



# Fact Sheet

NPDES Permit Number: AKG-33-0000 (formerly AKG-31-0000)

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## **The U.S. Environmental Protection Agency (EPA) Plans To Issue A General Wastewater Discharge Permit To:**

Facilities Related to Oil and Gas Extraction

and

This will also serve as a notice of a  
FINDING OF NO SIGNIFICANT IMPACT (FONSI) for  
BP Exploration's Badami Facility,

a notice to  
REVOKE COVERAGE UNDER THE MODIFIED 1997 GP,

notice of  
STATE CERTIFICATION,

and

notice of a  
DETERMINATION OF CONSISTENCY  
WITH THE  
ALASKA COASTAL MANAGEMENT PROGRAM

### **EPA Proposes NPDES Permit Issuance.**

EPA proposes to reissue a National Pollutant Discharge Elimination System (NPDES) General Permit to facilities related to oil and gas extraction located in the area bounded

by the North Slope Borough and seaward. The proposed general permit sets conditions on the discharges - or release - of pollutants from various types of operations into waters of the United States. To better align the general permit numbering scheme with EPA Headquarter requirements, the number for this general permit will change from AKG-31-0000 to AKG-33-0000. New notices of intent are required under this general permit, new permit numbers will be assigned when facilities are reauthorized.

This Fact Sheet includes:

- the tentative determination of the EPA to issue the general permit,
- information on public comment, public hearing, and appeal procedures,
- a description of the industry, and
- a description of proposed permit conditions.

### **Finding of No Significant Impact (FONSI)**

In compliance with EPA headquarter guidance for re-issued NPDES permits, the EPA Region 10 NEPA Compliance Program has evaluated the proposed changes to the NPDES permit and balanced the need to re-evaluate the NEPA analysis. The only new source previously covered by this general permit was the Badami Facility operated by BP Exploration (Alaska), Inc. An Environmental Assessment (EA) was developed in early 1997 and a FONSI was issued on April 12, 1997. EPA Region 10 has determined that the previous EA does not need to be amended with a new NEPA analysis, as the permit coverage is not used except as a contingency to the discharge of the wastewater into the Class I Underground Injection Control (UIC) well at the facility. Also, the proposed permit conditions for the new source discharge in the proposed re-issued NPDES permit are not significantly different from the previous permit.

### **The State of Alaska certification.**

EPA has requested that the Alaska Department of Environmental Conservation (ADEC) certify the NPDES permit under section 401 of the Clean Water Act (CWA).

### **Consistency Determination**

The State of Alaska, Department of Natural Resources, Office of Project Management and Permitting, Alaska Coastal Zone Management, intends to review this action for consistency with the approved Alaska Coastal Management Program (ACMP). For more information concerning this review, please contact Mr. Glenn Gray at (907) 465-8792.

### **EPA invites comments on the proposed permit.**

EPA will consider all substantive comments before issuing a final permit. Those wishing to comment on the proposed permit may do so in writing by the end of the public comment period.

Persons wishing to comment on State Certification should submit written comments by the public notice expiration date to the Alaska Department of Environmental Conservation, 555 Cordova Street, Anchorage, Alaska 99501. Questions may be addressed to Ms Sharmon Stambaugh at (907) 269-7565.

For more information on the ACMP consistency review process and the comment deadline, or to submit comments, please contact Mr. Glenn Gray, 302 Gold Street, Juneau, Alaska 99801 or at (907) 465-8792.

The general permit (GP) will become effective 30 days after publication of the final notice in the Federal Register according to Section 553(d) of the APA.

**Documents are available for review.**

The proposed NPDES permit and fact sheet can be reviewed at EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday. This material is also available for inspection and copying at the following places in Alaska:

USEPA Alaska Operations Office  
Federal Building, Room 537  
222 West 7th Avenue  
Anchorage, Alaska 99513-7588  
Telephone: (800) 781-0983 (in Alaska)

USEPA Alaska Operations Office  
709 W. 9<sup>th</sup> Street, Room 223A, Box 20370  
Juneau, Alaska 99802  
Telephone: (907) 586-7619

ADEC Watershed Development Program  
Air and Water Quality Division  
555 Cordova Street  
Anchorage, AK 99501  
Telephone: (907) 269-7565

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## LIST OF ACRONYMS

AAC	Alaska Administrative Code
ACMP	Alaska Coastal Management Program
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
APA	Administrative Procedures Act
AWQS	Alaska Water Quality Standard
BAT	Best Available Technology, economically achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BPJ	Best Professional Judgement
BOD <sub>5</sub>	5 day Biochemical Oxygen Demand
BPT	Best Practicable Control Technology, currently available
CFR	Code of Federal Regulations
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DNR	Department of Natural Resources
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FR	Federal Register
GP	General Permit
GPD	gallons per day
MGD	million gallons per day
mg/L	milligrams per liter
ml/L	milliliters per liter
MSGP	Multi-sector General Permit (Storm water)
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NSB	North Slope Borough
NSGP	North Slope General Permit
NSPS	New Source Performance Standards
NTU	Nephelometric Turbidity Units
ODCE	Ocean Discharge Criteria Evaluation
SS	Settleable Solids
SWPPP	Storm Water Pollution Prevention Plan
TSS	Total Suspended Solids
ug/L	micrograms per liter
U.S.C.	United States Code
USEPA	Environmental Protection Agency
USFWS	United States Fish & Wildlife Service

## I. GENERAL PERMITS

### A. Permit Coverage

1. Section 301(a) of the CWA provides that the discharge of pollutants is unlawful except in accordance with an NPDES permit. Although such permits are usually issued to individual dischargers, EPA's regulations also authorize the issuance of general permits to categories of dischargers [40 CFR 122.28] located within the same geographic area if the regulated sources are:
  - a) Involve the same or substantially similar types of operations;
  - b) Discharge the same types of wastes;
  - c) Require the same effluent limitations or operating conditions;
  - d) Require the same or similar monitoring requirements; and
  - e) In the opinion of the Director, are more appropriately controlled under a general permit than under individual permits.
2. Like individual permits, a violation of a condition contained in a general permit constitutes a violation of the Act and subjects the owner or operator of the permitted facility to the penalties specified in Section 309 of the Act as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note).
3. A Notice of Intent (NOI) to be covered under this General Permit (GP) is required [40 CFR 122.28(b)(2)(i)]. A NOI information sheet containing the information required to be covered is included in Appendix A of the GP.
4. This permit will expire five (5) years from the date of effective date. 40 CFR 122.28(b)(1) allows a GP to be administered according to the individual permit regulations found in 40 CFR 124 so the GP will continue in force and effect until a new GP is issued. Only those facilities authorized to discharge under the expiring GP that submit an NOI 90 days prior to the expiration of this GP are covered by the continued permit.
5. EPA is proposing that all facilities covered by the 1997 GP (modified in 1998) be eligible for coverage under this GP. Due to the time that has elapsed since the expiration of the GP, EPA shall require that new NOI information sheets be submitted by each facility still requiring coverage. All permittees covered by the GP will receive a copy of the draft permit and fact sheet as well as the final permit when it is published in the Federal Register (FR). After the final FR notice, new NOIs may be submitted.

