.990(77))
Recommencing Facilities	Those facilities that may have let permit coverage lapse but still meet the coverage requirements of the Permit.
Report	In this Permit, the definition of report may include, but not be limited to, inputting results of analysis on a Discharge Monitoring Report, submit a document summarizing the results of a study or activity, or notify the Department of a triggering condition or Permit violation.
Residual Chlorine	Means chlorine remaining in water or wastewater at the end of a specified contact period as combined or free chlorine.
Responsible Corporate Officer[a]	Means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation The Responsible Corporate Officer can also be the manager of one or more manufacturing, production, or operating facilities if the requirements of 18 AAC 83.385(a)(1)(B)(i)-(iii) are met.
Secondary Recreation[b]	Means activities in which incidental water use can occur. Secondary recreation includes boating, camping, hunting, hiking, wading, and recreational fishing. Secondary contact recreation does not include fish consumption.
Severe Property Damage[a]	Means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
Sheen[b]	Means an iridescent appearance on the water surface
Shellfish[b]	Means a species of crustacean, mollusk, or other aquatic invertebrate with a shell or shell-like exoskeleton in any stage of its life cycle
Sidetrack Well	Means a new hole drilled from a main well to a different bottom-hole location. Also referred to as Step-out Well.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition
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Solids Control Equipment	Means shale shakers, centrifuges, mud cleaners, and other equipment used to separate drill cuttings and/or stock barite solids from drilling fluid recovered from the wellbore.
Static Sheen Test	Means the standard test procedures in appendix 1 to subpart A of 40 CFR part 435 that have been developed for this industrial subcategory for the purpose of demonstrating compliance with the requirement of no discharge of free oil. Also referred to as EPA Test Method 1617.
Stock Barite	Means the barite that was used to formulate a drilling fluid.
Stock Base Fluid	Means the base fluid that was used to formulate a drilling fluid.
Synthetic-based Drilling Fluid	Means "drilling fluid" that has a synthetic material or a combination of synthetic materials as its continuous phase with water as the dispersed phase.
Sufficiently Sensitive Methods	Per 40 CFR 122.21(a)(3), a method approved under 40 CFR 136 is sufficiently sensitive when: (A) The method minimum level (ML) is at or below the level of the applicable water quality criterion for the measured parameter, or (B) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge, or (C) The method has the lowest ML of the analytical methods approved under 40 CFR 136 for the measured pollutant or pollutant parameter.
Synthetic Material	As applied to synthetic-based drilling fluid means material produced by the reaction of specific purified chemical feedstock, as opposed to the traditional base fluids such as diesel and mineral oil which are derived from crude oil solely through physical separation processes.
Territorial Seas	Means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the off shore limit of inland waters, and extending off shore a distance of three miles.
Test Fluid	Means the discharge that would occur should hydrocarbons be located during exploratory drilling and tested for formation pressure and content. This would consist of fluids sent downhole during testing along with water from the formation.

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

Total Suspended Solids (TSS)[g]	Means a measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136
Twice per year	Means two time periods during the calendar year: January through June and July through December.
Upset[a]	Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
Victual Waste	Means any spoiled or unspoiled food waste.
Wastewater Treatment	Means any process to which wastewater is subjected in order to remove or alter its objectionable constituents and make it suitable for subsequent use or acceptable for discharge to the environment
Water-based Drilling Fluid	Means “drilling fluid” that has water as its continuous phase and the suspending medium for solids, whether or not oil is present.
Water Depth	Means the depth of the water between the surface and the seafloor as measured at mean lower low water.
Waterflooding Discharges	Means discharges associated with the treatment of seawater prior to its injection into a hydrocarbon-bearing formation to improve the flow of hydrocarbons from production wells, and prior to its use in operating physical/chemical treatment units for sanitary waste. These discharges include strainer and filter backwash water.
Well Completion Fluids	Means salt solutions, weighted brines, polymers and various additives used to prevent damage to the well bore during operations which prepare the drilled well for hydrocarbon production. These fluids move into the formation and return to the surface as a slug with the produced water.
Workover Fluids	Means salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow for maintenance, repair, or abandonment procedures. Drilling fluids

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
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	used during workover operations are not considered workover fluids by definition. Packer fluids (low solid fluids between the packer, production string, and well casing) are considered to be workover fluids.
Waters of the United States or Waters of the U.S.	Has the meaning given in 18 AAC 83.990(77)
Water Recreation[b]	See contact recreation or secondary recreation
Water Supply[b]	Means any of the waters of the United States that are designated in 18 AAC 70 to be protected for fresh water or marine water uses. Water supply includes waters used for drinking, culinary, food processing, agricultural, aquacultural, seafood processing, and industrial purposes. Water supply does not necessarily mean that water in a waterbody that is protected as a supply for the uses listed in this paragraph is safe to drink in its natural state.
Week	Means the time period of Sunday through Saturday
4-day LC_{50}	A as applied to the sediment toxicity means the concentration (milligrams/kilogram dry sediment) of the drilling fluid in sediment that is lethal to 50 percent of the *Leptocheirus plumulosus* test organisms exposed to that concentration of the drilling fluids after four days of constant exposure.
10-day LC_{50}	As applied to the sediment toxicity means the concentration (milligrams/kilogram dry sediment) of the drilling fluid in sediment that is lethal to 50 percent of the *Leptocheirus plumulosus* test organisms exposed to that concentration of the drilling fluids after ten days of constant exposure.
96-hour LC_{50}	Means the concentration (parts per million) or percent of the suspended particulate phase (SPP) from a sample that is lethal to 50 percent of the test organisms exposed to that concentration of the SPP after 96 hours of constant exposure.
C_{12}-C_{14} Ester and C_8 Ester	Means the fatty acid/2-ethylhexyl esters with carbon chain lengths ranging from 8 to 16 and represented by the Chemical Abstracts Service (CAS) No. 135800-37-2.

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

C_{16}-C_{18} Internal Olefin	Means the fatty acid/2-ethylhexyl esters with carbon chain lengths ranging from 8 to 16 and represented by the Chemical Abstracts Service (CAS) No. 135800-37-2.
C_{16}-C_{18} Internal Olefin Drilling Fluid	Means a C16-C18 internal olefin drilling fluid formulated as specified in Appendix 8 of subpart A of 40 CFR Part 435.
Quarterly	For this Permit, means January through March, April through June, July through August, and September through December.

a) See 18 AAC 83

b) See 18 AAC 70.990

c) See 18 AAC 72.990

d) See 40 CFR Part 136

e) See EPA Technical Support Document

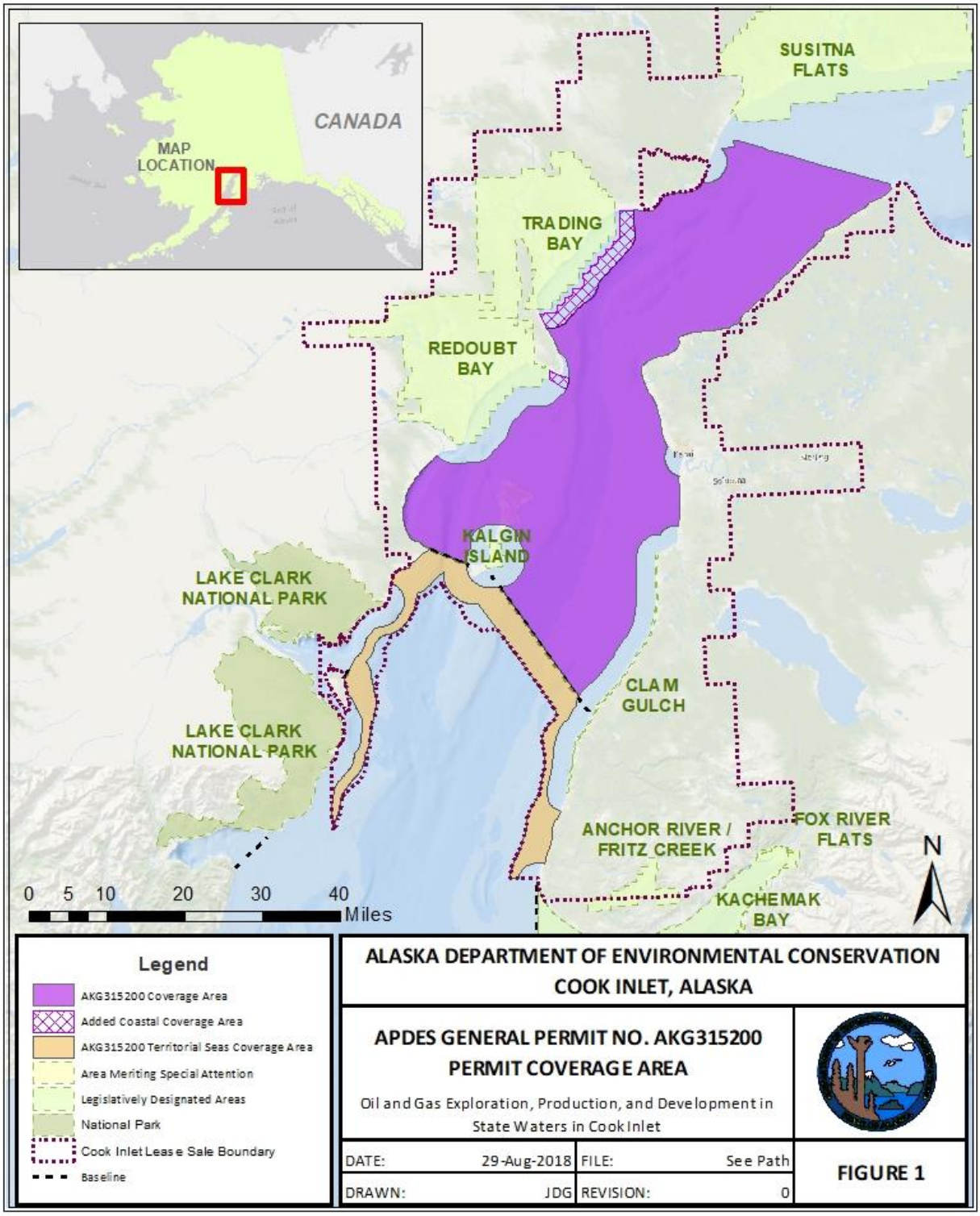
f) See Standard Methods for the Examination of Water and Wastewater 18th Edition

g) See EPA Permit Writers Manual

Appendix D

Cook Inlet Coverage Area

Figure 1: Coverage Area Map



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Appendix E

Method for Conducting a Sediment Toxicity Test with *Leptocheirus plumulosus* and Non-aqueous Fluids or Synthetic Based Drilling Muds

Introduction

This test method describes procedures for obtaining data regarding the effects of non-aqueous fluids (NAF) or synthetic based drilling muds (SBMs) on the marine amphipod, *Leptocheirus plumulosus*. The tests are conducted in a similar manner; differences are noted in the text and tables below. USEPA is regulating the sediment toxicity of NAFs and SBMs discharged by oil and gas extraction facilities in coastal and offshore waters as an indication of the toxicity of the drilling muds (USEPA 2000). This test method conforms to the Effluent Limitations Guidelines specified in 40 CFR part 435 (see 66 FR 6849, January 22, 2001). As specified in the Effluent Limitations Guidelines, this test method is consistent with ASTM Standard Guide E 1367-92 (ASTM 1997). Since ASTM E 1367-92 was outdated at the time 40 CFR part 435 (see 66 FR 6849, January 22, 2001) was published in the Federal Register, this test method is also consistent with ASTM E 1367-99 (ASTM 2000), which is the latest version published by ASTM.

Test Species

L. plumulosus is an infaunal amphipod that is indigenous to subtidal regions along the east coast of the U.S. This amphipod constructs U-shaped burrows in the top 5 cm of fine sand to silty clay sediments (ASTM E1367-99). As a result of its broad salinity and particle size tolerances, it is a desirable test species for a variety of toxicity testing programs.

