

United States Environmental Protection Agency Region 10 1200 Sixth Avenue Seattle, Washington 98101

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, the "Act", the following discharges:

<u>Discharge</u>	Discharge Description
002	Deck Drainage
003	Sanitary Wastes
004	Domestic Wastes
007	Boiler Blowdown
008	Fire Control System Test Water
009	Non-contact Cooling Water
012	Excess Cement Slurry

are authorized for the **Forest Oil Corporation Osprey Production Platform** located in the **Cook Inlet, Alaska**, at Latitude N 60°41N460, Longitude W 151°40N100 in accordance with the effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit shall become effective _____July 1, 2002_____

This permit and the authorization to discharge shall expire at midnight, <u>June 30, 2007</u>.

Signed this 23 day of May 2002

<u>/s/ Christine Psyk for</u> Randall F. Smith Director Office of Water, Region 10 U.S. Environmental Protection Agency

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I. LIMITATIONS AND MONITORING REQUIREMENTS

- A. Discharge Authorization. During the effective period of this permit, the permittee is authorized to discharge from the Osprey Production Platform to Cook Inlet, within the limits and subject to the conditions set forth herein. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that are associated with development and production activities and that have been clearly identified in the permit application process.
- B. Monitoring Location. The permittee must collect all effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
- C. Effluent Limits and Monitoring.
 - 1. The permittee must limit and monitor discharges from the Osprey Platform as specified in Table 1. The permittee must comply with the effluent limits in the table at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.
 - Unless specifically addressed in Table 1, the permittee must not discharge floating solids, debris, sludge, deposits, foam, scum, or other residues of any kind in concentrations causing nuisance, objectionable, or detrimental conditions or that make the water unfit or unsafe for the use.
 - 3. 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 and the Minerals Management Service (MMS). The discharge of dispersants to marine waters in response to oil or other hazardous waste spills is not authorized by this permit.
 - 4. The permittee must not discharge diesel oil, halogenated phenol compounds, trisodium nitrilotriacetic acid, sodium chromate, or sodium dichromate.
 - The permittee must maintain an inventory of the type and quantity of biocides and chemicals added to non-contact cooling water. Each annual inventory must be assembled for the calendar year and submitted to EPA by March 1 of the following calendar year.

- 6. The permittee must separate area drains for washdown and rainfall that may be contaminated with oil and grease from those area drains that would not be contaminated. Deck drainage contaminated with oil and grease must be processed through an oil-water separator prior to discharge. Samples for the deck drainage discharge that are collected from the oil/water separator effluent must be tested for sheen.
- 7. The permittee is not required to conduct monitoring for the facility if is it not staffed. The permittee must provide EPA and ADEC written notification that the facility is no longer staffed prior to terminating monitoring requirements.
- 8. The permittee must discharge domestic and sanitary wastes below the water surface.
- 9. If any discharges are commingled, the most stringent effluent limitations for each individual discharge are applied to the resulting discharge. If the individual discharge is not authorized, the commingled discharge is not authorized.
- 10. The permittee must maintain the pH range of all discharges between 6.5 and 8.5 standard units. The permittee must monitor pH in all discharges monthly.
- 11. The permittee must not discharge in water depths less than 5 m (as measured from mean lower low water).
- 12. The permittee must not discharge within the boundaries or within 1000 m of a coastal marsh, river delta, river mouth designated Area Meriting Special Attention (AMSA), game refuge, game sanctuary, or critical habitat area. The seaward edge of a coastal marsh is defined as the seaward edge of emergent wetland vegetation.

