STATE OF ALASKA

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DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER
WASTEWATER DISCHARGE AUTHORIZATION PROGRAM

December 19, 2011 DEC File No.: 900.45.045

Mr. Mike Lidgard, NPDES Unit Manager
US Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900, OWW-130
Seattle, Washington 98101

RE: DEC Section (§) 401 Certification of NPDES Permit AKG-33-1000 for Facilities Related to Oil and Gas Extraction, North Slope, Alaska

Dear Mr. Lidgard:

On November 16, 2011 the United States Environmental Protection Agency (EPA) requested a §401 certification for the issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit AKG-33-1000 for Facilities Related to Oil and Gas Extraction, North Slope, Alaska.

In accordance with §401 of the Clean Water Act and §402(o)(2) exceptions, as well as Alaska Administrative Codes (AAC) 18 AAC 15 (Administrative Procedures), 18 AAC 70 (Water Quality Standards), and 18 AAC 72 (Wastewater Discharge), the Department of Environmental Conservation (DEC or the department) has prepared the enclosed Certificate of Reasonable Assurance for NPDES General Permit AKG-33-1000 for facilities related to oil and gas extraction. EPA public noticed the draft NPDES permit, along with DEC's draft §401 certification for this activity. No comments were received on the draft certification.

The geographic area of coverage of the permit was proposed to change. AKG-33-1000 was publicly noticed to expand coverage to include wastewater discharges associated with the Trans Alaska Pipeline, currently authorized by the administratively extended NPDES permit AK-005056-3, as well as the Haines-to-Fairbanks pipeline. However, comments received during the public notice period did not support the inclusion, and EPA responded by removing the expanded areas of coverage from the permit. DEC supports the decision to remove the pipeline corridors from the permit. The permit also proposes to authorize discharges of rain and snow melt accumulations within secondary containment around fuel storage areas at facilities that meet the criteria of the general permit.

EPA also proposes that AKG-33-1000 no longer authorize the discharge of domestic/graywater components as authorized in the current permit. There are two general permits for domestic wastewater discharges into fresh and marine waters of the State of Alaska, AKG-57-0000 and AKG-57-1000, which are now under the authority of the Alaska Pollutant Discharge Elimination System (APDES) program. The domestic components that were authorized by AKG-33-0000 should meet the eligibility requirements of AKG-57-0000 and AKG-57-1000 (marine) and will be able to be authorized by the appropriate domestic general permit when those permits are reissued. The graywater component will not meet the eligibility requirements of AKG-57-0000 or AKG-57-1000, and DEC is in the process of developing a general permit for Graywater from Facilities Related to Oil and Gas, AKG-42-6000.

The department has both an informal review process and a formal administrative appeal process for final permit decisions. An informal review request must be delivered within 15 days after receiving the department's decision to the Director of the Division of Water at the following address:

Director, Division of Water
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501-2617

Interested persons can review 18 AAC 15.185 for the procedures and substantive requirements regarding a request for an informal department review. See http://www.dec.state.ak.us/commishiReviewGuidance.htm for information regarding appeals of department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the department within 30 days of the permit decision or a decision issued under the informal review process, whichever is later. An adjudicatory hearing will be conducted by an administrative law judge in the Office of Administrative Hearings within the Department of Administration. A written request for an adjudicatory hearing shall be delivered to the Commissioner at the following address:

Commissioner
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 303
Juneau, AK 99811-1800

Interested persons can review 18 AAC 15.200 for the procedures and substantive requirements regarding a request for an adjudicatory hearing. See http://www.dec.state.ak.us/commish/ReviewGuidance.htm for information regarding appeals of department decisions.

Please be advised that, pursuant to 18 AAC 15.120(c), the certification of this NPDES permit constitutes the permit required under AS 46.03.100. 18 AAC 15.120(c) also states, "Any rights or privileges inuring to the benefit of EPA in the NPDES permit, including any right to enter, inspect, sample, and have access to records, also inure to the benefit of the department. Any reports or other information filed with EPA in accordance with the NPDES permit must be contemporaneously filed with the department."

If you have any technical questions concerning the certification, please contact Marc Bentley at marc.bentley@alaska.gov or (907) 269-6287.

Sincerely,

Sharon Morgan
Program Manager

Enclosure: Certificate of Reasonable Assurance

Copies: Cindi Godsey, EPA Region 10, Anchorage
William Ashton, DEC Stormwater
Marc Bentley, DEC Anchorage
Adele Fetter, DEC Anchorage

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CERTIFICATE OF REASONABLE ASSURANCE

A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, has been requested by the United States Environmental Protection Agency (EPA) for National Pollutant Discharge Elimination System (NPDES) general permit AKG-33-1000, for specific wastewater and pollutant discharges from facilities related to oil and gas extraction to waters of the State of Alaska. The area of coverage is the North Slope Borough for the following discharges:

Discharge Name	Discharge Number
Gravel Pit Dewatering	003
Construction Dewatering	004
Hydrostatic Test Water	005
Storm Water	006
Mobile Spill Response	007
Secondary Containment	008

Public Notice of the application for this certification has been made in accordance with 18 Alaska Administrative Code (AAC) 15.140.