Collection and Handling

In the field, amphipods can be collected using sediment grab samplers such as Peterson and Ponar dredges. This species has been collected in various tributaries of the Chesapeake Bay for various toxicity testing programs (ASTM E 1367-99). The contents of each grab should be sieved through a 500 □m mesh screen. The sediment and organisms retained on the screen are gently rinsed into plastic buckets containing sediment and water from the collection site. These buckets are quickly transported back to the laboratory and aerated. See ASTM E 1367-99 for more details on collection and handling.

Holding and Acclimation

Amphipods can be placed in aquaria containing a 1-2 cm deep layer of collection site sediment that has been sieved through a 500 μm mesh screen. Amphipod density should be about 200-300 per 40 L aquarium with vigorous aeration. Two to three days are sufficient for acclimation to test conditions, and during this period a gradual change over from site water to test water is recommended (ASTM E 1367-99).

Environmental Tolerances

L. plumulosus is tolerant of a broad salinity range, from near 0 to 33 g/kg (‰) (ASTM E 1367-99). This species has demonstrated up to 100% survival in >90% silt-clay sediment and an average of 85% survival in >95% sand/gravel sediment (ASTM E 1367-99). The ASTM data are consistent with data published from other studies indicating that *L. plumulosus* is tolerant of sandy and silty sediments. For example, Schlekat et al. (1992) noted a mean survival of 97.5% when *L. plumulosus* was exposed for 10 days to field collected sediments ranging from 98.1% sand to 96.5% fines. Further, this species was collected in

the field in sediments consisting of 99.9% sand and 92.1% fines, indicating that *L. plumulosus* is a generalist and can thrive in a variety of sediment types (Schlekat et al. 1992).

However, the fine fraction of sediments in the Schlekat et al. study did not exceed 55% clay, indicating that the fine fraction was a mixture of silt and clay sized particles. Data from other studies indicated that this species is intolerant of sediments high in clay content. McGee et al. (1999) noted acceptable survival when this species was exposed to Baltimore Harbor sediments containing up to 72% clay. However, Emery et al. (1997) noted significantly reduced amphipod survival when *L. plumulosus* was exposed for 10 days to Magothy River, Maryland sediment (amended with beach sand and kaolinite clay) containing 84%, 90%, and 100% clay.

These data indicated that the tolerance range of this amphipod to clay content is between about 72 to 84%. As such, caution should be used when conducting *L. plumulosus* toxicity tests with sediments with clay content greater than about 70%. This should not have a significant impact on using this species in the NAF and SBM toxicity testing program, since field sediments seldom exceed 70% clay content (Suedel and Rodgers 1991).

Control Sediments

Control sediment must meet certain minimum requirements to be used in the SBM testing program. The primary requirement is that the sediment should be able to support *L. plumulosus* in cultures for extended periods of time. This will ensure that the sediment is chemically nontoxic and that the physical and chemical characteristics of the sediment (e.g., total organic carbon, particle size distribution, and moisture content) are within the tolerance range of the test species. It is expected that separate aliquots of the culture sediment will also be used as a control sediment to be amended by NAFs or SBMs in the NAF/SBM testing program. Any modifications made to the control sediments should be noted in the report.

Characterization

Sediments used in testing should be characterized for total organic carbon (TOC), particle size distribution (sand, silt, and clay), and percent water content. These parameters have been shown to influence the results of NAF/SBM toxicity to *L. plumulosus* in initial experiments. Variations in these sediment characteristics should be quantified so that potential effects of these parameters on test results can be closely monitored.

Collection

Control sediments should be collected from the amphipod collection site or from another area that can provide a consistent source of sediment with characteristics within the tolerance range of *L. plumulosus*. Sediments showing evidence of chemical contamination should not be used in the NAF/SBM testing program. Any site water overlying the sediment should be retained so that fine particles suspended in the water can be re-combined with the sediment before use. Sediment salinity and temperature should be

recorded at the time of collection. Sediment collected for use should be homogenized and a composite sample prepared for analysis for the parameters outlined above.

Sieving

Sediments collected in the field for culturing and testing purposes should be first press-sieved through a 2,000 μm or similar mesh sieve to remove large debris and then through a 500 μm mesh sieve to remove any indigenous organisms. Sediments have also been press-sieved through a 250 to 350 μm mesh sieve prior to testing to aid in the enumeration of amphipods on a 500 μ m mesh sieve at test termination.

Storage

The control sediment should be stored in plastic or glass containers at 4±3°C until test initiation. The sediment should be stored in the dark and should not be allowed to freeze or dry out during storage (E 1367-92).

Test Water

Water used in the NAF/SBM program should be available in sufficient quantities and be acceptable to *L. plumulosus*. The minimum requirement for acceptable water for use in the NAF program is that healthy test organisms survive in the water, and in the water plus control sediment, for the duration of holding and testing without showing signs of disease or stress (ASTM E 1367-99). Another test for acceptability of the test water would be its successful use in the culturing of *L. plumulosus* (with the control sediment).

Natural seawater or synthetic salt water can be used in the NAF program. Natural salt water should be obtained from an uncontaminated area known to support a healthy, reproducing population of *L. plumulosus* or similar sensitive species. Reconstituted salt water can be prepared by adding commercially available sea salt in specified quantities. Natural seawater should be filtered by passing through a 5 micron filter before use. The reader is referred to ASTM E 1367-92 or E 1367-99 for more information concerning test water.

Mixing NAFs or SBMs with Control Sediment

Appendix 3 to Subpart A of Part 435 – Procedure for Mixing Base Fluids with Sediments (40 CFR parts 9 and 435 pages 6901-6902) describes a method for amending control sediments with synthetic-based drilling fluids. This same method can be used to amend control sediments with NAFs and SBMs. The control sediment should be sieved and homogenized before wet to dry weight ratio and density determinations are made and before NAFs are added to the control sediment. The following steps were

given in 40 CFR Appendix 3 for mixing NAFs and SBMs with control sediments (parentheses were added here to provide additional information):

1. Determine the wet to dry weight ratio for the control sediment (three replicates of 30 g each has been used successfully);
2. Determine the density (g/ml) of the control sediment (three replicates of >25 ml is suitable for this purpose);
3. Determine the amount of NAF or SBM needed to obtain a desired test concentration;
    a. Determine the amount of wet sediment required;
    b. Determine the amount of dry sediment in kilograms for each test concentration;
    c. Determine the amount of NAF or SBM required to amend the control sediment at each test concentration;
4. Mix NAF or SBM with control sediment;
5. Test for homogeneity of NAF or SBM in sediment, and;
6. Mix sufficient quantities of NAF or SBM with control sediment for each treatment of amended or spiked sediment.

The six steps given above for base fluids can also be applied to SBMs, except that the third bullet in Step 3 requires a measurement of the density of the SBM. The density of the SBM can then be used to estimate

the quantity required for the desired test concentration. Refer to the formulas below for NAF and SBM calculations:

$$\text{NAF Required (g)} = \frac{\text{Conc Desired (mg/kg)}}{\text{1000g/kg}} \times \frac{\text{Dry Weight Sediment (g)}}{\text{1000 mg/g}}$$

SBM Required = Conc. Desired x Dry Weight Sediment x SBM Density

(g) (ml/kg) (kg) (g/ml)

See 40 CFR parts 9 and 435 pages 6901-6902 for more information regarding this procedure.

Mixing Procedure

Mixing the NAF or SBM with the control sediment can be accomplished by following these steps:

- Place appropriate amounts of weighed NAF or SBM into a stainless steel mixing bowl;
- Tare the mixing bowl weight;
- Add appropriate amount of control sediment;
- Mix for 9 to15 minutes with a hand-held mixer equipped with stainless steel blades (e.g., KitchenAid Model KHM6), and;
- As appropriate, test mixing homogeneity as described below.

The control sediment alone should also be subjected to the mixing procedure to ensure mixing has no effect on sediment toxicity.

Homogeneity of Mixing

As noted above, tests for homogeneity of mixing should be performed, preferably in the procedure development phase (40 CFR part 9 page 6901-6902) by each laboratory performing NAF/SBM toxicity testing. This is to ensure that the NAF or SBM, which can be difficult to homogenize with control sediments, can be evenly mixed with the control sediment by each testing laboratory. Appendix 3 to Subpart A of Part 435 specifies that the coefficient of variation (CV) for a minimum of three replicate samples of the NAF/control sediment mixture must be less than 20%. Determinations of CV should be based on total petroleum hydrocarbon (TPH) content of the NAF or SBM as measured by EPA Methods 3550A and 8015M. . If the initial CV is >20%, then the NAF/SBM-sediment mixture must be re-mixed and reanalyzed until the ≤20% CV limit is achieved.

Homogeneity measurements should be made on the lowest and highest NAF concentrations for a given test. Laboratories should validate mixing efficiency via TPH measurements (as outlined above) of the low and high NAF concentrations. The homogeneity measurements should be made at least once per year.

Recommended Test Conditions

The recommended test conditions for conducting the 10-day or 96-hr sediment toxicity test with *L. plumulosus* are summarized in Table E-1 and are consistent with methods presented in ASTM E 1367-92

and subsequent updates (E 1367-99). Tests should be conducted at 20±1°C at 20±1‰ salinity with a 14h light; 10 h dark photoperiod at approximately 500-1,000 lux (or about 46 to 93 footcandles). Test chambers are 1-L glass containers with about a 10 cm inside diameter opening (or similar glass containers) that can contain about 150 ml sediment and 600 ml overlying water to achieve a 4:1 (v/v) water to sediment ratio. There are five (5) test concentrations plus a control for each NAF and SBM test. Five (5) replicates are included for the control sediment (E 1367-99) and for each test concentration.

The control sediment/test material mixture and test water should be added to test chambers the day before amphipods are added. This will allow for suspended particles to settle and allow time for equilibration of temperature and the sediment-water interface. After the overnight equilibration period, amphipods are randomly distributed to each test chamber. Twenty amphipods are added to each replicate and there are five replicates per test treatment. Amphipods caught on the water surface can be pushed under with a glass rod. Individuals that have not burrowed within 5 to 10 minutes can be replaced, unless they are exhibiting an avoidance response. Amphipods are not removed at any time during the course of the toxicity test even if they appear dead. Test water is not renewed (i.e., static) and the amphipods are not fed during the exposure period. The toxicity test is terminated after 96 hours or 10 days for SBMs and NAFs respectively.

Temperature, salinity, pH, and dissolved oxygen (DO) should be monitored daily. Ammonia should also be monitored in overlying water to ensure that the concentrations of this constituent do not exceed the tolerance range of the test species. For *L. plumulosus*, this is about 60 mg/L (as total ammonia) at pH 7.7 in 10-day tests (USEPA 1994). Ammonia has not been a problem in initial *L. plumulosus* 96-hr and 10-day tests with various NAFs.

Biological Data

Mortality is the endpoint for *L. plumulosus* at the end of the exposure period. At test termination, the contents of each test chamber (amphipods plus test sediment) are sieved through a 500 um mesh screen to remove amphipods. Material retained on the screen should be rinsed into a sorting tray with clean salt water. The total numbers of live and dead amphipods should be recorded. Missing animals are presumed to have died and decomposed during the test and disintegrated. Amphipods should be counted alive if

there are any signs of movement, such as a neuromuscular pleopod twitch (ASTM E 1367-99). Gentle prodding may be used to elicit movement.

Test Acceptability Requirements

Table E-2 provides the acceptability requirements for the 10-day NAF and 96-hr SBM test per ASTM E 1367-92. The primary acceptability requirement for NAF testing is as follows:

- A toxicity test is unacceptable if more than a total of 10% of the control organisms die, or if the coefficient of variation (CV) of control survival is equal to or greater than 40%.

If this acceptability requirement is not met, then the data should be discarded and the experiment repeated. If this requirement is met, then the other acceptability requirements in TableE-2 should be reviewed and a determination made as to the acceptability of the data.