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Table 1. Effluent Limitations and Monitoring Requirements								
	Discharge Description	Effluent Parameter	Units	Effluent Limitations		Monitoring Requirements		
Discharge				AML	MDL	Sample Frequency	Sample Type	
001	Drilling Muds and Cuttings			No discharge				
	Deck Drainage	Free oil		No discharge ¹		Daily ²	Visual	
002		WET, chronic	TUc			Annually ³	Grab	
		Flow	mgd			Monthly	Estimated	
	Sanitary Wastes	BOD	mg/L	30	60	Monthly	Grab	
			lbs/day	0.5	1.0	Monthly	Calculated	
		TSS	mg/L	30	60	Monthly	Grab	
			lbs/day	0.5	1.0	Monthly	Calculated	
003		Flow	mgd			Monthly	Estimated	
		Fecal Coliform Bacteria	colonies/100 mL		14 ⁴	Monthly	Grab	
		Total Residual Chlorine	mg/L	0.8	1.6	Monthly	Grab	
			lbs/day	0.01	0.03	Monthly	Calculated	
004	Domestic Wastes	Floating solids, garbage, or foam		No discharge		Daily ²	Visual	
		Flow	mgd			Monthly	Estimated	
005	Desalination Unit Wastes			No discharge				
006	Blowout Preventer Fluid			No discharge				

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Table 1. Effluent Limitations and Monitoring Requirements							
			Effluer		imitations	Monitoring Requirements	
Discharge	Discharge Description	Effluent Parameter	Units	AML	MDL	Sample Frequency	Sample Type
007	Boiler Blowdown	Flow	mgd	-		Monthly	Estimated
008	Fire Control System Test Water	Flow	mgd	-		Monthly	Estimated
009	Non-contact Cooling Water	Flow	mgd	-		Monthly	Estimated
010	Uncontaminated Ballast Water			No discharge			
011	Bilge Water			No discharge			
010	Fuence Compart Clump	Free oil		No discharge ¹		Daily ²	Visual
012	Excess Cement Slurry	Flow	mgd			Monthly	Estimated
013	Mud, Cuttings, Cement at Seafloor			No discharge			
014	W aterflooding Discharges			No discharge			
015	Produced Water & Solids			No discharge			
016	Completion Fluids			No discharge			
017	Workover Fluids			No discharge			
018	Well Treatment Fluids			No discharge			

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Table 1. Effluent Limitations and Monitoring Requirements									
			Units	Effluent Limitations		Monitoring Requirements			
Discharge	Discharge Description	Effluent Parameter		AML	MDL	Sample Frequency	Sample Type		
019	Test Fluids			No discharge					
sheen test 2 Monitoring 3 Monitoring toxicity. S	 Footnotes: 1 As determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen) using the static sheen test defined in appendix 1 to 40 CFR part 435, subpart A. 2 Monitoring is only required when discharge occurs. 3 Monitoring must be conducted during a significant rainfall or snowmelt. Monitoring may cease after the results of the first test indicate no toxicity. See Section I.D of the permit for additional information on monitoring requirements for WET. 								

- D. Whole Effluent Toxicity Testing Requirements.
 - 1. The permittee must conduct tests on grab effluent samples with the following species:
 - a. Vertebrate species: survival and growth of Topsmelt (*Atherinops affinis*).
 - b. Invertebrate species: larval development of the Mussel (*Mytilis sp.*) or Pacific oyster (*Crassostrea gigas*) and echinoderm fertilization test of the purple sea urchin (*Strongylocentrotus pupuratus*) or sand dollar (*Dendraster excentricus*).
 - 2. The permittee must conduct the first test on all three species. If toxicity is detected in the first test, then the permittee must conduct one test on all three species each year during a different quarter than the previous three years.
 - 3. The permittee must estimate the presence of acute toxicity as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fourth Edition (EPA/600/4-90/027F). For the bivalve species (Mussel or Pacific oyster) and echinoderms (purple sea urchin or sand dollar), the permittee must estimate the chronic toxicity 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).
 - 4. For acute tests, the permittee must report the results in TUc, where TUc = $10 \times TUa$ and TUa = 100/LC50.
 - For chronic tests, the permittee must report the results in TUc, where TUc = 100/NOEC. The permittee must use the highest NOEC calculated in TUc for the applicable survival, growth, or fertilization endpoints.
 - 6. The permittee must conduct tests using a series of five dilutions and a control. The series must include the instream waste concentration (IWC), two dilutions above the IWC, and two dilutions below the IWC.