Water Quality Certification is required for the activity, because the activity will be authorized by an EPA permit identified as NPDES No. AKG-33-1000 and discharges into State waters will result from the activity authorized under the permit.

The Department of Environmental Conservation (DEC or the department) reviewed the NPDES permit and certifies that there is reasonable assurance that the activities and the resulting discharges are in compliance with the requirements of Section 401 of the Clean Water Act, which includes the Alaska Water Quality Standards (WQS), 18 AAC 70, as amended through June 26, 2003, provided that the terms and conditions of this certification are adhered to.

Through this certification, in accordance with 18 AAC 15.120, the final NPDES permit will constitute the permit required under AS 46.03.100. DEC is specifying the following permit stipulations under authority of AS 46.03.110(d):

1. An applicant is required to obtain written authorization from DEC prior to discharge.

   Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The DEC written authorization requirement will provide the department, through the review and approval of the Notice of Intent (NOI), oversight of the proposed activity and allow review of

treatment processes and best management practice plans for those facilities that apply for coverage under the general permit. Review of the NOI will provide assurance to the public that any discharges are being treated or controlled to comply with the State of Alaska Water Quality Standards 18 AAC 70 and the Alaska Wastewater Disposal Regulations 18 AAC 72.

Hydrostatic Test Water, Existing Pipelines, Discharge 005

2. DEC may attach other site specific stipulations and requirements as necessary to individual State authorizations to operate under this General Permit. Total aqueous hydrocarbons (TAqH) in the water column may not exceed 15 µg/L. Total aromatic hydrocarbons (TAH) in the water column may not exceed 10 µg/L.

Rationale: In accordance with Water Quality Standards 18 AAC 70.020(b)(5) & (17), Total aqueous hydrocarbons (TAqH) in the water column may not exceed 15 µg/L (see note 7). Total aromatic hydrocarbons (TAH) in the water column may not exceed 10 µg/L.

(Note 7) Samples to determine concentrations of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) must be collected in marine and fresh water below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed EPA Method 610.

3. DEC requires effluent monitoring for TAqH and TAH. Sample frequency and locations shall be as prescribed in Table 8 of the NPDES permit AKG-33-1000.

Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The terms and conditions shall be directed to avoiding pollution and to otherwise carry out the policies of this chapter. Also, in accordance with 18 AAC 70.910 the department may issue a compliance schedule as a condition of a permit, certification, or approval.

Stormwater Associated with industrial activities, Discharge 006

4. Applicants for new projects must submit a copy of the Storm Water Pollution Prevention Plan (SWPPP) for the project, developed by a qualified person, to DEC for review at the time of submittal of the NOI. The SWPPP for a new facility shall be accompanied by the state-required plan review fee (see 18 AAC 72.955 Table D). The SWPP shall be developed in accordance with the following EPA guidance, *Developing Your Stormwater Pollution Prevention Plan - A Guide for Industrial Operators. February 2009, EPA 833-B-09-002.*

Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The terms and conditions shall be directed to avoiding pollution and to otherwise carry out the policies of this chapter. In accordance with 18 AAC 72.600, DEC has the authority to require plan approval for nondomestic wastewater treatment works. Nondomestic wastewater includes stormwater runoff (18 AAC 72.990(41)(E)).

5. Existing projects with a SWPPP must review their SWPP for conformance with the EPA guidance, *Developing Your Stormwater Pollution Prevention Plan – A Guide for Industrial Operators. February 2009, EPA 833-B-09-002.* If modification of the existing SWPPP is necessary to comply with the guidance, the modified SWPPP will be submitted to DEC with the NOI for review.

Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The terms and conditions shall be directed to avoiding pollution and to otherwise carry out the policies of this chapter. In accordance with 18 AAC 72.600, DEC has the authority to require plan approval for nondomestic wastewater treatment works. Nondomestic wastewater includes stormwater runoff (18 AAC 72.990(41)(E)).

Mobile Spill Response Units, Discharge 007

6. Spills of reportable quantities must be reported to DEC and remediated per 18 AAC 75.300. Go to http://www.dec.state.ak.us/spar/spillreport.htm for contact information and reporting requirements.

Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The terms and conditions shall be directed to avoiding pollution and to otherwise carry out the policies of this chapter. Permitting the discharge of treated snow or water mixed with hydrocarbon does not excuse the discharger from the obligation of reporting the spill to DEC as set out in 18 AAC 75.300.

Secondary Containment, Discharge 008

7. DEC may attach other site-specific stipulations and requirements as necessary to individual State authorizations to operate under this General Permit. TAqH in the water column may not exceed 15 μg/L. TAH in the water column may not exceed 10 μg/L.

Rationale: In accordance with Water Quality Standards 18 AAC 70.020(b)(5) & (17), Total aqueous hydrocarbons (TAqH) in the

water column may not exceed 15 µg/L (see note 7). Total aromatic hydrocarbons (TAH) in the water column may not exceed 10 µg/L.