Reference Tests

A single toxicity test will be used to determine satisfactory laboratory performance and to determine whether an NAF or SBM can be discharged as it adheres to drill cuttings. The reference toxicants for the NAF test will be either a C_{16}-C_{18} -internal olefin reference standard or a C_{12}-C_{14} or C_8 ester. The reference toxicant for the SBM testing program will be a C_{16}-C_{18} internal olefin SBM which has also been specified for determining pass/fail for SBMs. The C_{16}-C_{18} Internal Olefin (IO) SBM is a 65/35 blend, proportioned by mass, of hexadecene and octadecene, respectively (40 CFR part 9 6849). These reference toxicity tests will be conducted in conjunction with all NAF or SBM tests to discern possible changes in the condition of the *L. plumulosus* population used in testing. The reference toxicant test must be conducted concurrently with each sample or batch of samples and at a minimum should be conducted at least monthly. Control charts of this reference standard should be maintained to perform statistical analyses, help understand the inherent variability in the reference test, and for long-term quality control. Test conditions for the reference test should follow the experimental conditions presented in Table E-1.

The reference toxicant test should be performed concurrently-and under the same conditions as the NAF or SBM test. The reference toxicant test should be conducted so that control limits (typically set at □2 standard deviations) can be established (USEPA 1994). If the reference test LC_{50} falls outside of this range of control limits generated on the most recent test data points, then the sensitivity of *L. plumulosus* and the credibility of the test results are considered suspect. In this case, the test procedure should be examined and the test repeated with a different batch of amphipods. A sediment test should not automatically be judged unacceptable if the reference test LC_{50} falls outside the expected range or if the control in the reference toxicity test exceeds 10%. The width of the control limits and all performance criteria listed in Table E-2 should be considered when determining the acceptability of a given NAF or SBM test.

Interpretation of Results

Procedures presented in this test method are used to calculate point estimates, or LC_{50} values. The LC_{50} value and 95% confidence limits of the NAF tests should be calculated on the basis of milligrams of NAF per kg dry control sediment (mg/kg) and amphipod mortality. The LC_{50} value and 95% confidence limits

of the NAF tests should be calculated on the basis of milliliters of NAF per kg dry control sediment (ml/kg) and amphipod mortality. A variety of methods can be used to calculate an LC_{50} value and its 95% confidence limits, including probit, moving average, trimmed Spearman-Karber and Litchfield-Wilcoxon methods (ASTM E 1367-99). The method used should take into account the number of partial kills, the number of test chambers per treatment (5), and the number of amphipods per test chamber (20).

The only NAF that will be allowed for use in drilling fluids that are discharge in association with cuttings are those that are as toxic or less toxic, but not more toxic, than the reference NAF (C_{16}-C_{18} internal olefin or C_{12}-C_{14} or C_8 ester).

The only SBMs that will be allowed for discharge are those that are as toxic or less toxic, but not more toxic, than the C_{16}-C_{18} internal olefin reference SBM.

These limitations are expressed as follows:

$$\frac{\text{96 hr. } LC_{50} \text{ RDF}}{\text{96 hr. } LC_{50} \text{ SBM}} \leq 1.00 \qquad \frac{\text{10 day } LC_{50} \text{ Reference Material}}{\text{10 day } LC_{50} \text{ NAF}} \leq 1.00$$

Where RDF = Reference Drilling Fluid

The EPA promulgated a sediment toxicity ratio of less than 1.0, indicating that the NAF or SBM can be equally toxic or less toxic, but not more toxic than the reference toxicant test LC_{50} values for *L. plumulosus*. Hence, the NAF or SBM data should be interpreted by comparing to the reference toxicant test LC_{50} value and whether it exceeds this value.

Culture Methods

Populations of *L. plumulosus* can be maintained through several generations in the laboratory. The culture conditions specified in ASTM E1367-92 and E1367-99 are provided in Table E-3. Besides the conditions specified, there are other conditions that are important in maintaining healthy *L. plumulosus* cultures, including identifying a source of clean sediment, sieving sediments before use, and the quality of the raw materials used to prepare their food. Preferably, the sediment and water used to culture the amphipods should be collected from the same area as those used in NAF tests. Fine-grained sediments have been shown to be suitable for this purpose (E1367-92). Sediments collected in the field for culturing purposes should be first sieved through a 2,000 μ m mesh sieve to remove large debris and then through a 500 μ m mesh sieve to remove any indigenous organisms. *L. plumulosus* cultures should be maintained at 20±1°C and 20±1‰ salinity. If used, natural seawater should be filtered through a 5 micron filter before adding to cultures. New culture chambers should be aerated and allowed to equilibrate overnight before adding amphipods. Water used to start a new culture chamber should be renewed 24 h after initiation and before

amphipods are added to culture chambers; otherwise, culture water should be renewed in conjunction with feeding.

Cultures should be observed daily to ensure sufficient aeration. An abundance of amphipods on the sediment surface during daylight hours may indicate insufficient dissolved oxygen or overcrowding, as amphipods typically remain in their burrows unless they are searching for food or a mate. Culture chambers should be terminated and restarted with fresh sediment about once every 8 weeks to avoid overcrowding. Overcrowding may lead to stress due to food or space limitations, and may also result in reduced female fecundity, thus reducing the relative health of the population of amphipods in a given culture chamber.

Cultures should be routinely inspected for the presence of indigenous worms and copepods, a microbial build-up, or black and sulfurous conditions beneath the sediment surface. Microbial growth appears as a white or gray growth associated with uneaten food, and is indicative of overfeeding. Presence of indigenous species, excess microbial growth, or black and sulfurous conditions may necessitate discarding the affected culture chamber.

Feeding

A mixture of micro-algae, yeast, fish food flakes, alfalfa powder, ground cereal leaves, and shrimp maturation feed has been used to feed cultures (E 1367-92 and E 1367-99). Micro-algae used in culturing include *Pseudoisochrysis paradoxa*, *Phaeodactylum tricornutum*, and *Tetraselmis suecica* mixed in equal parts on a volume basis. These algae provide a source of fatty acids that may otherwise be absent in the diet. In practice, however, it should be noted that *L. plumulosus* has been cultured successfully without the algal mixture and the yeast. The dry food portion of the diet that has been used to successfully culture *L. plumulosus* is shown below.

Dietary Component	Proportion
Fish food flakes (TetraMin®)	48.0%
Alfalfa powder	24%
Ground cereal leaves (dried wheat leaves)	24%
Shrimp maturation feed (Neo-Novum®)	4.0%

This dry food mixture should be homogenized into a fine powder and fed to each culture chamber at a rate of 0.1 to 0.5 g two to three times per week, depending on culture densities. Overfeeding may result in microbial build-up on the sediment surface. The quality of the alfalfa powder and dried wheat leaves may

not be consistent among suppliers, thus potentially adversely affecting culture performance. Feeding should occur immediately after culture water changes.

Obtaining Amphipods for Starting a Test

Immature and adult amphipods of mixed sexes and approximately 3 to 5 mm in length (as measured from the base of the first antenna to the end of the third pleon segment along the dorsal surface) are used in toxicity tests, as they are easier to handle and count than younger individuals. Gravid females are not used in testing. The 3 to 5 mm size class individuals are passed through a 1,000 μm mesh sieve and are retained on a 710 μm mesh sieve. A 500 μm mesh sieve has been used previously to retain amphipods of the size needed, but this results in a wider size range of amphipods used for testing. In preliminary NAF experiments, this wide size range may have contributed to variability in mortality observed that was not present when the 710 μm mesh sieve was used to retain amphipods in later experiments. The amphipods passing through a 1000 μm mesh sieve but trapped on a 710 μm mesh sieve provide a more uniform size range of animals that is thought to decrease the previously-observed variability in mortality. Laboratories are encouraged to use this type of approach to reduce the variability in the size of amphipods used in the NAF/SBM testing program.

Table 25 Conditions[1] for conducting 96 hour NAF and 10-day SBM sediment toxicity test with *L plumulosus*

Parameter	Conditions
Test type	Static whole sediment toxicity test
Temperature	20±1°C
Salinity	20±1‰
Light quality	Wide-spectrum fluorescent lights
Illuminance	500-1,000 lux
Photoperiod	14h light:10h dark[2]
Test chamber	1-L glass beaker or jar
Sediment volume	150 ml (2 cm depth)
Overlying water volume	600 ml (4:1 [v/v] water to sediment ratio)
Renewal of overlying water	None
Size and life stage of amphipods	3-5 mm; immature and adult
Number of organisms/chamber	20
Number of test concentrations	5
Number of replicate chambers/treatment	5 in both controls and test treatments
Feeding	None
Aeration	Water in each test chamber should be aerated throughout the test.
Overlying Water	Clean natural or synthetic seawater
Overlying water quality	Temperature, salinity, pH, and D.O. daily; ammonia, as needed
Test duration	96 hours
Endpoint	Survival
Test acceptability	Minimum mean control survival of 90% and satisfaction of criteria outlined in Table E-2
Dietary Component	Proportion
Fish food flakes (TetraMin®)	48.0%
Alfalfa powder	24%
Ground cereal leaves (dried wheat leaves)	24%
Shrimp maturation feed (Neo-Novum®)	4.0%

Footnotes:

1. Conditions listed are consistent with test conditions specified in ASTM E 1367-92 and subsequent updates (E 1367-99) unless otherwise noted
2. Although ASTM E1367 specifies 16h light:8h dark, the photoperiod was changed to 14h light:10h dark to be consistent with the *Mysidopsis bahia* bioassay for drilling fluids

(58 CFR 12453, 1993).

Table 26 Test acceptability requirements[1] for 10-day NAF and 96 hour SBM test with *L plumulosus*

- A 10-day NAF and 96-hr SBM toxicity tests are unacceptable if more than a total of 10% of the control organisms die, or if the coefficient of variation (CV) of control survival is equal to or greater than 40%.
- Ten-day NAF and 96-hr SBM toxicity tests should usually be considered unacceptable if one or more of the following occurred:
- All test chambers were not identical.
- Test organisms were not randomly or impartially distributed to test chambers.
- Required reference standard was not included in the test.
- All test animals were not from the same population, were not all of the same species, or were not of acceptable quality.
- Amphipods from a wild population were maintained in the laboratory for more than two weeks, unless the effects of prolonged maintenance in the laboratory has been shown to have no significant effect on sensitivity.
- The test organisms were not acclimated at the test temperature and salinity at least 48 hours before they were placed in the test chambers.
- Temperature and dissolved oxygen concentrations were not measured.

Footnotes:

1. Requirements listed are consistent with those specified in ASTM E 1367-92 and subsequent updates (E 1367-99). However, these guidelines are not identical to those listed ASTM E 1367 in part because some acceptability guidelines listed in E1367-92 are not applicable or practical for the NAF/SBM toxicity testing program

Table 27 Culture conditions for *L plumulosus*

Parameter	Conditions
Temperature	20±1°C
Salinity	20±1‰
Light quality	Wide-spectrum fluorescent or cool white lights
Illuminance	500-1,000 lux
Photoperiod	14h light:10h dark
Culture chamber	Shallow plastic tubs or glass aquaria
Sediment volume	1-2 cm depth at bottom of each culture chamber
Renewal of overlying water	Static renewal (30-50% water volume change 2-4 times per week)
Number of organisms/chamber	Start with about 300 mixed age (mostly immature and young adults) individuals per chamber
Feeding	0.1 to 0.5 g dry mixture 2-3 times per week (see text)
Aeration	Continuous gentle to moderate aeration so as to not suspend sediments
Overlying Water	Clean natural or synthetic seawater
Overlying water quality	Salinity, temperature, and ammonia during culture start-up
Footnotes: 1. Conditions listed are consistent with culture conditions specified in ASTM E 1367-92 and subsequent updates (E 1367-99).	

References

American Society for Testing and Materials (ASTM). 1997. Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods. E 1367-92. Annual Book of ASTM Standards, Vol. 11.05.

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Suedel, B.C. and J.H. Rodgers, Jr. 1991. Variability of bottom sediment characteristics of the continental United States. Water Res. Bull. 27:101-109.

USEPA. 1994. Methods for Assessing the Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods. EPA/600/R-94/025. USEPA Office of Research and Development, June 1994.