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- 7. In addition to the quality assurance measures specified in the methodology, the permittee must observe the following quality assurance procedures:
 - a. If organisms are not cultured in-house, the permittee must ensure that concurrent testing with reference toxicants are conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient.
 - b. If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria a specified in the test methods manual, then the permittee must re-sample and re-test as soon as possible.
 - c. Control and dilution water should 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.
- Within fifteen (15) days of receipt of the sample results that indicate the reported toxicity level (100/NOEC) is greater than 4.0 TUc, the permittee must:
 - a. initiate the following special monitoring requirements:
 - (1) If the source of toxicity is known (e.g., temporary plant upset), then the permittee is required to perform one additional test. If the subsequent sample exceeds the chronic toxicity trigger, then the permittee is required to follow the steps prescribed in the facility's TRE Work Plan.
 - (2) If the source of toxicity is unknown, the permittee is required to follow the steps prescribed in the facility's TRE Work Plan.
 - b. submit a report to the Director and ADEC, in writing, with the following information:
 - a description of the actions the permittee has taken or will take to investigate and correct the cause(s) of toxicity in accordance with the TRE Work Plan;

- (2) a status report on any actions required by the permit, with a schedule for actions not yet completed; and
- (3) where no actions have been taken, include the reasons for not taking action.
- II. MONITORING, RECORDING AND REPORTING REQUIREMENTS
 - A. Representative Sampling (Routine and Non-Routine Discharges).
 - 1. The permittee must ensure that samples and measurements taken for the purpose of monitoring are representative of the monitored activity.
 - 2. In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited in Part I.C of this permit that are likely to be affected by the discharge.
 - 3. The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with paragraph II.C ("Monitoring Procedures"). The permittee must report all additional monitoring in accordance with paragraph II.D ("Additional Monitoring by Permittee").

B. Reporting of Monitoring Results. The permittee must summarize monitoring results each month on the DMR form (EPA No. 3320-1) or equivalent. The permittee must submit reports monthly, postmarked by the 20th day of the following month. Annual sampling results must be reported on the January DMR. The permittee must sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E ("Signatory Requirements") of this permit. The permittee must submit the legible originals of these documents to the Direction, Office of Water, with copies to ADEC at the following addresses:

United States Environmental Protection Agency, Region 10 1200 Sixth Avenue, OW-133 Seattle, Washington 98101

Alaska Department of Environmental Conservation (ADEC) Attn: Division of Air and Water Quality 555 Cordova Street Anchorage, Alaska 99501

- C. Monitoring Procedures. The permittee must conduct monitoring according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit.
- D. Additional Monitoring by Permittee.
 - If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR.
 - 2. Upon request by the Director, the permittee must submit results of any other sampling, regardless of the test method used.
- E. Records Contents. The permittee must ensure that records of monitoring information include:
 - 1. the date, exact place, and time of sampling or measurements;
 - the name(s) of the individual(s) who performed the sampling or measurements;
 - 3. the date(s) analyses were performed;

- 4. the names of the individual(s) who performed the analyses;
- 5. the analytical techniques or methods used; and
- 6. the results of such analyses.
- F. Retention of Records. The permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of DMRs; a copy of this NPDES permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director or ADEC at any time.
- G. Twenty-four Hour Notice of Noncompliance Reporting.
 - 1. The permittee must report the following occurrences of noncompliance by telephone within 24 hours from the time the permittee becomes aware of the following circumstances:
 - a. any noncompliance that may endanger health or the environment;
 - any unanticipated bypass that exceeds any effluent limitation in the permit (See Part IV.F, "Bypass of Treatment Facilities");
 - c. any upset that exceeds any effluent limitation in the permit (See Part IV.G, "Upset Conditions"); or
 - d. any violation of a maximum daily discharge limitation for any of the pollutants in Table 1 of the permit requiring 24hour reporting.
 - The permittee must also provide a written submission within five days of the time that the permittee becomes aware of any event required to be reported under Part II.G.1, above. The written submission must contain:
 - a. a description of the noncompliance and its cause;