## B. Individual Permits

1. Owners or operators covered by a GP may be excepted from coverage by applying to the Director of the NPDES program for an individual permit. This request must be made by submitting an NPDES permit application, together with supporting documentation within 90 days of publication by EPA of the final GP in the Federal Register, or 180 days prior to the commencement of operation of a new source or new discharger.
2. The Director may require any person authorized by a GP to apply for and obtain an individual permit, or any interested person may petition the Director to take this action. The Director may consider the issuance of an individual permit when:
  - a) The single discharge or the cumulative number of discharges is/are a significant contributor of pollution;
  - b) The discharger is not in compliance with the terms and conditions of the GP;
  - c) A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
  - d) Effluent limitations guidelines are subsequently promulgated for the point sources covered by the GP;
  - e) A Water Quality Management Plan containing requirements applicable to such point sources is approved.
  - f) Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the GP, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary

## II. GENERAL PERMITTING BACKGROUND

There are many varied reasons why permitting authorities choose to use general permits to cover point source discharges. Permitting authorities approved to issue general permits have used general permits to reduce their permit issuance backlogs. General permits can be written to cover large classes or categories of similar discharges, thereby substantially reducing permit issuance backlogs. In addition, general permit can be used to cover dischargers that have been previously unpermitted due to resource constraints. By covering numerous discharges under one general permit, the permitting authority can avoid much of the time and burden that issuing individual permits to each discharge would involve. Permit application costs and paperwork burdens for discharges covered by a general permit are also reduced. Dischargers covered by a general permit usually are not required to conduct the sampling and analysis associated with individual permit applications.

### III. NORTH SLOPE GENERAL NPDES PERMIT (NSGP) HISTORY

A GP for discharges related to oil and gas extraction facilities on the North Slope was effective April 10, 1997. The GP covered discharges for sanitary and domestic wastewaters, gravel pit dewatering and construction dewatering. A Fact Sheet dated August 1, 1996, outlines the technical basis for the conditions included in the GP.

The GP was later modified and the modification was effective March 16, 1998. The modification included provisions to extend the area of coverage for sanitary and/or domestic wastewater discharges and discharges from melting ice roads constructed of gravel pit water into marine waters offshore of the North Slope Borough of Alaska. The modified GP also included a new outfall designation for the discharge of hydrostatic test water. A Fact Sheet dated November 10, 1997, outlines the technical basis of the modifications to the GP.

During the course of the five year life of the GP, 54 facilities were covered by the GP. Most facilities discharged to unnamed tundra wetlands. Thirteen facilities were permitted for discharge of domestic wastewaters while 19 were permitted for discharge of a combination of sanitary and domestic wastewaters. Eight facilities were permitted to dewater gravel pits and 14 facilities were authorized to discharge hydrostatic test water.

### IV. COVERED FACILITIES AND NATURE OF DISCHARGES

#### A. Types of Facilities Covered and Area of Coverage

The general permit, as proposed, authorizes the discharge of specific wastewaters from facilities related to oil and gas extraction.

In order to be authorized to discharge under this general permit, the operator of such facilities must be apply through the NOI process and receive an authorization letter from EPA prior to discharging.

The area of coverage for this GP is the North Slope Borough of Alaska (shown in Appendix B) and seaward for camp and ice structure discharges. This permit does not authorize the placement of operations in areas of restricted activity.

#### B. Types of Discharges Authorized

##### 1. Modular Camps

In this general permit, domestic wastewater, as defined in 18 AAC 72.990(23), means waterborne human wastes or graywater [from a laundry, kitchen, sink, shower, bath, or other domestic source and that does not contain excrement, urine, or combined stormwater]. The previous general permit separated coverage for sanitary (waterborne human wastes) and domestic (graywater).



Because the state's regulation is more stringent, it will be used to regulate any combination of sanitary and/or domestic wastewater and is designated as domestic wastewater in the GP.

The proposed discharge is from modular camp structures used in oil and gas exploration work both in geophysical surveys and in well drilling, construction and operations. These modular camps generally house 100 or fewer workers. Discharges are sporadic, varying in quantity with the time of day. The maximum flow discharge would normally occur anytime from late afternoon until midnight each day. The GP proposes an increase in the maximum daily discharge from 15,000 gallons per day to 25,000 gallons per day. This is to accommodate those facilities that may be combining their sanitary and graywater discharges. In the previous GP, there was no flow limit on discharges that consisted only of graywater.

Discharges to tundra or open waters will be authorized provided the discharge meets the numeric limitations of the GP. These limitations vary depending upon the type of receiving water and the conditions at the time of the discharge. Effluent limitations are generally most restrictive for discharges occurring to non-frozen tundra or to open waters supporting salmon. Less restrictive limitations apply to discharges to frozen tundra or to open waters not supporting salmon.

At the present time, EPA is developing a state-wide general permit to cover small domestic discharges. When the state-wide general permit is being finalized, EPA may decide to withdraw coverage for domestic wastewater discharges from this North Slope general permit.

## 2. *Gravel Pit Dewatering*

The second discharge covered by this general permit is dewatering of active gravel pits to a creek or adjacent tundra wetlands. Winter snow accumulations from precipitation and drifting, meltwater from snow and overburden storage, and local drainage from breakup runoff create bodies of water at the lower elevations of each mine site. Infrequent gravel source requirements may allow several seasons of water to accumulate in the mine sites. Initial pumping of accumulated waters is begun within the deeper sections of the gravel pits. These undisturbed waters contain little suspended sediment, as a pit serves as an effective settling basin. Removal of this accumulated water is required to allow gravel removal and transportation equipment to operate efficiently and safely.

The melting of ice roads and pads constructed from gravel pit water and the use of gravel pit water for road watering are covered by this GP. The ice roads and pads will eventually melt and discharge to the adjacent tundra wetlands or to surface waters. Ice roads and pads are used instead of gravel to limit the impact of an operation on the surrounding tundra area. Road watering is done during the

summer for dust suppression. The proposed permit will require compliance with a Best Management Practices (BMPs) Plan for dewatering and to maintain the quality of the ice roads and pads in use so that there will be no additional pollutants of concern as structures melt during breakup. The BMP Plan will also address potential runoff from the road watering process.

3. *Construction Dewatering*

At facilities related to oil and gas extraction, there are times when it is necessary to dewater construction areas where water has pooled. This is common when burying a pipeline and ditches have to be dewatered for proper placement of the line. This GP proposes to cover small discharges to waters of the United States associated with dewatering construction areas where water is mainly attributed to ground water inflow into the ditches with the inflow of stormwater being minimal.

4. *Hydrostatic Testing Water*

Hydrostatic testing must be done when pipe segments are newly installed or replaced. Water is used to pressure test the pipe to verify mechanical strength and integrity. This water is discharged when the hydrostatic testing is completed. Waters from hydrostatic testing can contain small quantities of residual materials that are left in the pipe prior to testing such as dust and welding slag. Common treatment and control measures used for hydrostatic testing waters include one or more of the following methods: velocity reduction on splash pads; erosion control; rubble mound infiltration into dry stream channels; settling ponds; pumping to upland areas; and/or pumping to ice and snow. The location and volume of discharges depend upon circumstances of the particular project involved.

5. *Storm Water Discharges associated with Industrial Activity*

The most likely source of storm water runoff comes during spring break-up from the rapid melting of snow and ice that accumulates during winter. Due to the low relief and frozen tundra surface, meltwater initially flows over the frozen tundra. As the tundra surface gradually thaws, meltwater percolates downward but is impeded by permafrost.