USEPA. 2000. Final Effluent Limitations Guidelines and Standards for Synthetic-Based Drilling Fluids Fact Sheet. EPA-821-F-00-014. USEPA Office of Water, December 2000. (www.epa.gov/ost/guide/sbf/final/finalfact.html

Appendix F

CWA Part 316(b) Cooling Water Intake Structure (CWIS) Requirements

Appendix F incorporates by reference 40 CFR Part 125, Subpart N requirements applicable to cooling water intake structures for new offshore oil and gas extraction facilities under the CWA 316(b). This Attachment summarizes the Subpart N requirements. Applicants and permittees should consult 40 CFR Part 125, Subpart N, for the specific, applicable requirements. To the extent there are any inconsistencies or missing provisions in this summary Attachment, the applicant and permittee must comply with the Subpart N requirements.

Pursuant to 40 CFR 125.134(a)(1), the owner or operator of a new offshore oil and gas extraction facility must comply with: (i) Track I in 125.134(b) or Track II in 125.134(c) if it is a fixed facility; or (ii) Track I in 125.134(b) if it is not a fixed facility (i.e. non-fixed facility).

A. Application Requirements. A permit applicant for a new fixed facility must submit to the Director a written statement, included in the Notice of Intent, indicating its intent to comply with either the Track I requirements in 40 CFR 125.134(b) as summarized in Paragraph B, below or the Track II requirements in 40 CFR 125.134(c) as summarized in Paragraph C, below. A permit applicant must also submit the application information required in accordance with 40 CFR 125.136(a)(2). Note: a non-fixed facility must comply with Track I requirements.

B. Track I Intake Structure Operational and Other Requirements.
   (1) Fixed Facilities that Do Not Employ Sea Chests as Intake Structures.
      (a) The cooling water intake structure(s) must be designed and constructed so that the maximum through-screen design intake velocity is 0.5 ft/s or less;
      (b) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the volume of the water column within the area centered about the opening of the intake with a diameter defined by the distance of one tidal excursion at the mean low water level;
      (c) The permittee shall select and implement design and construction technologies or operational measures for minimizing impingement mortality of fish and shellfish as determined by the Director in accordance with 40 CFR 125.134(b)(4)(i-iii);
      (d) The permittee shall select and implement design and construction technologies or operational measures for minimizing entrainment of entrainable life stages of fish and shellfish;
      (e) The applicant/permittee shall submit the applicable information specified in 40 CFR 125.134(b)(6);
      (f) The permittee shall implement monitoring requirements specified in 40 CFR 125.137 as summarized in Paragraph E, below.
      (g) The permittee shall implement the record keeping, data recording form creation and use, and applicable annual reporting requirements specified in 40 CFR 125.138 as summarized in Paragraph F, below.
   (2) Fixed Facilities that Employ Sea Chests as Intake Structures.
      (a) The cooling water intake structure(s) must be designed and constructed so that the maximum through-screen design intake velocity is 0.5 ft/s or less;
      (b) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the

volume of the water column within the area centered about the opening of the intake with a diameter defined by the distance of one tidal excursion at the mean low water level;

(c) The permittee shall select and implement design and construction technologies or operational measures for minimizing impingement mortality of fish and shellfish as determined by the Director in accordance with 40 CFR 125.134(b)(4)(i-iii);

(d) The applicant/permittee shall submit the applicable information specified in 40 CFR 125.134(b)(6);

(e) The permittee shall implement monitoring requirements specified in 40 CFR 125.137 as summarized in Paragraph E, below.

(f) The permittee shall implement the record keeping, data recording form creation and use, and applicable annual reporting requirements specified in 40 CFR 125.138 as summarized in Paragraph F, below.

(3) New Non-Fixed Facilities.

(a) The cooling water intake structure(s) must be designed and constructed so that the maximum through-screen design intake velocity is 0.5 ft/s or less;

(b) The permittee shall select and implement design and construction technologies or operational measures for minimizing impingement mortality of fish and shellfish as determined by the Director in accordance with 40 CFR 125.134(b)(4)(i-iii);

(c) The applicant/permittee shall submit the applicable information specified in 40 CFR 125.134(b)(6);

(d) The permittee shall implement monitoring requirements specified in 40 CFR 125.137 as summarized in Paragraph E, below.

(e) The permittee shall implement the record keeping, data recording form creation and use, and applicable annual reporting requirements specified in 40 CFR 125.138 as summarized in Paragraph F, below.

C. Track II Intake Operational and Other Requirements.

(1) Fixed Facilities With or Without Sea Chests as Intake Structures.

(a) The permittee shall comply with the demonstration requirements in 40 CFR 125.134(c)(1);

(b) For cooling water intake structures located in an estuary or tidal river, the total design intake flow over one tidal cycle of ebb and flow must be no greater than one (1) percent of the volume of the water column within the area centered about the opening of the intake with a diameter defined by the distance of one tidal excursion at the mean low water level;

(c) The applicant/permittee shall submit the applicable information required in 40 CFR 122.21(r)(2) (except (r)(2)(iv)), (3) and (4) and 40 CFR 125.136(c);

(d) The operator must implement monitoring requirements specified in 40 CFR 125.137 to demonstrate compliance with applicable requirements.

(e) The operator must implement the record keeping requirements specified in 40 CFR 125.138.

D. More Stringent Requirements. The permittee shall comply with any more stringent requirements relating to location, design, construction, and capacity of a cooling water intake structure(s) or monitoring

requirements at a new offshore oil and gas extraction facility that the Director deems are reasonably necessary to comply with any provision of federal or state law.

E. Monitoring Requirements. The permittee shall perform monitoring in accordance with the applicable monitoring requirements in 40 CFR 125.137.

(1) Track I Fixed Facilities that Do Not Employ Sea Chests as Intake Structures. The permittee shall monitor for entrainment in accordance with 40 CFR 125.137(a)(2), (a)(3) and (a)(5). The permittee shall conduct applicable velocity monitoring in accordance with 40 CFR 125.137(b) and visual or remote inspections in accordance with 40 CFR 125.137(c). The permittee is not required to monitor for impingement unless the Director determines that the information would be necessary to evaluate the need for or compliance with additional requirements in accordance with 40 CFR 125.134(b)(4) or more stringent requirements in accordance with 40 CFR 125.134(d).

(2) Track I Fixed Facilities that Employ Sea Chests as Intake Structures. The permittee shall conduct applicable velocity monitoring in accordance with 40 CFR 125.137(b) and visual or remote inspections in accordance with 40 CFR 125.137(c). The permittee is not required to perform biological monitoring unless the Director determines that the information would be necessary to evaluate the need for or compliance with additional requirements in accordance with 40 CFR 125.134(b)(4) or more stringent requirements in accordance with 40 CFR 125.134(d).

(3) Track II Fixed Facilities that Employ Sea Chests as Intake Structures. The permittee shall monitor for impingement in accordance with 40 CFR 125.137(a)(2), (a)(3) and (a)(4). The permittee shall conduct applicable velocity monitoring in accordance with 40 CFR 125.137(b) and visual or remote inspections in accordance with 40 CFR 125.137(c).

(4) Track II Fixed Facilities that Do Not Employ Sea Chests as Intake Structures. The permittee shall monitor for both impingement and entrainment in accordance with 40 CFR 125.137(a)(2), (a)(3), (a)(4) and (a)(5). The permittee shall conduct applicable velocity monitoring in accordance with 40 CFR 125.137(b) and visual or remote inspections in accordance with 40 CFR 125.137(c).

(5) Non-Fixed Facilities. The permittee shall conduct applicable velocity monitoring in accordance with 40 CFR 125.137(b) and visual or remote inspections in accordance with 40 CFR 125.137(c). The permittee is not required to perform biological monitoring unless the Director determines that the information would be necessary to evaluate the need for or compliance with additional requirements in accordance with 40 CFR 125.134(b)(4) or more stringent requirements in accordance with 40 CFR 125.134(d).

F. Record Keeping and Reporting. Every permittee shall comply with the following record retention, data recording form creation and use, and applicable annual reporting requirements.

(1) Record Retention. The permittee shall keep records of all the data used to complete the permit application or NOI and to show compliance with the requirements, any supplemental information developed in accordance with 40 CFR 125.136, and any compliance monitoring data created and/or submitted in accordance with Paragraph E, above for a period of three (3) years from the date that the permittee ceased exploratory facility operations and all authorized discharges at a

drilling site for which the data was created or generated. The Director may require the permittee to retain these records for a longer period of time by written notice.

(2) Data Recording Forms. The permittee shall create and use written forms to record compliance monitoring data including weekly visual/remote inspection data, velocity monitoring data, and applicable impingement and entrainment sampling data.

(3) Yearly Status Report. The permittee shall submit a yearly status report to the Director by March 1 of the following year that includes the biological monitoring records for each CWIS of fixed facilities, velocity and head loss monitoring records, and records of visual and/or remote inspections as required by Paragraph E, above.

ATTACHMENT 1 NOTICE OF INTENT INFORMATION

Attachment 1

Notice of Intent

FILE NUMBER_____(for DEC use)

NOTICE OF INTENT / APPLICATION TO DISCHARGE UNDER:

General Permit No. AKG315200

Oil and Gas Exploration, Production, and Development Facilities in State Waters in Cook Inlet

Please submit this NOI electronically to: dec.water.oilandgas@alaska.gov and send a hardcopy to:

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501

Submittal of this document constitutes notice that the party identified in NOI Sections 2 and 3 intends to be covered by the Alaska Pollutant Discharge Elimination System (APDES) General Permit AKG315200 – Oil and Gas Exploration, Production, and Development Facilities in State Waters in Cook Inlet (Permit). The permit authorizes discharges into waters of the United States resulting from onshore and offshore mobile or fixed oil and gas activities, and other similar discharges from non-oil and gas facilities, and obligates the applicant to comply with the terms and conditions of the permit. Please provide all information below per each site proposed for exploration activities. Attach supplemental information sheets as appropriate.

SECTION 1 – PERMIT INFORMATION

Please indicate the permit status of the applicant:

☐ **Transferring Permittee**: An existing Cook Inlet oil & gas facility authorized to discharge under an individual permit or AKG315000 (See Permit Sections 1.1.5) requesting transfer of coverage to AKG315200.

Indicate current Authorization No.:

NOTE: MODU Facilities authorized under AKG315100 will be automatically transferred per Permit Section 1.1.3, and do not need to complete an NOI unless requesting additional discharges or a new activity location (see Existing Permittee – Revision option below)

☐ **New Applicant**: A new facility meeting criteria under Permit Sections 1.1.4 and 1.1.6-1.1.10 for coverage under this Permit.

☐ **Existing Permittee**: A permittee currently authorized under AKG315200 requesting a revision or renewal of their current permit coverage.

Indicate current Authorization No.:

☐ **Revision** – An existing facility permitted under AKG315200 seeking to add discharges to current authorization.

☐ **Reissuance** – An existing authorization under AKG315200 is required by Permit Section 1.2 to apply for reissuance of an existing authorization 180 Days prior to permit expiration.

SECTION 2 – FACILITY CONTACT INFORMATION

Facility Name:	Company:	
Contact Person:	Phone:	Fax:
Email:		
Facility Address (Street Location):		
City:	State:	Zip:
Facility Mailing Address (☐ Check here if same as Above):		
City:	State:	Zip:
Email Address:		

SECTION 3 – RESPONSIBLE PARTY CONTACT INFORMATION

Owner/Operator or Person meeting description in 18 AAC 83.385 (a)(1-3). Only the responsible party may sign the NOI.

First Name:	Last Name:	Title:
Company:	Phone:	Fax:
E-mail Address:		
Mailing Address:		
City:	State:	Zip:

SECTION 4 – DULY AUTHORIZED REPRESENTATIVE

Person or position given authority to sign APDES reports, forms, or submittals (other than an NOI) per 18 AAC 83.385 (b). Leave blank if the Responsible Party does not give signatory authority at this time.