- the period of noncompliance, including exact dates and times;
- c. the estimated time noncompliance is expected to continue if it has not been corrected; and
- d. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.
- 4. The permittee must submit reports to the addresses in Part II.B ("Reporting of Monitoring Results").
- H. Other Noncompliance Reporting. The permittee must report all instances of noncompliance not required to be reported within 24 hours, at the time that monitoring reports for Part II.B ("Reporting of Monitoring Results") are submitted. The reports must contain the information listed in Part II.G ("Twenty-four Hour Notice of Noncompliance Reporting") of this permit.
- I. Changes in Discharge of Toxic Substances. The permittee must notify the Director and ADEC as soon as it knows, or has reason to believe:
 - 1. That any activity has occurred or will occur that would result in 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":
 - a. One hundred micrograms per liter (100 : g/l);
 - Two hundred micrograms per liter (200 : g/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 : g/l) for 2,4-dinitrophenol and for 2-methyl-4,6dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

- d. The level established by the Director in accordance with 40 CFR 122.44(f).
- 2. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of any toxic pollutant that i snot limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification level":
 - a. Five hundred micrograms per liter (500 : g/l);
 - b. One milligram per liter (1 mg/l); for antimony;
 - Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - d. The level established by the Director in accordance with 40 CFR 122.44(f).
- J. Compliance Schedules. The permittee must submit any reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit no later than 14 days following each schedule date.

III. SPECIAL CONDITIONS

- A. Toxicity Reduction Evaluation (TRE) Requirements.
 - 1. Within 180 days of the effective date of this permit, the permittee must submit to the Director and ADEC a copy of the facility's initial investigation Toxicity Reduction Evaluation (TRE) Work Plan.
 - 2. The TRE Work Plan must describe the steps the permittee intends to follow if toxicity is detected and must include, at a minimum, the following steps:
 - a. Information and Data Acquisition. Collect one sample approximately every two weeks over a twelve-week period. Testing must commence within two weeks of receipt of the sample results that indicated the exceedance of the WET monitoring trigger. These testing requirements may be

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modified based on consultation with the Director. If none of the additional tests indicates toxicity, then the permittee may return to the normal testing frequency specified in Table 1.

- b. Performance Evaluation. Identify the facility's methods of maximizing in-house treatment efficiency of the effluent and good housekeeping practices.
- c. Toxicity Identification Evaluation. Identify investigation and evaluation techniques or actions that may be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency.
- d. Toxicity Control. Develop actions that will be taken to mitigate the impact of the discharge and to prevent the recurrence of toxicity.
- e. Schedule. Develop a schedule for TRE.
 - note: The document *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs)*, EPA/600/2-88/070, may be helpful in developing a TRE Work Plan for this facility.
- B. Quality Assurance Plan.
 - 1. Within 90 days of the effective date of this permit, the permittee must develop a Quality Assurance Plan (QAP) and notify the Director and ADEC, in writing, that the QAP is complete.
 - 2. The QAP shall address effluent, internal waste stream, ambient water, and ambient sediment monitoring. At a minimum, the following information must be provided in the QAP:
 - a. Sample locations (map and physical description, which includes station identification number, latitude, and longitude);
 - b. Sample frequency;
 - c. Sediment compositing scheme (sample locations/depths for composites);

- d. Sample handling, storage, transport, and Chain-of-Custody procedures;
- e. Parameters, preparation and analysis methods, detection limits, and volume of sample required for each analyte in each medium (i.e., water or sediment);
- f. Number of QC samples, spikes and replicates required for analysis (for precision accuracy);
- g. Documentation requirements for the laboratory (i.e., retention or holding time, QA/QC procedures for test methods, volume of sample collected, field test blanks, etc.);
- h. Organizational responsibilities who is responsible for QA/QC activities (i.e., who takes samples, who reviews the data analysis, etc.); and
- i. Name(s), address(es), and phone number(s) of laboratories used or proposed to be used by the permittee.
- note: The document *Guidance for Preparation of Quality Assurance Project Plans*, EPA, Region 10, Quality and Data Management Program, QA/G-5, can be used as a helpful reference guide in preparing the QAP. This document is available in Adobe Acrobat format at http://www.epa.gov/r10earth/offices/oea/qaindex.htm.
- 3. The permittee is responsible for reviewing and updating the QAP to ensure all material is current and applicable.
- 4. The permittee must amend the QAP whenever there is a modification in the sample collection, sample analysis, or conditions or requirements of the QAP.
- 5. The permittee must keep copies of the most current QAP on site and must make the QAP available to the Director and ADEC upon request.
- C. Best Management Practices Plan.