A storm water discharge permit is not required for discharges of storm water runoff from oil and gas exploration, production, processing or treatment operations or transmission facilities that is composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or do not come into contact with any overburden, raw material, intermediate products, finished

products, byproduct or waste products located on the site of such operations [33 USC 1342(l)(2)]. In short, if a facility experiences a release of a reportable quantity then it must obtain a permit for storm water discharge.

a. This GP proposes to cover those storm water discharges that have come in contact with any of those materials or products from industrial activities that may occur in, but are not limited to, the following sites and areas:

- 1) Industrialized resource extraction areas including drill sites;
- 2) Access roads, docks and airstrips used or traveled by carriers of raw materials, intermediate products, or finished products;
- 3) Sites used for storage of manufactured products, waste material or byproducts used or created by the facility;
- 4) Material handling and storage sites, refuse sites, and sites used for the application or disposal of process wastewaters;
- 5) Production reserve pits which have been closed under 18 AAC 60 and converted to storm water storage areas;
- 6) Sites used for residual treatment, storage or disposal of production or remediation wastes:
  - a) Shipping and receiving areas;
  - b) Manufacturing buildings, including electric power generation plants, storage areas (including tank farms) for raw materials and intermediate and finished products;
- 7) Areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. Significant materials include but are not limited to raw materials, fuels, solvents, detergents, plastic pellets, finished materials, fertilizers, pesticides and waste products such as sludge.

b. Non-storm water discharges authorized to be discharged with storm water, under the permit include:

- 1) Fire fighting flows and fire hydrant flushing discharges, including periodic fire suppression test discharges;
- 2) Potable water sources including waterline flushings and drinking fountain water;
- 3) Irrigation drainage – Not a common practice but may be used on occasion for re-vegetation projects ;
- 4) Routine external building and power line wash down that does not use detergent or other compounds;
- 5) Uncontaminated springs or groundwater;
- 6) Uncontaminated foundation or footing drains;
- 7) Uncontaminated storm water and snow melt from secondary containment; and
- 8) Electrical insulator steaming.

## 6. *Mobile Spill Response Units*

Small leaks from winter operations of motorized vehicles and equipment used for oil and gas exploration and development may result in droplets of motor oil, diesel, gasoline or transmission fluid on snow. These leaks are frequently remediated by removing droplets from the snow surface with a shovel and placing the snow-oil mixture in a container. The snow is melted and treated in a 55 gallon water-scrubbing unit that selectively absorbs hydrocarbons and repels water. The contaminated absorbent material is disposed of with similar oil-soaked material: typically in an incinerator. If the water's only source of contamination has been a small amount of oil products and there is not a sheen then the water from the unit could be discharged to frozen tundra wetlands.

## V. RECEIVING WATER

The receiving waters are waters of United States and the State of Alaska, most of which are classified in the Alaska Water Quality Standards (AWQS) [18 AAC 70] as Classes (1)(A), (B), (C), and (D) for use in drinking, culinary and food processing, agriculture, aquaculture, and industrial water supply; contact and secondary recreation; and growth and propagation of fish, shellfish, other aquatic life, and wildlife.

Some of the receiving waters are marine waters that are classified in 18 AAC 70 as Classes (2)(A), (B), (C), and (D) for use in aquaculture, seafood processing, and industrial water supply; contact and secondary recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife; and harvesting for consumption of raw mollusks or other raw aquatic life.

## VI. OCEAN DISCHARGE CRITERIA EVALUATION

In March 1995, EPA finalized a document entitled "Ocean Discharge Criteria Evaluation for Area of Coverage Under the Arctic NPDES General Permit for Oil and Gas Exploration" (ODCE). Since this document covers the same area and the same or similar pollutants of concern as this draft general permit, EPA is proposing to use this document to satisfy the requirements of Section 403 of the Act.

The discharges contained within this general permit that may be made to marine waters are domestic wastewater from mobile camps, discharges from ice structures constructed of gravel pit water, hydrostatic test water discharges, storm water and discharges from Mobile Spill Response Units.

The ODCE directly addresses the discharge of sanitary and domestic wastewaters. For the purposes of this general permit, sanitary and domestic wastewater discharges are combined into one category, domestic wastewater, which in this proposed general permit is required to meet the state's secondary treatment standards as well as the state's water quality standards for fecal coliform and chlorine. This discharge is not expected to have a detrimental effect on the marine environment.

The ODCE does not specifically address discharges from melting ice structures but comparisons can be made. The water from the gravel pits must be withdrawn according to BMPs structured to achieve the effluent limitations placed on direct discharges of gravel pit water. If followed, these BMPs should assure a low level of sediment, the primary pollutant of concern, in the ice structure water. This water may be formed into structures on the ice over marine waters. These structures shall be maintained to prevent any additional pollutants from being introduced into the marine environment (e.g., rototrimming). The discharge from ice structures, built over marine ice of high quality freshwater and melting during spring breakup, should be considered less of an environmental impact than the discharge of cement slurries which are addressed in the ODCE. No adverse impacts are expected from cement discharges so it is also expected that no adverse impacts will occur from melting ice structure discharges.

Even though hydrostatic testing water is not addressed specifically in the ODCE, a comparison can be made with the discharge of ballast water which is addressed as a Miscellaneous Discharge. Ballast waters that have not been contaminated are not usually treated but treatment of hydrostatic testing waters is required under the permit even though the water can only come from a new pipeline that has not carried oil products so no hydrocarbon contamination is expected. The treatment is settling and/or filtering to remove any solids that may remain in the pipeline after construction such as welding slag. Since the only contaminants expected will be filtered or settled out prior to discharge, the discharge is expected to have minimal effects on the environment.

Comparisons may also be made between deck drainage which is addressed by the ODCE and storm water as well as discharges from Mobile Spill Response Units. Discharges of deck drainage are expected to contain small quantities of detergents, spilled drilling muds, solvents and other material that may be found on surfaces of the facility exposed to precipitation. It is expected that the discharge contain no sheen. Because the nature of storm water is very similar to deck drainage and it is expected that the other discharge would be of a consistent quality not having been exposed to anything other than oil products, these discharges are comparable to deck drainage. The ODCE says that if the collection systems to prevent a sheen are operating normally, the mass loading of pollutants on the environment should be minimal.

## VII. ENVIRONMENTAL SETTING

The facilities proposed to be covered by this general permit lie on the coastal plains of the North Slope of the Brooks Range of Alaska, north of 68° north latitude. The climate is characterized by long, cold winters persistent winds and low precipitation, with about 50 percent falling as snow. Depending on latitude, there is no daylight 5 to 60 days during the winter. When the sun does rise in winter, it remains low in the sky resulting in low levels of solar energy. These factors, along with the subfreezing temperatures, act to maintain frozen ground conditions 8 to 9 months of the year. In the spring, day length increases rapidly, with up to 24 hours of daylight in summer. In winter, winds cause substantial sublimation and drifting of snow that accumulates in topographic low areas. In summer, winds increase evaporation and generate water currents in lakes and ponds.