Last Name:	Title:	Title:
Company:	Phone:	Fax:
E-mail Address:		
Mailing Address:		
City:	State:	Zip:

SECTION 5 – ON-SITE CONTACT / OPERATOR CONTACT INFORMATION

☐ Check if same as Responsible Party

Last Name:	Title:	Title:
Company:	Phone:	Fax:
E-mail Address:		
Mailing Address:		
City:	State:	Zip:

SECTION 6 – BILLING CONTACT INFORMATION

☐ Check if same as Responsible Party

First Name:	Last Name:	Title:
Company:	Phone:	Fax:
E-mail Address:		
Mailing Address:		
City:	State:	Zip:

SECTION 7 – DISCHARGE INFORMATION BY FACILITY CATEGORY

Which category below best describes your facility or project and attach the appropriate supplemental form:

☐ Onshore Oil and Gas Production Facility – Submit AKG315200 Supplemental Form 7A

☐ Fixed Oil and Gas Platform Facility – Submit AKG315200 Supplemental Form 7B

☐ Mobile Offshore Drilling Unit (MODU) used for Oil and Gas Exploration – Submit AKG315200 Supplemental Form 7C

☐ Horizontal Directional Drilling (HDD) Project – Submit AKG315200 Supplemental Form 7D

☐ Geotechnical Investigation Project – Submit AKG315200 Supplemental Form 7E

AKG315200 – Notice of Intent:

SUPPLEMENTAL ATTACHMENT FORMS

FILE NUMBER_____(for DEC use)

AKG315200 SUPPLEMENTAL ATTACHMENT FORM 7A

Shore-based Coastal Oil and Gas Production Facility

SUPPLEMENTAL ATTACHMENT FORM 7A

SECTION 8 - FACILITY INFORMATION

Facility Name:			
Latitude:	Longitude:	Coordinate Source	
Company:	Phone:	Fax:	
E-mail Address:			
Mailing Address:			
City:	State:	Zip:	
List Contaminated Sites within 1500 feet of the facility:			
Year Facility Began Operations in the Cook Inlet:			

SECTION 9 - OTHER WASTE DISPOSAL METHODS USED: (e.g. Class I / II UIC Wells that Receive Waste from this Facility):

Well	Class	Estimate Annual Volume of Produced Water:	Other Waste Types (001, 002, etc.)	Annual Other Waste Volume:	Estimated Total Annual Volume:

Describe Other Disposal Practices at the facility (e.g., Backhauled, Reinjected for Enhanced Oil Recovery, Hauled to Shore, Centralized Treatment, or Disposal Facility, etc.):

SECTION 10 - INVENTORY OF DISCHARGES

Check all that apply then indicate the depth of discharge and the maximum daily and average discharge rate, and indicate if you will be requesting a default mixing zone for that discharge *(include units of measure).*

Discharge Requested	Coordinates	Variance Requested?	Discharge Characteristics:	Other Information
☐ 014 Waterflooding (Filter Backwash) Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge Check one: ☐ Submerged Discharge ☐ Surface Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [1] ☐ No	Depth: Max Temp (estimate if New): Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 015 Produced Water Is this a new discharge request? ☐ Yes [2] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate: Average Monthly Rate:	Describe Treatment:
☐ 020 Hydrostatic Test Water Check all that apply: ☐ New or uncontaminated infrastructure (Permit Section 2.93) ☐ Infrastructure previously exposed to Hydrocarbons (Permit Section 2.94) ☐ Potable Water Systems (Permit Section 2.95)	Latitude: Longitude: Coordinate Source:	N/A	Depth: Max Daily Rate:	Will the Hydrostatic Test Water be Comingled with Produced Water for Treatment? ☐ Yes ☐ No If no, Describe Treatment (If Applicable)[3]:

☐ List or attach any other discharge requests included in the Permit but not included in this NOI:

NOTES:

1. Applicants not listed in Permit Table 24 must complete Sections 1-3 and 5 of APDES Form 2M. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
2. Attach APDES Forms 1 and 2C and 2M.
3. Submit Treatment Unit information to be used in BMP Plan for review (Permit Section 2.9.4)

SECTION 11 - CHECKLIST – ADDITIONAL NOI REQUIREMENTS		
Project Vicinity Map and Site Plan	☐ Included	Submit a vicinity map (topographic map or aerial photograph) showing the general location of the onshore facility and a site plan.
Site Map	☐ Included ☐ N/A	Submit a site map showing the exact location of the facility and discharges associated with the facility.
Line Drawings and Flow Balances	☐ Included ☐ N/A	Submit line drawings that show the flow, including rates/volumes of each discharged waste stream through facility. The line drawings must contain flow balances showing average and maximum flow rates between intakes, operations, treatment units, and outfalls.
Quality Assurance Project Plan (QAPP) Certification	☐ Included	Submit a letter certifying that a QAPP for all monitoring required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
Best Management Practices (BMP) Plan	☐ Included	Submit a letter certifying that a BMP Plan required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
BMP Treatment Unit Information	☐ Included ☐ N/A	Submit the Hydrostatic Test Water Treatment information (if Applicable) that achieves the objectives and specific requirements of the permit.
Cooling Water Intake Structure Requirements 316(b)	☐ Included ☐ N/A	Indicate whether the facility meets the BMP Plan Requirements in Section 5.2.9.6 of the Permit. If not, please indicate the date of construction for the facility
New Produced Water Discharges (015)	☐ Included ☐ N/A	New Produced Water Discharges (015) must attach APDES Forms 1 and 2C (see Permit Section 1.1.7)
APDES Form 2M - Mixing Zone Attachments	☐ Included QTY._____ ☐ N/A	Include APDES Mixing Zone Attachment Form 2M for each discharge in accordance with Mixing Zone submittal requirements outline by the Permit and NOI.

SECTION 12 – 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	Title
Printed Name	Date

FILE NUMBER_____(for DEC use)

AKG315200 SUPPLEMENTAL ATTACHMENT FORM 7B

Fixed Oil and Gas Platform Facility

SUPPLEMENTAL ATTACHMENT FORM 7B

SECTION 8 - FACILITY INFORMATION

Facility Name:			
Latitude:	Longitude:	Coordinate Source	
Company:	Phone:	Fax:	
E-mail Address:			
Mailing Address:			
City:	State:	Zip:	
Year Facility Began Operations in the Cook Inlet:			

SECTION 9 - OTHER WASTEWATER DISPOSAL METHODS USED:

(e.g. Class I / II UIC Wells that Receive Waste from this Facility):

Well	Class	Estimate Annual Volume of Produced Water:	Other Waste Types (001, 002, etc.)	Annual Other Waste Volume:	Estimated Total Annual

Describe Other Disposal Practices at the facility (e.g., Backhauled, Reinjected for Enhanced Oil Recovery, Hauled to Shore, Centralized Treatment, or Disposal Facility, etc.):

SECTION 10 - INVENTORY OF DISCHARGES

Check all that apply then indicate the depth of discharge and the maximum daily and average discharge rate, and indicate if you will be requesting a default mixing zone for that discharge *(include units of measure).*

Discharge Requested	Coordinates	Variance Requested?	Discharge Characteristics:	Other Information
☐ 001 Drilling Fluids and Drill Cuttings (Class B Fluids) Drilling Fluid Classification [1]: ☐ B1 [2] ☐ B2 ☐ B3 Number of Wells:	Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas	Mixing Zone? ☐ Yes ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth of Discharge (See Permit Table 3): Max Daily Rate (bbl/hr):	Category: ☐ Water-based ☐ NAF/Synthetic-based [3] ☐ Oil-based [4] ☐ Other List Group (see Fact Sheet Section 4.1.2): List all Drilling Fluids and Additives:
☐ 002 Deck Drainage Number of Outfalls:	Latitude: Longitude: Coordinate Source:	N/A	Depth: Estimated Daily Rate:	Describe Treatment (e.g., Oil-Water Separator) Is Deck Drainage comingled with Produced Water for Treatment? ☐ Yes ☐ No
☐ 003 Domestic Wastewater Is this a new discharge request? ☐ Yes [5] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [6] ☐ No	Depth: Max Daily Rate:	Treatment System Type (Permit Section 2.4): ☐ MSD ☐ MSD/BTU ☐ BTU Staffing Classification: ☐ M10 ☐ M9IM Disinfection:

☐ 004 Graywater Is this a new discharge request? ☐ Yes [7] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Primary Treatment (if Applicable):
☐ 005 Desalination Unit Wastes Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Daily Rate: Check one: ☐ Submerged Discharge ☐ Surface Discharge	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 006 Blowout Preventer Fluid	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Volume Per Test:	Describe Treatment (if Applicable):
☐ 007 Boiler Blowdown	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:

☐ 008 Fire Control System Testwater Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 009 Non-contact Cooling Water Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Temp (estimate if New): Max Daily Rate: Check one: ☐ Submerged Discharge ☐ Surface Discharge	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 010 Uncontaminated Ballast Water	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Daily Rate:	Describe Treatment (e.g. Oil-Water Separator for contaminated ballast water):
☐ 011 Bilge Water	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Daily Rate:	Describe Treatment (e.g. Oil-Water Separator):

☐ 012 Excess Cement Slurry	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Source/Project resulting in Excess Cement Slurry (e.g. well abandonment, plugging, etc…):
☐ 013 Muds, Cuts, and Cement at the Seafloor	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Source/Project resulting in Muds, Cuts, and Cement at the Seafloor:
☐ 014 Waterflooding (Filter Backwash) Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge Check one: ☐ Submerged Discharge ☐ Surface Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [8] ☐ No	Depth: Max Temp (estimate if New): Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 015 Produced Water Is this a new discharge request? ☐ Yes [9] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate: Average Monthly Rate:	Describe Treatment:

☐ 016 Completion Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Are these Completion Fluids comingled with Produced Water for Treatment? ☐ Yes ☐ No [10] If no, Describe Treatment:
☐ 017 Workover Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Are these Workover Fluids comingled with Produced Water for Treatment? ☐ Yes ☐ No [10] If no, Describe Treatment:
☐ 018 Well Treatment Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Are these Well Treatment Fluids comingled with Produced Water for Treatment? ☐ Yes ☐ No [10] If no, Describe Treatment:
☐ 019 Test Fluids Number of Outfalls:	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Are these Test Fluids comingled with Produced Water for Treatment? ☐ Yes ☐ No [10] If no, Describe Treatment:

☐ 020 Hydrostatic Test Water Check all that apply: ☐ New or uncontaminated infrastructure (Permit Section 2.93) ☐ Infrastructure previously exposed to Hydrocarbons (Permit Section 2.94) ☐ Potable Water Systems (Permit Section 2.95)	Latitude: Longitude: Coordinate Source:	N/A	Depth: Max Daily Rate:	Will the Hydrostatic Test Water be Comingled with Produced Water for Treatment? ☐ Yes ☐ No[10] If no, Describe Treatment (If Applicable)[11]:
☐ List any other discharge requests included in the Permit but not included in this NOI:				

NOTES:

1. See Permit Table 2 for Drilling Fluids and Drill Cuttings Classification.
2. B1 Fluids must include SPP Toxicity (96 Hr LC_{50})
3. NAF/Synthetic fluids may only be used in Territorial Seas.
4. Oil-based fluids must not be discharged, must be hauled to shore.
5. Complete Section 11 – Compliance with Wastewater Disposal Regulations (18 AAC 72) for Domestic Wastewater
6. Complete Sections 1-3 and 5 of APDES Form 2M if this is a new discharge. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
7. Complete Section 12 – Compliance with Wastewater Disposal Regulations (18 AAC 72) for Graywater.
8. Applicants not listed in Permit Table 24 must complete Sections 1-3 and 5 of APDES Form 2M for the miscellaneous discharge with the largest maximum daily discharge rate. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
9. If facility is not currently included in Permit Section 2.7.7 (Tables 13-20), attach APDES Forms 1, 2C, and 2M for this discharge.
10. Indicate why discharge cannot be comingled with Produced Water (015).
11. Submit Treatment Unit information to be used in BMP Plan for review (Permit Section 2.9.4)

SECTION 11 - COMPLIANCE WITH WASTEWATER DISPOSAL REGULATIONS (18 AAC 72) FOR DOMESTIC WASTEWATER

This Section is applicable to new or existing fixed platforms that have not been previously authorized to discharge Domestic Wastewater (003).

DOMESTIC WASTEWATER TREATMENT: Provide a brief description of the domestic wastewater treatment process(es) of the facility, including the level of treatment and type of disinfection (if any). Include all makes, models, treatment capacities of the wastewater treatment units, and a schematic flow diagram of the wastewater treatment process.