- The permittee shall, during the term of this permit, operate the facility in accordance with its current Best Management Practices (BMP) Plan or in accordance with subsequent amendments to the Plan. The permittee shall also amend this Plan to incorporate practices to achieve the objectives and specific requirements listed below. The amended Plan shall be implemented as soon as possible but not later than 90 days from the effective date of the permit.
- 2. Through implementation of the BMP Plan, the permittee shall:
 - a. Prevent or minimize the generation and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities; and
 - b. Ensure that methods of pollution prevention, control, and treatment will be applied to all wastes and other substances discharged.
- 3. The permittee shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.
 - a. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility shall be minimized by the permittee to the extent feasible by managing each waste stream in the most appropriate manner.
 - b. Under the BMP Plan, and any Standard Operating Procedures (SOPs) included in the Plan, the permittee shall ensure proper operation and maintenance of the facility.
 - c. The permittee shall establish specific objectives for the control of pollutants by conducting the following evaluations.
 - (1) Each facility component or system shall be examined for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to waters of the United States due to equipment failure, improper operation, and natural phenomena such as rain or snowfall, etc. The

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examination shall include all normal operations and ancillary activities including loading or unloading operations or spillage or leaks.

- (2) Where experience indicates a reasonable potential for equipment failure, natural condition (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the program should include a prediction of the direction, rate of flow and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.
- 4. The BMP Plan shall be consistent with the objectives listed above and the general guidance contained in the publication entitled *Guidance Manual for Developing Best Management Practices* (*BMPs*) (USEPA, 1993) or any subsequent revisions to the guidance document. The BMP Plan shall:
 - Be documented in narrative form, shall include any necessary plot plans, drawings or maps, and shall be developed in accordance with good engineering practices. The BMP Plan shall be organized and written with the following structure:
 - (1) Name and location of the facility.
 - (2) Statement of BMP policy.
 - (3) Structure, functions, and procedures of the BMP Committee.
 - (4) Specific management practices and standard operating procedures to achieve the above objectives, including, but not limited to, the following:
 - (a) modification of equipment, facilities, technology, processes, and procedures,
 - (b) reformulation or redesign of products,
 - (c) substitution of materials, and
 - (d) improvement in management, inventory control, materials handling or general operational phases of the facility.

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- (5) Risk identification and assessment.
- (6) Reporting of BMP incidents.
- (7) Materials compatibility.
- (8) Good housekeeping.
- (9) Preventative maintenance.
- (10) Inspections and records.
- (11) Security.
- (12) Employee training.
- b. Include the following provisions concerning BMP Plan review:
 - (1) Be reviewed by facility engineering staff and the facility manager.
 - (2) Be reviewed and endorsed by the permitee's BMP Committee.
 - (3) Include a statement that the above reviews have been completed and that the BMP Plan fulfills the requirements set forth in this permit. The statement shall be certified by the dated signature of each BMP Committee member.
- c. Establish specific best management practices to meet the objectives identified above, addressing each component or system capable of generating or causing a release of significant amounts of pollutants, and identifying specific preventative or remedial measures to be implemented.
- d. Establish specific best management practices or other measures which ensure that the following specific requirements are met:

- (1) Ensure proper management of solid and hazardous waste in accordance with the regulations promulgated under the Resource Conservation and Recovery Act (RCRA). Management practices required under RCRA regulations shall be referenced in the BMP Plan.
- (2) Reflect requirements for Spill Prevention, Control, and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 112 and may incorporate any part of such plans into the BMP Plan by reference.
- (3) Reflect requirements for storm water control under Section 402(p) of the Act and the regulations at 40 CFR 122.26 and 122.44, and otherwise eliminate to the extent practicable, contamination of storm water runoff.
- (4) Reflect requirements for air emissions under 18 AAC 50.
- e. Include the following specific BMPs:
 - (1) Ensure that solids, sludges, or other pollutants removed in the course of treatment or control of water and wastewaters are disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.
 - (2) Separate used motor oil from deck drainage collection systems.
 - (3) Minimize wastewater treatment system upsets by the controlled usage of deck washdown detergents.
 - (4) Reduce oil spillage through the use of good prevention techniques such as drip pans and other handling and collection methods.
 - (5) Segregate deck drainage from oil leaks from pump bearings and seals by directing the leakage to the crude oil processing system.