The land surface is characterized by subtle changes in topography, thousands of shallow lakes, meandering stream channels and ice-rich permafrost. The coastal plain consists of two physiographic regions: the Coastal Zone and the Upland Tundra. The Coastal Zone consists of delta fans, low truncated bluffs, shallow lagoons and barrier islands formed by the combined processes of stream flow, current, waves and ice. The Upland Tundra Region has little topographic relief, with local change ranging up to about 6 feet and grades to an elevation of about 100 feet above sea level. The ground surface has been modified by strong winds, stream erosion and deposition, and extremes of temperature. Wind transport of silt and sand from lake beds and floodplains have formed loess deposits of up to 30 feet in thickness.

The climate of the North Slope is characterized by long, cold winters, persistent winds, light to moderate summer rainfall and light winter snow. Winter snow is widely redistributed by wind action and tends to accumulate in topographic lows of the terrain. The mean annual temperature of the National Weather Service Meteorological Station of Umiat on the North Slope is approximately -12° C (10° F). Summer temperatures normally range from 2 to 18° C (36 to 65° F) in July.

Permafrost soils, defined as ground having a temperature below 0° C for two or more consecutive years, are essentially continuous throughout the area. The impermeable nature of the permafrost and the low topographic relief of the coastal plain result in poor drainage. Water derived from rain, snow and summer thawing of the surface soils, excluding that lost to evaporation or transpiration, accumulates above the permafrost zones, resulting in numerous swampy low-lying areas of the tundra wetlands.

## VIII. SPECIFIC PERMIT REQUIREMENTS

In establishing permit limits, EPA first determines which technology-based limits must be incorporated into the permit. EPA then evaluates the effluent quality expected to result from these controls, to see if it could result in any exceedences of the water quality standards in the receiving water. If exceedences could occur, EPA must include water quality-based limits in the permit. The proposed permit limits will reflect whichever requirements (technology-based or water quality-based) are more stringent. Appendix C provides the basis for the development of effluent limits.

### A. Modular Camp Discharges

#### 1. *Domestic Wastewater Discharges*

##### a) **Technology-based limitations**

*BPT Requirements* [40 CFR § 435.42 separately defines sanitary and domestic wastewater]

Floating solids: For sanitary wastes (made up of human body wastes from

toilets and urinals) the BPT level of treatment prohibits floating solids for facilities continuously manned by 9 or fewer persons or intermittently manned by any number of persons.

Chlorine: The requirement of maintaining residual chlorine levels as close as possible to, but no less than 1 mg/L for sanitary discharges for facilities staffed by 10 or more people.

Floating solids, foam or garbage: For domestic wastes (materials discharged from sinks, showers, laundries, safety showers, eyewash stations and galleys), the BPT level of treatment prohibits floating solids, foam or garbage.

Secondary Treatment [18 AAC 72.040 and 18 AAC 72.990(64)]

Biological Oxygen Demand (BOD<sub>5</sub>): The regulations for secondary treatment require that BOD meet a 7 day average of 45 mg/L, a 30 day average of 30 mg/L and the arithmetic mean of the values for effluent samples collected in a 24-hour period does not exceed 60 mg/L.

Total Suspended Solids (TSS): The regulations for secondary treatment require that TSS meet a 7 day average of 45 mg/L, a 30 day average of 30 mg/L and the arithmetic mean of the values for effluent samples collected in a 24-hour period does not exceed 60 mg/L.

pH: pH levels be maintained between 6 and 9 standard units.

b) **Water Quality Based limitations**

The waterbodies considered to be potential receiving waters under this general permit are protected for all uses. The most protective criteria will be used in the Permit.

Fecal Coliform: For freshwater, the most protective standard for fecal coliform is for drinking, culinary and food processing use. The AWQS state, "In a 30-day period, the geometric mean may not exceed 20 FC/100 ml, and not more than one sample, or more than 10% of the samples may exceed 40 FC/100 ml."

For marine waters, the most protective standard for fecal coliform is for harvesting for consumption of raw mollusks or other raw aquatic life use. The AWQS state, "Based on a 5-tube decimal dilution test, the fecal coliform median MPN may not exceed 14FC/100mL, and not more than 10% of the samples may exceed a fecal coliform median MPN of 43 FC/100mL.

Chlorine: The most protective freshwater and marine standard for chlorine is for aquaculture. For both, the AWQS state, "May not exceed 2.0 ug/l for salmonid fish or 10.0 ug/l for other organisms." The term "salmonid fish" is defined in the permit as the family of fish, *Salmonidae*, which includes salmon, trout, grayling, whitefish, char, ciscoe and inconnu. The Permit is structured so that there is some flexibility for those facilities discharging to waterbodies not designated for salmonid fish. The permittee is expected to check with Alaska Department of Fish and Game or other appropriate agency to determine whether the more restrictive limitation applies to their facility.

pH: For fresh waters, the most protective limitations on pH are for



aquaculture and contact recreation. This level is 6.5 to 8.5 standard units. For marine waters, the most protective limitations are for aquaculture and the growth and propagation of fish, shellfish, other aquatic life and wildlife. This level is 6.5 to 8.5 standard units.

Oil and Grease. Applicable state standards for oil and grease are limited to "shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines." The potential source of oil and grease in this discharge would be excess cooking oils. While the ordinary cleaning of utensil and cooking appliances is acceptable, the discharge of excess cooking oil is not. EPA has determined that the state criteria can be met by requiring that no kitchen oils from food preparation be mixed with the wastewater being discharged.

c) **Mixing Zone Authorizations**

In accordance to 18 AAC 70.240, ADEC may issue a discharge-specific mixing zone upon receipt of a complete NOI. Permittees may request modification to the effluent limits based upon a mixing zone assigned and approved by ADEC, pursuant to 18 AAC 70.260. The necessary information may be included with the NOI. It is expected that ADEC will certify this mixing zone provision and will list the required information for mixing zone development in its 401 Certification of this GP. If ADEC does not certify this provision into the permit, mixing zones will be removed from the permit. EPA will approve modified effluent limits proposed by ADEC under this general permit if the modified limits and resulting mixing zone are consistent with the Clean Water Act, EPA's regulations, 18 AAC 70.245, 18 AAC 70.250, 18 AAC 70.255 and that:

- 1) The mixing zone and the resulting dilution factors are established by ADEC in accordance with the State of Alaska Water Quality Standards (18 AAC 70).
- 2) The public was provided reasonable notice of and an opportunity to comment on the modified effluent limits and associated mixing zone.
- 3) The EPA Director or ADEC may require and establish limits for additional parameters such as total aromatic hydrocarbons, as conditions warrant. The limits for any additional parameters shall be in addition to those already required in this permit and shall not make the provisions in this permit less stringent. The permittee will be notified of any additional parameters and limitations when issued authorization to discharge under this general permit.

- 4) ADEC may also establish limits at the edge of an authorized mixing zone in the ambient (receiving water). These limits shall be based on the limitations and requirements of the Alaska Water Quality Standards (18 AAC 70). ADEC will be responsible for the establishment and oversight of these limitations. The permittee will be notified of receiving water limitations when issued mixing zone authorization by ADEC to discharge under this general permit.