TREATMENT SYSTEM TYPE:	**STAFFING CLASSIFICATION:**
☐ MSD ☐ MSD / BTU ☐ BTU	☐ M10 ☐ M9IM
Maximum Rated Personnel Capacity of the Facility:	Average Estimated Personnel on this Facility:

ENGINEERED PLAN REVIEW: Proof of a current Approval to Operate (ATO) from DEC for new platforms and MODUs indicated in the NOI, satisfies requirements of 18 AAC 72.200, 72.205, and 72.600. Provide the dates of plan submittal and ATO (if applicable). If you do not have an ATO or have not yet submitted plans, please indicate in the spaces provided below.

Engineered Plan Review Submittal Date:	Approval to Operate Issue Date (attach):

DOMESTIC WASTEWATER MINIMUM TREATMENT WAIVER FROM TSS AND BOD_5: All combinations of Treatment System Types and Staffing Classifications will require a Waiver for Domestic Discharges except M10/BTU's. In accordance with 18 AAC 72.050(d)(1) – (5) and 18 AAC 72.060(b), an applicant seeking a waiver from the minimum treatment requirements of 18 AAC 72.050(a)(1) or (a)(4) for domestic wastewater discharge (003), shall submit a request prepared by a registered engineer. The department will review the request and supporting documentation and determine if a waiver or modification will be made in accordance with 18 AAC 72.060. Provide the submittal date for any applicable waiver requests and the approval (if applicable). If you do not have a Minimum Treatment Waiver or have not yet requested one, please indicate in the spaces provided below.

Submittal Date of Waiver for Domestic Wastewater:	Waiver Approval Date for Domestic WW (attach):

SECTION 12 - COMPLIANCE WITH WASTEWATER DISPOSAL REGULATIONS (18 AAC 72) FOR GRAYWATER

This Section is applicable to new or existing fixed platforms that have not been previously authorized to discharge Graywater (004).

Will graywater (as defined by 18 AAC 72.990(35)) be discharged as a segregated wastewater stream?

☐ Yes –A waiver from minimum treatment standards (18 AAC 72) is required for this Graywater (Discharge 004).

☐ No

GRAYWATER MINIMUM TREATMENT WAIVER FROM SECONDARY TREATMENT: In accordance with 18 AAC 72.050(d)(1) – (5) and 18 AAC 72.060(b), an applicant seeking a waiver from the minimum treatment requirements of 18 AAC 72.050(a)(1) or (a)(4) for graywater discharge (004), shall submit a request prepared by a registered engineer. The department will review the request and supporting documentation and determine if a waiver or modification will be made in accordance with 18 AAC 72.060. Provide the submittal date for any applicable waiver requests and the approval (if applicable). If you do not have a Minimum Treatment Waiver or have not yet requested one, please indicate in the spaces provided below.

Submittal Date of Waiver Request for Graywater:	Waiver Approval Date for Graywater (attach):

SECTION 13 - CHECKLIST – ADDITIONAL NOI REQUIREMENTS		
Project Vicinity Map	☐ Included	Submit a vicinity map (topographic map or aerial photograph) showing the general location of fixed platform facility included in NOI.
Site Map	☐ Included	Submit a site map showing the exact location of the facility and discharges associated with the fixed platform.
Line Drawings and Flow Balances	☐ Included ☐ N/A	Submit line drawings that show the flow, including rates/volumes of each discharged waste stream through facility. The line drawings must contain flow balances showing average and maximum flow rates between intakes, operations, treatment units, and outfalls.
Quality Assurance Project Plan (QAPP) Certification	☐ Included	Submit a letter certifying that a QAPP for all monitoring required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
Best Management Practices (BMP) Plan	☐ Included	Submit a letter certifying that a BMP Plan required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
BMP Treatment Unit Information	☐ Included ☐ N/A	Submit the Hydrostatic Test Water Treatment information (if Applicable) that achieves the objectives and specific requirements of the permit.
Plan Review for New Discharges of Domestic Wastewater and Graywater (003-004)	☐ Included ☐ N/A	For new discharges of Domestic Wastewater (003) or Graywater (004), submit proof of prior approval or an engineering plan to DEC for written approval before constructing, installing, or modifying a domestic or nondomestic wastewater treatment works (18 AAC 72.200 and 18 AAC 72.600).
Waiver from minimum treatment requirements for new Discharges of Domestic Wastewater and Graywater (003-004).	☐ Included ☐ N/A	For new discharges of Domestic Wastewater (003) Graywater (004), Submit proof of prior approval or an engineering report with a request for written approval of a waiver to DEC's minimum treatment requirements (18 AAC 72.050).
Cooling Water Intake Structure Requirements 316(b)	☐ Included ☐ N/A	Indicate whether the facility meets the BMP Plan Requirements in Section 5.2.9.6 of the Permit. If not, please indicate the date of construction for the facility
New Produced Water Discharges (015)	☐ Included ☐ N/A	New Produced Water Discharges (015) must attach APDES Forms 1 and 2C (see Permit Section 1.1.7)
APDES Form 2M - Mixing Zone Attachments	☐ Included QTY._____ ☐ N/A	Include APDES Mixing Zone Attachment Form 2M for each discharge in accordance with Mixing Zone submittal requirements outline by the Permit and NOI.

SECTION 14 – 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	Title
Printed Name	Date

FILE NUMBER_____(for DEC use)

AKG315200 SUPPLEMENTAL ATTACHMENT FORM 7C

Exploration Mobile Offshore Drilling Units

SUPPLEMENTAL ATTACHMENT FORM 7C

SECTION 8 - FACILITY INFORMATION

Facility Name:			
Latitude:	Longitude:	Coordinate Source	
Company:	Phone:	Fax:	
E-mail Address:			
Mailing Address:			
City:	State:	Zip:	
Year Facility Began Operations in the Cook Inlet:			

SECTION 9 - OTHER WASTEWATER DISPOSAL METHODS USED:

(e.g. Class I / II UIC Wells that Receive Waste from this Facility):

Well	Class	Estimate Annual Volume of Produced Water:	Other Waste Types (001, 002, etc.)	Annual Other Waste Volume:	Estimated Total Annual

Describe Other Disposal Practices at the facility (e.g., Backhauled, Reinjected for Enhanced Oil Recovery, Hauled to Shore, Centralized Treatment, or Disposal Facility, etc.):

SECTION 10 - INVENTORY OF WELLS FOR DISCHARGE 001 DRILLING FLUIDS AND DRILL CUTTINGS

Provide an inventory all anticipated exploration wells included in your NOI application (Use additional sheets as necessary).

WELL #1

Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas

Is this well within any of the areas described in Permit Section 1.6.4? ☐ Yes ☐ No Depth below Mean Lower Low Water (MLLW):

Is this a net depositional or transitional location? ☐ Yes ☐ No Have baseline sediment samples been collected at the site?[1] ☐ Yes ☐ No

Mixing Zone Requested? [2] ☐ Yes ☐ No Zone of Deposit Requested? ☐ Yes ☐ No

Estimated Start Date:	Diameter of Borehole (inches):	Estimated Total Volume of Drill Cuttings (bbls):
Estimated End Date:	Estimated Drilling Depth:	Estimated Total Volume of Drill Fluids (bbls):
	Depth of Discharge (See Permit Table 3):	Max Daily Rate (bbl/hr):

Drilling Fluids Class: [3]

☐ B1 [4] ☐ B2 [5] ☐ B3

SPP Toxicity 96 Hr LC_{50} (ppm):

☐ Estimated or ☐ Test Result

List all Drilling Fluids and Additives:

Drill Fluid Base (Check one):

☐ Water-based ☐ NAF/Synthetic-based [6]

☐ Oil-based [7] ☐ Other:

List Groups that Apply (see Fact Sheet Section 4.1.2)::

WELL 2

Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas

Is this well within any of the areas described in Permit Section 1.6.4? ☐ Yes ☐ No Depth below Mean Lower Low Water (MLLW):

Is this a net depositional or transitional location? ☐ Yes ☐ No Have baseline sediment samples been collected at the site?[1] ☐ Yes ☐ No

Mixing Zone Requested? [2] ☐ Yes ☐ No Zone of Deposit Requested? ☐ Yes ☐ No

Estimated Start Date:	Diameter of Borehole (inches):	Estimated Total Volume of Drill Cuttings (bbls):
Estimated End Date:	Estimated Drilling Depth:	Estimated Total Volume of Drill Fluids (bbls):
	Depth of Discharge (See Permit Table 3):	Max Daily Rate (bbl/hr):

Drilling Fluids Class: [3]

☐ B1 [4] ☐ B2 [5] ☐ B3

SPP Toxicity 96 Hr LC_{50} (ppm):

☐ Estimated or ☐ Test Result

List all Drilling Fluids and Additives:

Drill Fluid Base (Check one):

☐ Water-based ☐ NAF/Synthetic-based [6]

☐ Oil-based [7] ☐ Other:

List Groups that Apply (see Fact Sheet Section 4.1.2)::

WELL #3

Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas

Is this well within any of the areas described in Permit Section 1.6.4? ☐ Yes ☐ No Depth below Mean Lower Low Water (MLLW):

Is this a net depositional or transitional location? ☐ Yes ☐ No Have baseline sediment samples been collected at the site?[1] ☐ Yes ☐ No

Mixing Zone Requested? [2] ☐ Yes ☐ No Zone of Deposit Requested? ☐ Yes ☐ No

Estimated Start Date:	Diameter of Borehole (inches):	Estimated Total Volume of Drill Cuttings (bbls):
Estimated End Date:	Estimated Drilling Depth:	Estimated Total Volume of Drill Fluids (bbls):
	Depth of Discharge (See Permit Table 3):	Max Daily Rate (bbl/hr):

Drilling Fluids Class: [3]
☐ B1 [4] ☐ B2 [5] ☐ B3

SPP Toxicity 96 Hr LC_{50} (ppm):
☐ Estimated or ☐ Test Result

List all Drilling Fluids and Additives:

Drill Fluid Base (Check one):
☐ Water-based ☐ NAF/Synthetic-based [6]
☐ Oil-based [7] ☐ Other:

List Groups that Apply (see Fact Sheet Section 4.1.2)::

WELL #4

Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas

Is this well within any of the areas described in Permit Section 1.6.4? ☐ Yes ☐ No Depth below Mean Lower Low Water (MLLW):

Is this a net depositional or transitional location? ☐ Yes ☐ No Have baseline sediment samples been collected at the site?[1] ☐ Yes ☐ No

Mixing Zone Requested? [2] ☐ Yes ☐ No Zone of Deposit Requested? ☐ Yes ☐ No

Estimated Start Date:	Diameter of Borehole (inches):	Estimated Total Volume of Drill Cuttings (bbls):
Estimated End Date:	Estimated Drilling Depth:	Estimated Total Volume of Drill Fluids (bbls):
	Depth of Discharge (See Permit Table 3):	Max Daily Rate (bbl/hr):

Drilling Fluids Class: [3]
☐ B1 [4] ☐ B2 [5] ☐ B3

SPP Toxicity 96 Hr LC_{50} (ppm):
☐ Estimated or ☐ Test Result

List all Drilling Fluids and Additives:

Drill Fluid Base (Check one):
☐ Water-based ☐ NAF/Synthetic-based [6]
☐ Oil-based [7] ☐ Other:

List Groups that Apply (see Fact Sheet Section 4.1.2)::

WELL #5

Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas

Is this well within any of the areas described in Permit Section 1.6.4? ☐ Yes ☐ No Depth below Mean Lower Low Water (MLLW):

Is this a net depositional or transitional location? ☐ Yes ☐ No Have baseline sediment samples been collected at the site?[1] ☐ Yes ☐ No

Mixing Zone Requested? [2] ☐ Yes ☐ No Zone of Deposit Requested? ☐ Yes ☐ No

Estimated Start Date:	Diameter of Borehole (inches):	Estimated Total Volume of Drill Cuttings (bbls):
Estimated End Date:	Estimated Drilling Depth:	Estimated Total Volume of Drill Fluids (bbls):
	Depth of Discharge (See Permit Table 3):	Max Daily Rate (bbl/hr):

Drilling Fluids Class: [3]

☐ B1 [4] ☐ B2 [5] ☐ B3

SPP Toxicity 96 Hr LC_{50} (ppm):

☐ Estimated or ☐ Test Result

List all Drilling Fluids and Additives:

Drill Fluid Base (Check one):

☐ Water-based ☐ NAF/Synthetic-based [6]

☐ Oil-based [7] ☐ Other:

List Groups that Apply (see Fact Sheet Section 4.1.2)::

NOTES:

1. Alternately, is there information about the sediment and benthic organisms at this location? If so, provide as an attachment.
2. Complete Sections 1-3 and 5 of APDES Form 2M if this is a new discharge. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
3. See Permit Table 2 for Drilling Fluids and Drill Cuttings Classification
4. B1 Fluids must include SPP Toxicity (96 Hr LC_{50}).
5. B2 Fluids within areas defined in Permit Section 1.6.4.5.3 must include a drilling fluids plan and an environmental monitoring plan
6. NAF/Synthetic fluids may only be used in Territorial Seas.
7. Oil-based fluids must not be discharged, must be hauled to shore.