- (6) If oil is used as a spotting fluid, carful attention to the operation of the drilling fluid system could result in the segregation from the main drilling fluid system of the spotting fluid and contaminated drilling fluid. Once segregated, the contaminated drilling fluid can be disposed of in an environmentally acceptable manner.
- (7) Substitute standard drill pipe threading compound (pipe dope) with "toxic metals free" pipe dope.
- (8) Careful application of standard drill pipe dope to minimize contamination of receiving water and drilling fluids.
- (9) Substitute diesel oil with less toxic mineral oil or synthetic-based material in drilling fluid applications.
- (10) Substitute standard drilling fluid additives with less toxic additives.
- (11) Segregate contaminated process area deck drainage and runoff from relatively uncontaminated runoff from areas such as office space, walkways, and living quarters.
- (12) Segregate handling, storage and disposal of contaminated drilling waste from less contaminated waste.
- (13) Install roofs and sheds to divert uncontaminated rainfall from areas with a high potential for generating contaminated runoff.
- (14) Segregate existing roof drains from contaminated deck drainage sources.
- (15) Careful handling of drilling fluid materials and treatment chemicals to prevent spills.
- (16) 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.

- (17) Install treatment devices for deck drainage to reduce or remove pollutants in the discharges (e.g., skim tanks, oil/water separators, sediment tanks/basins, or detention ponds).
- 5. The permittee shall maintain a copy of the BMP Plan at the facility and shall make the plan available to EPA and ADEC upon request.
- 6. The permittee shall amend the BMP Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to the receiving waters. The permittee shall also amend the Plan, as appropriate, when facility operations covered by the BMP Plan change. Any such changes to the BMP Plan shall be consistent with the objectives and specific requirement listed above. All changes in the BMP Plan shall be reported to EPA and ADEC in writing.
- 7. At any time, if the BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or the specific requirements above, the permit and/or the BMP Plan shall be subject to modification to incorporate revised BMP requirements.

IV. COMPLIANCE RESPONSIBILITIES

- A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- B. Penalties for Violations of Permit Conditions.
 - Civil Penalties. Pursuant to 40 CFR 19 and the Act, any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any permit condition or limitation implementing any such Sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Sections 402(a)(3) or 402(b)(8) of the Act is subject to a civil penalty not to

exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) [currently \$27,500 per day for each violation].

- 2. Administrative Penalties. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any permit condition or limitation implementing any of such Sections in a permit issued under Section 402 of the Act. Pursuant to 40 CFR 19 and the Act. administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) [currently \$11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$27,500]. Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) [currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$137,500].
- 3. Criminal Penalties.
 - a. Negligent Violations. The Act provides that any person who negligently violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such Sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two years, or both.

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- b. Knowing Violations. The Act provides that any person who knowingly violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such Sections in a permit issued under Section 402 of the Act, or any requirement imposed in a pretreatment program approved under Section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six years, or both.
- Knowing Endangerment. The Act provides that any person c. who knowingly violates Section 301, 302, 303, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such Sections in a permit issued under Section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in Section 309(c)(3(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for a second or subsequent convictions.
- d. False Statements. The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. The Act further provides that any person who knowingly makes any false

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statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

- C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.
- D. Duty to Mitigate. The permittee must 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.
- E. Proper Operation and Maintenance. The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Bypass of Treatment Facilities.
 - Byapass not exceeding limitations. The permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.
 - 2. Notice.
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior notice, if possible at least 10 days before the date of the bypass.