The tables below summarize the effluent limitations and monitoring requirements for this category of discharges:

TABLE 1 EFFLUENT LIMITATIONS					
Parameter, (units)		7-Day Average	30-Day Average	Daily Maximum	Units
Flow		---	---	25,000	gallons/day
Biochemical Oxygen Demand (BOD <sub>5</sub> )		45	30	60	mg/L
		see footnote 1			lbs/day
Total Suspended Solids (TSS)		45	30	60	mg/L
		see footnote 1			lbs/day
Fecal Coliform <sup>2</sup>	Freshwater	---	20	40	#/100 ml
	Marine water	---	14	43	
Total Residual Chlorine <sup>3</sup> (TRC)		---	---	2 <sup>4</sup>	µg/L
<p>1. BOD<sub>5</sub> and TSS mass loading limits apply to each discharge. The calculation for these limitations is based on the following formula: concentration limit (mg/L) X facility design flow (MGD) X 8.34 (conversion factor) = pounds per day. Loading limitations are applicable to the average monthly, average weekly and maximum daily limitations.</p> <p>2. All fecal coliform results must be reported as the geometric mean.</p> <p>3. Test not required if chlorine is not used as disinfectant.</p> <p>4. The effluent limitation for non-salmonid streams is 10 ug/L</p>					

The NOI requires a facility to submit the design flow so loading limits can be calculated for each facility. When a facility is covered, the table in Permit Part II.A.1.e. will contain the loading limits specific for the facility.

The effluent limit for chlorine is not quantifiable using EPA approved analytical methods. EPA will use 0.1 mg/L (the Minimum Level for EPA Method 330.3 and Method 330.4) on the Discharge Monitoring Report (DMR) as the compliance evaluation level for this parameter.

For purposes of reporting on the DMR, if a value is greater than the minimum detection level (MDL), the permittee must report the actual value. If a value is less than the MDL, the permittee must report “less than {numeric MDL}” on the DMR. For purposes of calculating monthly averages, zero may be used for values less than the MDL.

<b>TABLE 2 MONITORING REQUIREMENTS</b>				
<b>Parameter</b>	<b>Sample Location</b>	<b>Sampling Frequency</b>		<b>Type of Sample</b>
		<b>Lower Flows*</b>	<b>Higher Flows**</b>	
<b>Total Flow</b>	Effluent	Daily	Daily	Estimate
<b>BOD<sub>5</sub></b>	Effluent	Monthly	Weekly	Grab
<b>TSS</b>	Effluent	Monthly	Weekly	Grab
<b>pH</b>	Effluent	Monthly	Weekly	Grab
<b>Fecal Coliform</b>	Effluent	Monthly	Monthly	Grab
<b>TRC</b>	Effluent	Monthly	Weekly	Grab
<b>Floating Solids</b>	Effluent	Daily		Observation
<b>Foam</b>	Effluent	Daily		Observation
<b>Garbage</b>	Effluent	Daily		Observation
<b>Oily Sheen</b>	Effluent	Daily		Observation
* up to and including 10,000 gallons per day (gpd)				
** over 10,000 gpd				

2. *BMP Plan*

The requirement of low phosphate detergent use shall be included in the BMP Plan required for this type of discharge. The inclusion of this BMP will avoid the need for a phosphate limit yet still control nutrient loading.

**B. Gravel Pit Dewatering**

1. *Technology-Based Limitations*

Effluent limitations required in this GP for the control of pollutants are published in 40 CFR § 436 Subpart C—Construction Sand and Gravel Subcategory. These limitations apply to the dewatering of gravel pits. Subpart C establishes effluent limitation guidelines based on Best Practicable Control Technology currently available (BPT). BPT effluent limitations are listed in 40 CFR § 436.32 (a)(2),

which states that "mine dewatering discharges shall not exceed the following limitations: pH range of 6 to 9, maximum for one day; pH range of 6 to 9, average of daily values for 30 consecutive days."

EPA did not include a technology-based limitation for sediment in the national effluent guidelines for this category of discharge but the treatment technology for these discharges would be the same as the gold placer mining category, one of simple settling. The only parameter specifically limited in these guidelines [40 CFR § 440, Subpart M] is settleable solids. The limit is 0.2 ml/L. Since the technology is the same, EPA is proposing to use this guideline as the Best Professional Judgement (BPJ) technology-based limitation for sediment.

## 2. *Water Quality-Based Evaluation*

Oil and Grease. Applicable state standards for oil and grease are limited to "shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines." The mine sites should have no direct contact with oil production activities. Furthermore, equipment is not to be operated in a manner that will allow contact of hydraulic fluids, lubricants, or fuel with the accumulated meltwater. EPA has determined that the state criteria can be met by a requirement of no discharge of floating solids, visible foam, or oily wastes which produce a sheen on the surface of the receiving water.

pH. For fresh waters, the most protective limitations on pH are for aquaculture and contact recreation. This level is 6.5 to 8.5 standard units. For marine waters, the most protective limitations are for aquaculture and the growth and propagation of fish, shellfish, other aquatic life and wildlife. This level is 6.5 to 8.5 standard units.

Sediment. There is a reasonable potential for violations to occur should pumping of the gravel pit be conducted improperly. A sediment limitation based on the AWQS would call for "no measurable increase in concentrations of settleable solids above natural conditions, as measured by the volumetric Imhoff cone." This level is less restrictive than the technology-based limitation so EPA is proposing a settleable solids limit for the discharge of 0.2 ml/L.

The effluent limitations and monitoring requirements are summarized in Table 3:

Table 3 Effluent Limitations and Monitoring Requirements						
Parameter	Minimum	Maximum	Units	Sampling Location	Sample Type	Sampling Frequency

<b>Flow</b>	---	1.5	Million gallons per day (MGD)	Effluent	Estimate	Daily
<b>Settleable Solids (SS)</b>	---	0.2	Milliliters per liter (ml/L)	Effluent	Grab	Weekly
<b>PH</b>	6.5	8.5	Standard Units	Effluent	Grab	Weekly
<b>Oily Sheen</b>	No discharge of floating solids, visible foam, or oily wastes which may cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines.			Surface of mine water and receiving water	Visual	Daily

### 3. *Best Management Practices Plans (Ice Structures and Road Watering)*

The use of gravel pit discharge water for ice road and pad construction is being proposed for two reasons. The first reason is the possible impacts on a larger area because the waters usually used for these activities may not be in close proximity to a facility. The second reason was brought to light by the Alaska Department of Fish and Game during the initial permit issuance in 1996. Their concern is that drawing down waters in naturally occurring lakes or ponds, the usual source of water, may cause harm to fish overwintering in these water bodies. The ice roads may be built over marine waters as well as frozen tundra; therefore, the discharges may be to fresh or to marine waters.

The use of gravel pit water for the construction of ice roads and pads causes a unique discharge of this water in the spring during breakup. The discharge cannot be representatively sampled as it occurs to the tundra wetlands or to surface waters over a large area so the use of BMPs are proposed in this general permit. 40 CFR § 122.44(k)(2) allows the use of BMPs when numeric limitations are infeasible. The Permit requires that BMPs be developed for the gravel pit dewatering process and these BMPs be utilized when gravel pit water will be used for ice structures and/or road watering. The BMP Plan required in Permit Part II.G. will also address the operation and maintenance of these activities to ensure that water quality is not harmed.

## C. **Construction Dewatering**

### 1. *Technology-Based Limitations*

EPA has not developed effluent guidelines for this category of dischargers but the treatment technology for these discharges would be the same as the gold placer mining category, one of simple settling.

Sediment. The only parameter specifically limited in these guidelines [40 CFR § 440, Subpart M] is settleable solids. The limit is 0.2 ml/L. Since the technology is the same, EPA is proposing to use this guideline as the BPJ technology-based limitation for sediment.