SECTION 11 - INVENTORY OF OTHER DISCHARGES

Check all that apply then indicate the depth of discharge and the maximum daily and average discharge rate, and indicate if you will be requesting a standard mixing zone for that discharge *(include units of measure).*

Discharge Requested	Coordinates	Variance Requested?	Discharge Characteristics:	Other Information
☐ 002 Deck Drainage Number of Outfalls:	Latitude: Longitude: Coordinate Source:	N/A	Depth: Estimated Daily Rate:	Describe Treatment (e.g., Oil-Water Separator)
☐ 003 Domestic Wastewater Is this a new discharge request? ☐ Yes [1] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [2] ☐ No	Depth: Max Daily Rate:	Treatment System Type (Permit Section 2.4): ☐ MSD ☐ MSD/BTU ☐ BTU Staffing Classification: ☐ M10 ☐ M9IM Disinfection:
☐ 004 Graywater Is this a new discharge request? ☐ Yes [3] ☐ No	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Primary Treatment (if Applicable):
☐ 005 Desalination Unit Wastes Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Daily Rate: Check one: ☐ Submerged Discharge ☐ Surface Discharge	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:

☐ 006 Blowout Preventer Fluid	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Volume Per Test:	Describe Treatment (if Applicable):
☐ 007 Boiler Blowdown	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 008 Fire Control System Testwater Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Daily Rate:	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:
☐ 009 Non-contact Cooling Water Discharge Type: ☐ Continuous Discharge ☐ Intermittent Discharge ☐ Contingency Discharge	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Temp (estimate if New): Max Daily Rate: Check one: ☐ Submerged Discharge ☐ Surface Discharge	Are Chemicals Used? ☐ Yes ☐ No List of Chemicals: Dosing Rate (if Applicable): ☐ Batch or ☐ Continuous Frequency: Volume:

☐ 010 Uncontaminated Ballast Water	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Daily Rate:	Describe Treatment (e.g. Oil-Water Separator):
☐ 011 Bilge Water	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No	Depth: Max Daily Rate:	Describe Treatment (e.g. Oil-Water Separator):
☐ 012 Excess Cement Slurry	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No Zone of Deposit? ☐ Yes [4] ☐ No	Depth: Max Daily Rate:	Describe Source/Project:
☐ 013 Muds, Cuts, and Cement at the Seafloor	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [4] ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Source/Project:

☐ 016 Completion Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Treatment:
☐ 017 Workover Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Treatment:
☐ 018 Well Treatment Fluids	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Treatment:
☐ 019 Test Fluids Number of Outfalls:	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Treatment:

☐ 020 Hydrostatic Test Water Check all that apply: ☐ New or uncontaminated infrastructure (Permit Section 2.93) ☐ Infrastructure previously exposed to Hydrocarbons (Permit Section 2.94) ☐ Potable Water Systems (Permit Section 2.95)	Latitude: Longitude: Coordinate Source:	N/A	Depth: Max Daily Rate:	Describe Treatment [5]:

☐ List any other discharge requests included in the Permit but not included in this NOI:

NOTES:

1. Complete Section 12 – Compliance with Wastewater Disposal Regulations (18 AAC 72) for Domestic Wastewater
2. Complete Sections 1-3 and 5 of APDES Form 2M if this is a new discharge. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
3. Complete Section 13 – Compliance with Wastewater Disposal Regulations (18 AAC 72) for Graywater
4. Applicants not listed in Permit Table 24 must complete Sections 1-3 and 5 of APDES Form 2M for the miscellaneous discharge with the largest maximum daily discharge rate. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.
5. Submit Treatment Unit information to be used in BMP Plan for review (Permit Section 2.9.4)

SECTION 12 - COMPLIANCE WITH WASTEWATER DISPOSAL REGULATIONS (18 AAC 72) FOR DOMESTIC WASTEWATER

This Section is applicable to new platforms, new MODUs or existing MODUs that have not been previously authorized to discharge Domestic Wastewater (003).

DOMESTIC WASTEWATER TREATMENT: Provide a brief description of the domestic wastewater treatment process(es) of the facility, including the level of treatment and type of disinfection (if any). Include all makes, models, treatment capacities of the wastewater treatment units, and a schematic flow diagram of the wastewater treatment process.

TREATMENT SYSTEM TYPE:	**STAFFING CLASSIFICATION:**
☐ MSD ☐ MSD / BTU ☐ BTU	☐ M10 ☐ M9IM
Maximum Rated Personnel Capacity of the Facility:	Average Estimated Personnel on this Facility:

ENGINEERED PLAN REVIEW: Proof of a current Approval to Operate (ATO) from DEC for new platforms and MODUs indicated in the NOI, satisfies requirements of 18 AAC 72.200, 72.205, and 72.600. Provide the dates of plan submittal and ATO (if applicable). If you do not have an ATO or have not yet submitted plans, please indicate in the spaces provided below.

Engineered Plan Review Submittal Date:	Approval to Operate Issue Date (attach):

DOMESTIC WASTEWATER MINIMUM TREATMENT WAIVER FOR TSS AND BOD_5: All combinations of Treatment System Types and Staffing Classifications will require a Waiver for Domestic Discharges except M10/BTU's. In accordance with 18 AAC 72.050(d)(1) – (5) and 18 AAC 72.060(b), an applicant seeking a waiver from the minimum treatment requirements of 18 AAC 72.050(a)(1) or (a)(4) for domestic wastewater discharge (003), shall submit a request prepared by a registered engineer. The department will review the request and supporting documentation and determine if a waiver or modification will be made in accordance with 18 AAC 72.060. Provide the submittal date for any applicable waiver requests and the approval (if applicable). If you do not have a Minimum Treatment Waiver or have not yet requested one, please indicate in the spaces provided below.

Submittal Date of Waiver for Domestic Wastewater:	Waiver Approval Date for Domestic WW (attach):

SECTION 13 - COMPLIANCE WITH WASTEWATER DISPOSAL REGULATIONS (18 AAC 72) FOR GRAYWATER

This Section is applicable to new platforms, new MODUs or existing MODUs that have not been previously authorized to discharge Graywater (004).

Will graywater (as defined by 18 AAC 72.990(35)) be discharged as a segregated wastewater stream?

☐ Yes –A waiver from minimum treatment standards is required for this Graywater (Discharge 004).

☐ No

GRAYWATER MINIMUM TREATMENT WAIVER FROM SECONDARY TREATMENT: In accordance with 18 AAC 72.050(d)(1) – (5) and 18 AAC 72.060(b), an applicant seeking a waiver from the minimum treatment requirements of 18 AAC 72.050(a)(1) or (a)(4) for graywater discharge (004), shall submit a request prepared by a registered engineer. The department will review the request and supporting documentation and determine if a waiver or modification will be made in accordance with 18 AAC 72.060. Provide the submittal date for any applicable waiver requests and the approval (if applicable). If you do not have a Minimum Treatment Waiver or have not yet requested one, please indicate in the spaces provided below.

Submittal Date of Waiver Request for Graywater:	Waiver Approval Date for Graywater (attach):

SECTION 14 - CHECKLIST – ADDITIONAL NOI REQUIREMENTS		
Project Vicinity Map	☐ Included	Submit a vicinity map (topographic map or aerial photograph) showing the general location of mobile activities the MODU included in NOI.
Site Map	☐ Included	Submit a site map showing the initial location of the MODU Facility (including latitude and longitude), discharge locations associated with the MODU, and the intended areas of operation (well locations). Also include a description of operations within those areas.
Initial Site Assessment	☐ Included ☐ N/A	Submit initial site assessment with NOI documenting that the drill site is not located in or near a sensitive marine environment specifically excluded from coverage by this permit (see Prohibited Areas in Permit Section 1.6).
Line Drawings and Flow Balances	☐ Included ☐ N/A	Submit line drawings that show the flow, including rates/volumes of each discharged waste stream through facility. The line drawings must contain flow balances showing average and maximum flow rates between intakes, operations, treatment units, and outfalls.
SPP Data (Type B1 Fluids)	☐ Included ☐ N/A	Describe drilling fluid additive that will be used (i.e., bentonite) and include 96hr LC_{50} SPP data or analysis results for the product. Fluid mixture data must demonstrate an SPP concentration of 500,000ppm or greater (see permit section 5.5.1)
Drilling Fluids Plan (Type B2 and B3 Fluids)	☐ Included ☐ N/A	Include 96hr LC_{50} SPP data for each drilling fluid additive (Provide SPP analysis of the combined toxicity for the fluid mixture containing each additive at the maximum proposed concentration).
Other Reports and Related Plans	☐ Included ☐ N/A	Provide copies of exploration plans as well as copies of reports, other applications, and information that may support NOI (e.g., information required by other agencies (e.g., ADNR, ADFG, BOEM, BSEE, NMFS, USFWS). These may include biological surveys, and environmental reports for the site including any information about sediment and/or benthic organisms present, etc.
Environmental Monitoring Program (EMP) Plan of Study	☐ Included ☐ N/A	Submit EMP Plan of Study (i.e., EMP design and detailed scope of work), per Permit Section 5.4. Include references to or copies of any previously completed EMP Reports.
Plan Review for New Discharges of Domestic Wastewater and Graywater (003-004)	☐ Included ☐ N/A	For new discharges of Domestic Wastewater (003) or Graywater (004), submit proof of prior approval or an engineering plan to DEC for written approval before constructing, installing, or modifying a domestic or nondomestic wastewater treatment works (18 AAC 72.200 and 18 AAC 72.600).
Waiver from minimum treatment requirements for new Discharges of Domestic Wastewater and Graywater (003-004).	☐ Included ☐ N/A	For new discharges of Domestic Wastewater (003) Graywater (004), Submit proof of prior approval or an engineering report with a request for written approval of a waiver to DEC's minimum treatment requirements (18 AAC 72.050).

Cooling Water Intake Structure Requirements 316(b)	☐ Included ☐ N/A	Indicate whether the facility meets the BMP Plan Requirements in Section 5.2.9.6 of the Permit. If not, please indicate the date of construction for the facility
BMP Treatment Unit Information	☐ Included ☐ N/A	Submit the Hydrostatic Test Water Treatment information (if Applicable) that achieves the objectives and specific requirements of the permit.
Best Management Practices (BMP) Plan	☐ Included	Submit a letter certifying that a BMP Plan required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
Quality Assurance Project Plan (QAPP) Certification	☐ Included	Submit a letter certifying that a QAPP for all monitoring required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
APDES Form 2M - Mixing Zone Attachments	☐ Included QTY._____ ☐ N/A	Include APDES Mixing Zone Attachment Form 2M for each discharge in accordance with Mixing Zone submittal requirements outline by the Permit and NOI.