- Unanticipated bypass. The permittee must submit notice of an unanticipated bypass a required under Part II.G ("Twenty-four Hour Notice of Noncompliance Reporting").
- 3. Prohibition of bypass.
 - Bypass is prohibited, and the Director or ADEC may take enforcement action against the permittee for a bypass, unless:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventative maintenance; and
 - (3) The permittee submitted notices as required under paragraph 2 of this Part.
 - b. The Director and ADEC may approve an anticipated bypass, after considering its adverse effects, if the Director and ADEC determine that it will meet the three conditions listed above in paragraph 3.a of this Part.
- G. Upset Conditions.
 - Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- 2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under Part II.G ("Twenty-four Hour Notice of Noncompliance Reporting"); and
 - d. The permittee complied with any remedial measures required under Part IV.D ("Duty to Mitigate").
- 3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.
- H. Toxic Pollutants. The permittee muse comply with effluent standards or prohibitions established under section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- I. Planned Changes. The permittee must give notice to the Director and ADEC as soon as possible of any planned physical alterations or additions to the permitted facility whenever:
 - 1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
 - The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification reuqiremen5ts under Part II.I ("Changes in Discharge of Toxic Substances").

J. Anticipated Noncompliance. The permittee must give advance notice to the Director and ADEC of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

V. GENERAL PROVISIONS

- A. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR 122.62, 122.64, or 124.5. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- B. Duty to Reapply. If the permittee intends to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. In accordance with 40 CFR 122.21(d), and unless permission for the application to be submitted at a later date has been granted by the Regional Administrator, the permittee must submit a new application at least 180 days before the expiration date of this permit.
- C. Duty to Provide Information. The permittee must furnish to the Director and ADEC, within any reasonable time specified in the request, any information that the Director or ADEC may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee must also furnish to the Director or ADEC, upon request, copies of records required to be kept by this permit.
- D. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or in any report to the Director or ADEC, it must promptly submit the such facts or information.
- E. Signatory Requirements. All applications, reports or information submitted to the Director and ADEC must be signed and certified as follows:
 - 1. All permit applications must be signed as follows:
 - a. For a corporation: by a responsible corporate officer.

- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
- c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.
- 2. All reports required by the permit and other information requested by the Director or ADEC must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
 - c. The written authorization is submitted to the Director and ADEC.
- 3. Changes to authorization. If an authorization under Part V.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.E.2 must be submitted to the Director and ADEC prior to or together with any reports, information, or applications to be signed by an authorized representative.
- 4. Certification. Any person signing a document under this Part must make the following 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

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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."

- F. Availability of Reports. In accordance with 40 CFR 2, information submitted to EPA pursuant to this permit may be claimed as confidential by the permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 2, Subpart B (Public Information) and 41 Fed. Reg. 36924 (September 1, 1976), as amended.
- G. Inspection and Entry. The permittee must allow the Director, ADEC, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:
 - Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.
- H. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of state or local laws or regulations.

- I. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory.)
- J. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

VI. DEFINITIONS

"Act" means the Clean Water Act.

- "Acute toxic unit" (TUa) is a measure of acute toxicity. TUa is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the acute exposure period (i.e., 100/LC50).
- "ADEC" means Alaska Department of Environmental Conservation.
- "Administrator" means the Administrator of the EPA, or an authorized representative.
- "AML" means average monthly limit for the discharge.
- "Average Monthly Limit" (AML) 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 during that month.
- "Average Weekly Limit" (AWL) means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

"AWL" means average weekly limit for the discharge.

"Ballast water" means harbor or sea water added or removed to maintain the proper ballast floater level and ship draft.

- "Best Management Practices" (BMPs) means schedules of activities, prohibitions or 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 the drilling vessel hull.
- "Biocide" means any chemical agent used for controlling the growth of or destroying nuisance organisms (e.g., bacteria, algae, and fungi).
- "Blowout preventer fluid" means fluid used to actuate hydraulic equipment on the blowout preventer.
- "BOD" means biochemical oxygen demand.
- "Boiler blowdown" means the discharge of water an minerals drained from boiler drums.
- "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- "Chronic toxic unit" (TUc) is a measure of chronic toxicity. TUc is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., 100/NOEC).
- "Completion fluid" means salt solutions, weighted brines, polymers, and various additives used to prevent damage to the wellbore during operations which prepare the drilled well for hydrocarbon production.