### 2. *Water Quality-Based limitations*

Sediment. There is a reasonable potential for violations to occur should pumping be conducted improperly. A sediment limitation based on the AWQS would call for “no measurable increase in concentrations of settleable solids above natural conditions, as measured by the volumetric Imhoff cone.” This is less restrictive than the technology-based limitation so EPA is proposing a settleable solids limit for the discharge of 0.2 ml/L.

Turbidity. Due to the nature of the discharge, dewatering a construction area, a turbidity limitation is being proposed in the general permit for this category of discharge. According to the AWQS, the most protective turbidity criteria applies to fresh water sources classified for use as drinking water and contact recreation uses. These criteria [18 AAC 70.020(b)] state that turbidity “(m)ay not exceed 5 Nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less; and more than 10% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum increase of 25 NTU.”

## **D. Hydrostatic Test Water Discharges**

### *1. Technology-Based Limitations*

There are no EPA effluent guidelines for discharges from hydrostatic testing. Therefore, the limitations in this GP are based on Best Professional Judgement (BPJ) which has been established for this type of discharge in the permit for Alyeska Pipeline Service, AK-005056-3. For this discharge, EPA is required to establish limitations that can be achieved through the use of Best Conventional Pollutant Control Technology (BCT).

Sediment. The constituents of the discharge generated by hydrostatic testing are primarily small quantities of inorganic residual materials left in the pipe prior to testing, such as dust and welding slag. It has been determined that appropriate technology for these discharges are physical treatment methods, such as filtration, overland treatment, and/or settling ponds that can control settleable solids and turbidity. This technology is therefore established as BCT and BAT for hydrostatic testing discharges. The effluent limit for sediment is 0.2 ml/L.

### *2. Water Quality-Based Limitations*

Sediment. There is a reasonable potential for violations to occur should pumping of the gravel pit be conducted improperly. A sediment limitation based on the AWQS would call for “no measurable increase in concentrations of settleable solids above natural conditions, as measured by the volumetric Imhoff cone.”

Turbidity. Due to the nature of the discharge, a turbidity limitation is being proposed in the general permit for this category of discharge. According to the AWQS, the most protective turbidity criteria apply to fresh water sources classified for use as drinking water and contact recreation uses. These

criteria [18 AAC 70.020(b)] state that turbidity “(m)ay not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the turbidity the natural turbidity is 50 NTU or less; and more than a 10% increase in turbidity when the natural conditions is more than 50 NTU, not to exceed a maximum increase of 25 NTU. The most protective marine criteria is for aquaculture, contact and secondary contact recreation, and states, “(m)ay not exceed 25 nephelometric turbidity units (NTU).”

pH. For fresh waters, the most protective limitations on pH are for aquaculture and contact recreation. This level is 6.5 to 8.5 standard units. For marine waters, the most protective limitations are for aquaculture and the growth and propagation of fish, shellfish, other aquatic life, and wildlife. This level is 6.5 to 8.5 standard units.

Oil and Grease. Applicable state standards for oil and grease are limited to “shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines.” EPA has determined that the state criteria can be met by a requirement of no discharge of floating solids, visible foam, or oily wastes which produce a sheen on the surface of receiving water.

## **E. Storm Water Discharges from Industrial Facilities**

### *1. Technology-Based Limitations*

EPA has developed Effluent Limitation Guidelines for the Oil and Gas Extraction Point Source Category, Subpart D—Coastal Category [40 CFR Part 435] that contain provisions that apply to storm water associated with industrial activity. The limitations applicable to oil and gas extraction activities are described below.

BPT, BAT, BCT, and NSPS requirements [40 CFR §§ 435.12, .13, .14, and .15] for discharge of deck drainage (which includes rainfall runoff) require no discharge of free oil, as determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen).

In evaluating options for controlling pollutants, EPA noted that it does not believe it is necessary to establish specific numeric effluent limitations, or a specific design or performance standard for storm water discharges associated with industrial activity from oil and gas facilities to meet the BAT/BCT standards. The storm water permit for industrial activities (60 FR 50915, September 29, 1995) did not contain numeric effluent limitations and no limitations were contained in the reissuance of the Multi-Sector GP (65 FR 64761, October 30, 2000).





## 2. *Water Quality-Based Limitations*

Based on results of EPA's review of data in developing the Multi-Sector General Permit (MSGP) for oil and gas, water transportation, and air transportation industry sectors, no effluent limitations are proposed.

## 3. *Storm Water Pollution Prevention Plans (SWPPP)*

Standard application requirements for storm water discharges associated with industrial activity, as specified at 40 CFR § 122.26(c), are proposed to be included in the GP. In particular, applications must contain a narrative description of materials management practices and existing structural and non-structural control measures to reduce pollutants in storm water runoff. This GP proposes that these descriptions be included in the applicant's BMP Plan.

This GP proposes that the narrative of the SWPPP include descriptions of the following items:

- a) Measures to cleanup reportable quantity releases (Contaminated storm water is storm water associated with a discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21, 40 CFR 302.6, or 40 CFR 110.6 or any storm water that contributes to a violation of a water quality standard [40 CFR 122.26(c)(1)(iii)]);
- b) Vehicle and equipment storage, cleaning, and maintenance areas;
- c) Snow handling procedures and erosion controls; and
- d) Any provisions necessary to meet the BMP requirements of Permit Part II.G.

The SWPPP shall be consistent with the general guidance contained in the publication entitled "Storm Water Management for Industrial Activities - Developing Pollution Prevention Plans and Best Management Practices" (USEPA 1992), or any subsequent revision to the guidance document.

Facilities that have already completed SWPPPs may incorporate those plans by reference. SWPPPs will become part of the overall BMP Plan under this Permit and, as such, are subject to the same requirements for revision and review.

## 4. *Monitoring Requirements*

Requirements for reporting results of storm water monitoring are specified at 40 CFR § 122.44(i)(4). The GP includes the following provisions:

- a) Bi-annual inspection of the facility site. One inspection should be conducted prior to breakup to assess whether there are any areas which may contribute to storm water discharges associated with an industrial activity and could be addressed with BMPs to minimize contact with the industrial activity. The second inspection should be conducted after the breakup period is over to assess whether there are any areas which contributed to storm water discharge associated with an industrial activity that were unanticipated and unaddressed by the SWPPP. The SWPPP should be modified to include the necessary practices to minimize contact with industrial activities in the future.
- b) Maintenance of inspections reports and compliance certification for a period of 3 years.
- c) Certification signed in accordance with established signatory authority (40 CFR § 122.22); and for inactive sites where annual inspections are impracticable, or otherwise unwarranted, a certification once every 3 years that the facility is in compliance with the Permit or alternative requirements.

#### **F. Treated Water Effluent from Mobile Spill Response Units**

Spill response units are used for small spills of fuel for field exploration activities. The units are composed of a vessel which provides gravity separation of aqueous and non-aqueous petroleum liquids.

##### *1. Technology-Based Limitations*

There are no EPA effluent guidelines for discharges from this type of petroleum/water separator. Therefore, the limitations in this GP are based on Best Professional Judgement based on evaluation of the unit's performance. For this type of discharge, EPA is required to establish limitations that can be achieved through the use of BAT.

Oil and Grease. The constituents of the discharge generated by water scrubbing units are primarily small quantities of petroleum hydrocarbons left in the water after treatment. It has been determined that appropriate technology for these discharges are physical treatment methods, such as adsorption and/or absorption. This technology is, therefore, established as BAT for response unit discharges. The effluent limit for oil and grease is no visible sheen.