SECTION 15 – 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	Title
Printed Name	Date

FILE NUMBER_____(for DEC use)

AKG315200 SUPPLEMENTAL ATTACHMENT FORM 7D

Horizontal Directional Drilling Project

SUPPLEMENTAL ATTACHMENT FORM 7D

SECTION 8 - FACILITY INFORMATION

Facility Name:			
Latitude:	Longitude:	Coordinate Source	
Company:	Phone:	Fax:	
E-mail Address:			
Mailing Address:			
City:		State:	Zip:

Are activities within 1500 ft of a contaminated site? ☐ Yes ☐ No
If Yes, have you contacted the Contaminated Sites Program? ☐ Yes ☐ No (please include correspondence)

SECTION 9 - PROJECT DESCRIPTION:

Provide a description of the project below:

SECTION 10 - INVENTORY OF HDD LOCATIONS FOR DISCHARGE 001 DRILLING FLUIDS AND DRILL CUTTINGS

Provide an inventory all anticipated HDD sites included in your NOI application. Attach additional pages if necessary.

	Drill Point Entry Location and Information:	Variance Requested?	Drilling Fluid Info
LOCATION 1	Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas Estimated Drill Dates: Beginning: End:	Mixing Zone? ☐ Yes [1] ☐ No Zone of Deposit? ☐ Yes ☐ No Depth of Discharge[2] (See Permit Table 3): Estimated Discharge Rate/velocity (gpm or ft/s):	Drilling Fluid Class [3] ☐ C1 [4] ☐ C2 [5] ☐ C3 [5] SPP Toxicity 96Hr LC_{50}: ☐ Estimated or ☐ Test Result List all Drilling Fluids and Additives:
LOCATION 2	Latitude: Longitude: Coordinate Source: Choose One: ☐ Coastal Waters ☐ Territorial Seas Estimated Drill Dates: Beginning: End:	Mixing Zone? ☐ Yes [1] ☐ No Zone of Deposit? ☐ Yes ☐ No Depth of Discharge[2] (See Permit Table 3): Estimated Discharge Rate/velocity (gpm or ft/s):	Drilling Fluid Class [3] ☐ C1 [4] ☐ C2 [5] ☐ C3 [5] SPP Toxicity 96Hr LC_{50}: ☐ Estimated or ☐ Test Result List all Drilling Fluids and Additives:

NOTES:

1. Complete APDES Mixing Zone Form 2M for each discharge request; a pre-application meeting is recommended.
2. Provide a plan and profile of HDD project location.
3. See Permit Table 2 for Drilling Fluids and Drill Cuttings Classification.
4. C1 Fluids must include SPP Toxicity (96 Hr LC_{50}) prior to receiving authorization to discharge.
5. C2 and C3 Fluids must include a drilling fluids plan

SECTION 11 - INVENTORY OF OTHER DISCHARGES

List any other discharge requests included in the Permit but not included in this NOI:

SECTION 12 - CHECKLIST – ADDITIONAL NOI REQUIREMENTS		
Project Vicinity Map, Site Plan, and Plan and Profile	☐ Included	Submit a vicinity map (topographic map or aerial photograph) showing the general location of all HDD activities included in NOI. Include detailed Site Plans showing drilling sites, receiving waters, and proposed equipment locations. Provide a plan and profile drawing of the proposed HDD that includes pertinent geological and hydrogeological information.
Project Description (for Class C Fluids)	☐ Included ☐ N/A	A description of the method of drilling method, equipment technology used to minimize or eliminate discharges (i.e., HDD, recirculating), typical design schematics, and BMP measures taken to minimize the quantity of the water discharged and meet permit requirements. Project Descriptions for C2 and C3 are included in the DFP (Permit Section 2.2.1.3, Table 2).
SPP Data Type C1 Fluids	☐ Included ☐ N/A	Describe drilling fluid additive that will be used (i.e., bentonite) and include 96hr LC_{50} SPP data or analysis results for the product. Fluid mixture data must demonstrate an SPP concentration of 750,000ppm or greater.
Drilling Fluids Plan Type C2 and C3 Fluids	☐ Included ☐ N/A	Include 96hr LC_{50} SPP data for each drilling fluid additive (Provide SPP analysis of the combined toxicity for the fluid mixture containing each additive at the maximum proposed concentration). All SPP results must be 500,000ppm or greater.
Other Reports and Related Plans	☐ Included ☐ N/A	Provide copies of reports, other applications, and information that may support NOI (e.g., information required by other agencies (e.g., ADNR, ADFG, BOEM, BSEE, NMFS, USFWS). These may include biological surveys, and environmental reports for the site including any information about sediment and/or benthic organisms present, etc.
AKG320000 Mixing Zone Attachment	☐ Included QTY._____	Complete APDES Mixing Zone Form 2M for each HDD borehole discharge location. A pre-application meeting is recommended.
Initial Site Assessment	☐ Included ☐ N/A	Submit initial site assessment with NOI documenting that the drill site is not located in or near a sensitive marine environment.
Best Management Practices (BMP) Plan	☐ Included	Submit a letter certifying that a BMP Plan required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
Quality Assurance Project Plan (QAPP) Certification	☐ Included	Submit a letter certifying that a QAPP for all monitoring required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.

SECTION 13 – 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	Title
Printed Name	Date

FILE NUMBER_____(for DEC use)

AKG315200 SUPPLEMENTAL ATTACHMENT FORM 7E

Geotechnical Investigation Project

SUPPLEMENTAL ATTACHMENT FORM 7E

SECTION 8 - FACILITY INFORMATION

Facility Name:			
Latitude:	Longitude:	Coordinate Source	
Company:	Phone:	Fax:	
E-mail Address:			
Mailing Address:			
City:	State:	Zip:	

SECTION 9 - PROJECT DESCRIPTION:

Provide a description of the project below:

SECTION 10 – INVENTORY OF GEOTECHNICAL DRILLING LOCATIONS FOR DISCHARGE 001 DRILLING FLUIDS AND DRILL CUTTINGS

Provide an inventory all anticipated geotechnical investigation sites included in your NOI application (Use additional sheets as necessary).

Please indicate if these discharges will require the following variances to meet water quality standards:

Mixing Zone: ☐ Yes[1] ☐ No

Zone of Deposit: ☐ Yes ☐ No

Borehole ID	Borehole Diameter (inches)	Planned Drill Depth (feet)	Water Depth at MLLW (feet)	Latitude	Longitude	Coordinate Source	Drilling Fluid Category [2]	SPP Toxicity of C1 Fluids (96Hr LC_{50})	Projected Start Date
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		
							☐ C1 [3] ☐ C2 [4] ☐ C3 [4]		

NOTES:

1. Complete Section 1, 3, and 5 of APDES Mixing Zone Form 2M for each borehole grouping, a pre-application meeting is recommended.
2. See Permit Table 2 for Drilling Fluids and Drill Cuttings Classification.
3. C1 Fluids must include SPP Toxicity (96 Hr LC_{50}) prior to receiving authorization to discharge.
4. C2 and C3 Fluids must include a drilling fluids plan

SECTION 11 - INVENTORY OF OTHER DISCHARGES

Check all that apply then indicate the depth of discharge and the maximum daily and average discharge rate, and indicate if you will be requesting a default mixing zone for that discharge *(include units of measure).*

Discharge Requested	Coordinates	Variance Requested?	Discharge Characteristics:	Other Information
☐ 012 Excess Cement Slurry	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [1] ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Source/Project:
☐ 013 Muds, Cuts, and Cement at the Seafloor	Latitude: Longitude: Coordinate Source:	Mixing Zone? ☐ Yes [1] ☐ No Zone of Deposit? ☐ Yes ☐ No	Depth: Max Daily Rate:	Describe Source/Project:
☐ Other discharges not listed here but covered by the permit (attach description):				

NOTES:

1. Complete Sections 1-3 and 5 of APDES Form 2M for the miscellaneous discharge with the largest maximum daily discharge rate. The Department may require a full submittal and a 30-day public notice if a standard mixing zone is not appropriate.

SECTION 13 - CHECKLIST – ADDITIONAL NOI REQUIREMENTS		
Project Vicinity Map and Site Plan	☐ Included	Submit a vicinity map (topographic map or aerial photograph) showing the general location of all geotechnical boreholes included in NOI. Include include areas of interest, including biologically sensitive areas and know aquatic resources and harvest areas (e.g. set net lease sites, etc.). See also, Permit Section 1.6, Initial Site Assessment, and APDES Form 2M Section 3C.
Project Description (for Type C1 Fluids)	☐ Included ☐ N/A	A description of the method of drilling method, equipment technology used to minimize or eliminate discharges (i.e., riser stem, recirculating, etc.), typical design schematics, and BMP measures taken to minimize the quantity of the water discharged and meet permit requirements. Project Descriptions for C2 and C3 are included in the DFP. See Fact Sheet Section 4.5.
SPP Data (for Type A1 Fluids)	☐ Included ☐ N/A	Describe drilling fluid additive that will be used (i.e., bentonite) and include 96hr LC_{50} SPP data or analysis results for the product. Fluid mixture data must demonstrate an SPP concentration of 750,000ppm or greater. See Fact Sheet Section 3.1.
Drilling Fluids Plan Type C2 and C3 Fluids	☐ Included ☐ N/A	Include 96hr LC_{50} SPP data for each drilling fluid additive (Provide SPP analysis of the combined toxicity for the fluid mixture containing each additive at the maximum proposed concentration). All SPP results must be 500,000ppm or greater.
AKG320000 Mixing Zone Attachment	☐ Included QTY._____	Complete APDES Mixing Zone Form 2M, Sections 1,3, and 5 for each grouping of borehole locations.
Initial Site Assessment	☐ Included ☐ N/A	Submit initial site assessment with NOI documenting that the drill site is not located in or near a sensitive marine environment. Include copies of other reports, applications, and plans that may support the NOI.
Best Management Practices (BMP) Plan	☐ Included	Submit a letter certifying that a BMP Plan required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.
Quality Assurance Project Plan (QAPP) Certification	☐ Included	Submit a letter certifying that a QAPP for all monitoring required by this general permit has been developed and implemented. Submittal is required upon the effective date of the permit for existing permittees who are automatically authorized by the permit, or within 90 days of permit authorization for new permittees and permittees who are required to reapply.

SECTION 14 – 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	Title
Printed Name	Date

ATTACHMENT 2 NONCOMPLIANCE NOTIFICATION

Attachment 2

Noncompliance Notification

Alaska Department of Environmental Conservation

Division of Water, Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Nationwide Toll Free: 1(877) 569-4114 Anchorage/International: (907) 269-4114
Fax: (907) 269-4604 E-mail address: dec-wqreporting@alaska.gov.

NONCOMPLIANCE NOTIFICATION

GENERAL INFORMATION	PERMIT# (if any):	
Owner or Operator:	**Facility Name:**	**Facility Location:**
Person Reporting:	**Phone Numbers of Person Reporting:**	**Reported How? (e.g. by phone):**
Date/Time Event was Noticed:	**Date/Time Reported:**	**Name of DEC Staff Contacted:**

VERBAL NOTIFICATION MUST BE MADE TO ADEC WITHIN 24 HOURS OF DISCOVERY OF NONCOMPLIANCE

INCIDENT DETAILS (attach additional sheets, lab reports, and photos as necessary)

Period of Noncompliance	**Start Date/Time** (exact)**:**	**End Date/Time** (exact)**:**

If noncompliance has not been corrected, provide a statement regarding the anticipated time the noncompliance is expected to continue:

Estimated Quantity involved (volume or weight):

Description of the noncompliance and its cause (be specific):

Actions taken to reduce, eliminate, and prevent reoccurrence of noncompliance and Actual/Potential Impact on Environmental Health (describe in detail) (e.g. Supplied drinking water to nearby well owners and informed well owners not to drink from wells until further notice)

Permit Condition Deviation (Identify each permit condition exceeded during the event.)

Parameter (e.g. BOD pH)	**Permit Limit**	**Exceedance (sample result)**	**Sample Date**

Corrective Actions (Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of recurrence.)

Environmental Damage: (if yes, provide details below) ☐ **Yes** ☐ **No** ☐ **Unknown**

Actual /Potential Impact on Environment/Public Health (describe in detail)

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.

Name: **Title:** **Signature:** **Date:**

FORMS MUST BE SENT TO ADEC WITHIN FIVE DAYS OF BECOMING AWARE OF THE EVENT.