"Cooling water" means once-through non-contact cooling water.

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

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- "Deck drainage" means all waste resulting from platform washings, deck washings, spillage, rainwater, and runoff from curbs, gutters, and drains including drip pans and wash areas within facilities subject to this permit.
- "Desalination unit wastes" means wastewater associated with the process of creating fresh water from sea water.
- "Diesel oil" means the grade of distillate fuel, as specified in the American Society for Testing and Materials (ASTM) Standard Specifications D975-81, that is typically used as the continuous phase in conventional oilbased drilling fluids, which contains a number of toxic pollutants. For the purpose of this permit, "diesel oil" includes the fuel oil present at the facility.
- "Director" means the Director of the Office of Water, EPA, or an authorized representative.
- "DMR" means discharge monitoring report.
- "Domestic wastes" means materials discharged from showers, sinks, safety showers, eye-wash stations, hand-wash stations, fish-cleaning stations, galleys and laundries.
- "Drill cuttings" means particles generated by drilling into subsurface geological formations and carried to the surface with the drilling fluid.
- "Drilling fluid" refers to the circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure. The four classes of drilling fluids are: water-based fluids, oil-based fluids, enhanced mineral oil-based fluids, and synthetic-based fluids.
- "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.

- "Enhanced mineral oil-based drilling fluid" means "drilling fluid" that has an enhanced mineral oil as its continuous phase with water as the dispersed phase.
- "EPA" means the United States Environmental Protection Agency.
- "Excess cement slurry" means the excess cement and wastes from equipment washdown after a cementing operation.
- "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.
- "Grab" sample is an individual sample collected over a period of time not exceeding 15 minutes.
- "Hydrotest water" is filtered sea water, or occasionally fresh water, used to test the integrity of unused produced water lines, or produced water lines which are suspected of leaking or which have recently been repaired.
- "Instream Waste Concentration" (IWC) is the concentration of effluent at the edge of the mixing zone.
- "LC50" means the concentration of toxicant (e.g., effluent) which is lethal to 50 percent of the test organisms exposed in the time period prescribed by the test.
- "Maximum daily limit" means the highest allowable "daily discharge."
- "MDL" means the maximum daily limit for the discharge.
- "mgd" means million gallons per day.
- "mg/L" means milligrams per liter.
- "Mineral oil" means a class of low volatility petroleum product, generally of lower aromatic hydrocarbon content and lower toxicity than diesel oil.
- "MSD" means marine sanitation device, and is a sanitary wastewater treatment system specifically designed to meet U.S. Coast Guard requirements.

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- "Muds, cuttings, cement at sea floor"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.
- "NOEC" means no observed effect concentration. The NOEC is the highest concentration of toxicant (e.g., effluent) to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short-term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of effluent in which the values for the observed responses are not statistically significantly different from the controls).
- "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.
- "Produced solids" means sands and other solids deposited from produced water which collect in vessels and lines which must be removed to maintain adequate vessel and line capacities.
- "Produced water" means fluid extracted from a hydrocarbon reserve during development or production, and hydrotest water. The fluid 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.

"QA/QC" means quality assurance/quality control.

"Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.

"Sanitary wastes" means human body waste discharged from toilets and urinals.

- "Severe property damage" 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.
- "Site" means the single, specific geographical location where a mobile drilling facility (jackup rig, semisubmersible, or arctic mobile rig) conducts its

activity, including the area beneath the facility, or to a location of a single gravel island.

- "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.
- "Synthetic-based drilling fluid" means "drilling fluid" that has a synthetic material as its continuous phase with water as the dispersed phase.
- "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.
- "Test fluid" means the discharge which 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.
- "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit 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.
- "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.
- "Waterflooding discharges" means discharges associated with the treatment of sea water 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" are 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.

- "Well treatment fluid" is any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon bearing strata after a well has been drilled.
- "Workover fluids" are salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow for maintenance, repair of abandonment procedures. Drilling fluids 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.