## 2. *Water Quality-Based Limitations*

Oil and Grease. There is a reasonable potential for violations to occur should the discharge be conducted improperly. Applicable state standards for oil and grease are limited to “shall not cause a film, sheen, or discoloration on the surfaces or floor of the water body or adjoining shorelines.” EPA has determined that the state criteria can be met by a requirement of no discharge of floating solids, visible foam, or oily wastes which produce a sheen on the surface of the receiving water.

## 3. *Monitoring Requirements*

The effluent discharge shall be visually monitored throughout, with observations and problems noted in a log.

# IX. OTHER PERMIT CONDITIONS

## A. **Endangered Species Act (ESA)**

The Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. EPA sent letters to USFWS and to NMFS on July 25, 2002, requesting a species list for the coverage area of the GP. EPA received a letter from USFWS on August 1, 2002. There are two listed species within the area of coverage, the North Slope Borough (NSB): the Steller’s eider and the Spectacled eider. There is critical habitat for the Spectacled eider off the southwest shore of the NSB. Because the discharges from the permitted facilities have to meet water quality standards, a discharge from a facility operating in compliance with its permit limitations should not adversely affect either listed species. If necessary, EPA will enter into informal or formal consultation with USFWS and NMFS to ensure that the GP will not result in unacceptable impacts to any of the species identified on these lists.

## B. **Essential Fish Habitat (EFH)**

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish habitat. The action agency needs to make a determination Federal actions that may adversely impact EFH.

EPA has determined that the issuance of this GP is not likely to affect EFH species and habitat in the vicinity of the discharges. This is because most of the discharges occur to tundra wetlands. The discharges that do occur to open waters meet water quality standards and have to follow BMPs to prevent habitat degradation.

EPA has submitted this fact sheet and the proposed permit to NMFS for review during the public notice period. Additional information will be provided to NMFS if requested. Any recommendations received from NMFS will be considered for incorporation in the GP prior to the final reissuance.

### **C. State Certification**

Section 401 of the Clean Water Act requires EPA to seek certification from the State that the permit is adequate to meet State water quality standards before issuing a final permit. The regulations allow for the State to stipulate more stringent conditions in the permit, if the certification cites the Clean Water Act or State law references upon which that condition is based. In addition, the regulations require a certification to include statements of the extent to which each condition of the permit can be made less stringent without violating the requirements of State law.

The draft permit has been sent to the State to begin the certification process. If the state authorizes different or additional conditions as part of the certification, the permit may be changed to reflect these conditions.

### **D. Consistency Determination**

EPA has sent a copy of the permit and its consistency determination to the State of Alaska, Office of Management and Budget, Division of Governmental Coordination (DGC), which will review this permitting action for consistency with the approved Alaska Coastal Management Program (ACMP). For more information concerning this review, please contact Ms Kaye Laughlin at (907) 257-1351.

### **E. Permit Expiration**

This permit will expire five years from the effective date of the permit.

## APPENDIX A -- REFERENCES

- Alaska Department of Environmental Conservation. (ADEC). 2001. Wastewater General Permit – Contained Hydrocarbon Contaminated Water, No. 0240-DB001. December.
- BP Exploration (Alaska) Inc. (BPXA). 1994. Badami Development Project. Project Description and Environmental Assessment. July. pp. 2-7,8.
- Eddy, Samuel and James C. Underhill. How to Know the freshwater fishes.
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- National Pollutant Discharge Elimination System (NPDES) permit AK-005056-3 with corresponding fact sheet. Effective July 30, 1993. Expires July 30, 1998.
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- Scott, K. H. 1978. Effects of permafrost on stream channel behavior in Arctic Alaska. U.S. Geological Survey. Professional Paper 1068. 19 pp.
- Snoeyink, Vernon L. and David Jenkins. 1980. Water Chemistry.
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- United State Environmental Protection Agency. (USEPA). 1992. Storm Water Management for Industrial Activities—Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006.
- USEPA. 1993. Guidance Manual for Developing Best Management Practices (BMP). October 1993.

USEPA. 1995. Ocean Discharge Criteria Evaluation for Area of Coverage under the Arctic NPDES General Permit for Oil and Gas Exploration. Prepared with the assistance of Tetra Tech, Inc. March 1995.

USEPA. 1996. Fact Sheet for Proposed Issuance of General NPDES Permit No. AKG-31-0000 for Facilities Related to Oil and Gas Extraction. USEPA, Region 10. August 1, 1996. 18 p.

USEPA. 1997. Fact Sheet for Proposed Modification of General NPDES Permit No. AKG-31-0000 for Facilities Related to Oil and Gas Extraction. USEPA, Region 10. November 10, 1997. 12 p.

USEPA, Region 10. 1993. Guidance Manual for Developing Best Management Practices. USEPA, Regional.

APPENDIX B -- AREA OF COVERAGE



## APPENDIX C -- TECHNICAL INFORMATION

Sections 301(b), 304, 308, 401, and 402 of the Act provide the basis for the effluent limitations and other conditions contained in this proposed GP. EPA evaluates discharges with respect to these sections of the CWA and the relevant NPDES regulations in determining which conditions to include in the Permit.

In general, EPA first determines which technology-based limits apply to the discharges in accordance with the national effluent guidelines and standards. EPA then determines which water quality-based limits apply to the discharges. The Permit limits will reflect whichever limits (technology-based or water quality based) are more stringent.

### 1. Technology-Based Effluent Limitations

The CWA requires particular categories of industrial discharges to meet effluent limitations established by EPA. The CWA initially focused on the control of “traditional” pollutants (conventional pollutants and some metals) through the use of Best Practicable Control Technology Currently Available (BPT). Permits issued after March 31, 1989, must include any conditions necessary to ensure that the BPT level of control is achieved. BPT limitations are based on effluent guidelines developed by EPA for specific industries. Where EPA has not yet developed guidelines for a particular industry, permit conditions must be established using Best Professional Judgement (BPJ) procedures (40 CFR § 122.43, 122.44, and 125.3).

Section 301(b)(2) of the Act also requires further technology-based controls on effluents. After March 31, 1989, all permits are required by CWA § 301(b)(2) and 301(b)(3) to contain effluent limitations for all categories and classes of point sources which: (1) control toxic pollutants and nonconventional pollutants through the use of Best Available Technology Economically Achievable (BAT), and (2) represent Best Conventional Pollutant Control Technology (BCT). BCT effluent limitations apply to conventional pollutants (pH, BOD, oil and grease, suspended solids, and fecal coliform). BAT applies to toxic and nonconventional pollutants. Toxic pollutants are those listed in 40 CFR § 401.15. Nonconventional pollutants include all pollutants not included in the toxic and conventional pollutant categories. In no case may BCT or BAT be less stringent than BPT. Like BPT requirements, BAT and BCT permit conditions must be established using BPJ procedures in the absence of effluent limitation guidelines for a particular industry.

#### a) Domestic Wastewater

The effluent guidelines used in this general permit are Part 435 - Oil and Gas Extraction Point Source Category, Subpart D - Coastal Category and Subpart A - Offshore Subcategory. The limitations are applied to the discharge of domestic

wastewaters (as defined in Permit Part VI.H.).

b) Gravel Pit Dewatering

Part 436—Mineral Mining and Processing Point Source Category, Subpart C—Construction Sand and Gravel Subcategory are used to limit gravel pit dewatering discharges [40 CFR § 436.32(a)(2)]. Regulations at 40 CFR § 436.32 include limitations applying to the dewatering of gravel pits. Subpart C establishes effluent limitation guidelines based on Best Practicable Control Technology (BPT) currently available. BPT effluent limitations are listed in 40 CFR § 436.32 (a)(2), which states that “mine dewatering discharges shall not exceed the following limitations: pH range of 6 to 9, maximum for one day; pH range of 6 to 9, average of daily values for 30 consecutive days.”

EPA did not include a technology-based limitation for sediment in the national effluent guidelines for this category of discharge, but the treatment technology for these discharges would be the same as the gold placer mining category, one of simple settling. The only parameter specifically limited in these guidelines (40 CFR § 440, Subpart M) is settleable solids. The limit is 0.2 ml/L. Since the technology is the same, EPA is proposing to use this guideline as the technology-based limitation for sediment.

c) Construction Site Dewatering

EPA has not developed effluent guidelines for this category of discharges, but the treatment technology for these discharges would be the same as the gold placer mining category, one of simple settling. The only parameter specifically limited in these guidelines (40 CFR § 440, Subpart M) is settleable solids. The limit is 0.2 ml/L. Since the technology is the same, EPA is proposing to use this guideline as the technology-based limitation for sediment.

d) Hydrostatic Test Water

There are no EPA effluent guidelines for discharges from hydrostatic testing. Therefore, the limitations in this GP are based on Best Professional Judgement (BPJ) which has been established for this type of discharge in the permit for Alyeska Pipeline Service, AK-005056-3. For this discharge, EPA is required to establish limitations that can be achieved through the use of Best Conventional Pollutant Control Technology (BCT).

The constituents of the discharge generated by hydrostatic testing are primarily small quantities of inorganic residual materials left in the pipe prior to testing, such as dust

and welding slag. It has been determined that appropriate technology for these discharges are physical treatment methods, such as filtration, overland treatment, and/or settling ponds that can control settleable solids and turbidity. This technology is therefore established as BCT and BAT for hydrostatic testing discharges. The effluent limit for sediment is 0.2 ml/L.

e) Storm Water

EPA has stated that does not believe it is necessary to establish specific numeric effluent limitations or a specific design or performance standards for storm water discharges associated with industrial activity from oil and gas [60 FR 50915]. However, no discharge of free oil, as determined by the presence of a film or sheen upon the surface of the receiving water, is permitted.

Regulations at 40 CFR §§ 435.42 through 435.45 include limitations for the deck drainage waste source in the Coastal Subcategory. Deck drainage in this subpart [coastal] means [40 CFR § 435.41(e)] “any waste resulting from deck washings, spillage, rainwater, and runoff from gutters and drains including drip pans and work areas within facilities subject to this subpart.” Under this definition, storm water would be included in the definition of deck drainage. The effluent limitations for deck drainage with the application of BPT, BAT, and BCT are all the same: no discharge of free oil, as determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water.

f) Treated Effluent from Mobile Spill Response Units

There are no effluent limitations guidelines for treated spill response effluent. The waste source included in the regulations (40 CFR 435 Subpart C) that appears to be most similar is deck drainage (described above), since the definition of deck drainage includes runoff from drip pans. For this, the effluent limitation is the same: no discharge of free oil, as determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water.

2. Water Quality-Based Limitations

Section 301(b)(1) of the Act requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977. All discharges to state waters must comply with state and local coastal management plans as well as with state water quality standards, including the state's antidegradation policy. Discharges to state waters must also comply with limitations imposed by the state as part of its coastal management program consistency determinations and of its certification of NPDES permits under CWA § 401.

The NPDES regulations at 40 CFR § 122.44(d)(1) require that permits include limits on all pollutants or parameters which “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Alaska State Water Quality Standards (18 AAC Part 70) classify fresh waters as Classes (I)(A)(i-iv), (I)(B)(i-ii), and (I)(C) for use in drinking, culinary and food processing, agriculture, aquaculture, industrial water supply, water recreation, and the growth and propagation of fish, shellfish, aquatic life, and wildlife. With few exceptions, and none on the North Slope of the Brooks Range, rivers and lakes are designated for all beneficial uses and the most stringent of the water quality standards for these uses must be met.

Alaska State Water Quality Standards (18 AAC Part 70) classify marine and estuarine receiving waters as Classes (II)(A)(i-iii), (I)(B)(i-ii), (II)(C) and (II)(D) for use in aquaculture, seafood processing, water recreation, the growth and propagation of fish, shellfish, aquatic life and wildlife, and the harvesting for consumption of raw mollusks and other raw aquatic life. Marine and estuarine waters are designated for all beneficial uses and the most stringent of the water quality standards for these uses must be met.

### 3. Monitoring

Under Section 308 of the Act and 40 CFR § 122.44(i), EPA must also include monitoring requirements in the permit to determine compliance with effluent limitations. EPA has included several monitoring requirements in this GP.

The basis for monitoring is found in 40 CFR § 122.44(i). Flow monitoring is included based on 40 CFR § 122.44(i)(1)(ii). The location, frequency, and type of sampling are required based on 40 CFR § 122.48 as is a requirement for reporting which is specified in the Permit as an annual submission of the Discharge Monitoring Report (DMR). 40 CFR § 122.44(i)(2) allows flexibility in determining the frequency of reporting.

### 4. Best Management Practices (BMP) Plan

It is national policy that, whenever feasible, pollution should be prevented or reduced at the source, that pollution which cannot be prevented should be recycled in an environmentally safe manner, and that disposal or release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner (Pollution Prevention Act of 1990, 42 U.S.C. 13101 *et seq.*).

Pursuant to Section 402(a)(1) of the Clean Water Act, development and implementation of Best Management Practices (BMP) Plans may be included as a condition in NPDES permits. Section 402(a)(1) authorizes EPA to include miscellaneous requirements in

permits on a case-by-case basis, which are deemed necessary to carry out the provisions of the Act. BMPs, in addition to numerical effluent limitations, are required to control or abate the discharge of pollutants in accordance with 40 CFR § 122.44(k). The BMP Plan requirement has also been incorporated into this Permit in accordance with Region 10's BMP Plan Policy (EPA Region 10, 1993).

The proposed general permit requires the development and implementation of a BMP Plan which prevents or minimizes the generation of pollutants, their release, and/or potential release from the facility to the waters of the United States. The requirements of the general plan are outlined in the proposed permit and the permit also stipulates that the plan address the integrity of the ice structures. The quality of the water discharged from a mine site and used for ice road or pad construction must be maintained throughout the life of the road or pad to ensure that the discharge of the melting pad or road to tundra wetlands or to surface waters will meet water quality standards. If gravel pit water is to be used for road watering the Plan should also address this activity.

In addition to the developing and implementing the BMP Plan, the operator is also required to certify that the BMP Plan is complete, on-site, and available upon request. Certification is required no later than submission of their written notice of intent to commence discharge. The BMP Plan must be amended whenever there is a change in the facility or in the operation of the facility which materially increases the potential for an increase discharge of pollutants. The BMP Plan will become an enforceable condition of the Permit; a violation of the BMP Plan is a violation of the Permit.