(Note 7) Samples to determine concentrations of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) must be collected in marine and fresh water below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed EPA Method 610.

8. DEC requires effluent monitoring for TAqH and TAH. Sample frequency and locations shall be prescribed in Part II.F.1 of the NPDES permit AK-33-1000 (See Table 9: Effluent Limits and Monitoring Requirements).

Rationale: In accordance with AS 46.03.110(d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. This requirement will be used to provide assurance to the department of compliance with the State of Alaska Water Quality for TAqH and TAH, 18 AAC 70.020(b)(5) & (17).

Antidegradation

The department's approach to implementing the antidegradation policy found in 18 AAC 70.015 is based on the requirements in 18 AAC 70 and the department's July 14, 2010, Policy and Procedure guidance *Interim Antidegradation Implementation Methods*. Using these requirements and policies, the department determines whether a water body or portion of a water body is classified as Tier 1, Tier 2, or Tier 3. This determination is made on a pollutant-by-pollutant basis. DEC has determined that the general area for the above discharge is tundra and tundra wetlands and qualifies for Tier 2 status. This decision is based on the antidegradation guidance cited above, information submitted by the applicant, and DEC knowledge of the area of discharge.

The Antidegradation Policy of the Alaska WQS (18 AAC 70.015) states that existing water and the level of water quality necessary to protect existing uses must be maintained and protected. There are no exceptions to state-wide standards in the permit; therefore, state water quality criteria must be met at the point of discharge. The department may allow reduction of water quality below that of natural conditions only after finding that five specific criteria are met. These criteria and the department's findings are as follows:

- *18 AAC 70.015(a)(2)(A) allowing lower water quality is necessary to accommodate important economic or social development in the area where the water is located.*

Treatment methods for these types of discharges include reinjection and additional treatment, as well as those required by the permit via best

management practices (BMPs). Alternative methods of tertiary advanced treatment are discussed in the section below that addresses 18 AAC 70.015(a)(2)(D).

This activity occurs in the North Slope Borough and more specifically Barrow, Alaska and other smaller villages. Oil and oil related industry is the primary source of employment in the North Slope area (Alaska Department of Commerce, Community and Economic Development - Alaska Community Database at: http://www.commerce.state.ak.us/dca/commdb/CF_CIS.htm). Activities regulated in the permit are a necessary part of the infrastructure that supports the oil industry and are designed to provide maintenance support of oil related activities.

According to the State of Alaska, Division of Employment Security, the oil industry is the main source of revenue for and in the state, including the North Slope Borough. Oil and Gas producers account for approximately 22% of all job growth in Alaska from 2000 to 2007, while oil related services account for approximately 48% for the same time period. The oil industry is also the source of 80% of the state's general fund and is considered the mainstay of the state's economy providing jobs in the catering, security, construction, engineering, and support services in addition to directly related jobs in oil production, processing, and transport. It also accounts for the highest salaries paid in the state.

DEC finds that authorization of these discharges requires the lowering of water quality, that this lowering of water quality is necessary to accommodate important economic development, and that this requirement is met.

- *18 AAC 70.015(a)(2)(B) Except as allowed under this subsection, reducing water quality will not violate the applicable criteria of 18 AAC 70.020.*

The permit requires facilities of this nature to establish BMPs to minimize potential discharge of pollutants to waters of the U.S. The permit limits and conditions are established after comparing technology-based and water quality-based effluent limits and applying the more restrictive of these limits to the permit.

The permit requires visual monitoring of the waste discharge where appropriate and includes requirements to monitor and limit potential pollutants. The department has determined facilities operating under the terms and conditions of the permit and the department policies will be adequate to maintain water quality and protect existing uses.

DEC concludes that this criterion will be met at the point of discharge and final permit limits will not violate the applicable criteria of 18 AAC 70.020. The Department finds that this requirement is met.

- *18 AAC 70.015(a)(2)(C) the resulting water quality will be adequate to fully protect existing uses of the water.*

Waters covered under this general permit are protected for the following uses, per 18 AAC 70.020(a)(1)(A)-(C) and 18 AAC 70.020: Water supply for drinking, culinary, and food processing, aquaculture, and industrial; contact and secondary recreation; and the growth and propagation of fish, shellfish, other aquatic life and wildlife. DEC requires facilities of this nature to establish BMPs to minimize potential discharge of pollutants to waters of the U.S. The permit limits and conditions are established after comparing technology-based and water quality-based effluent limits and applying the more restrictive of these limits to the permit. The permit requires visual monitoring of the waste discharge where appropriate, and has requirements to monitor and limit potential pollutants.

Based on department policy, the above information, and a review of the expected volumes of discharge, the types and amounts of regulated pollutants including their fate, transport, and available dilution, the DEC finds that existing uses will be fully protected and that this requirement is met.

- *18 AAC 70.015(a)(2)(D) the methods of pollution prevention, control, and treatment found by the department to be most effective and reasonable will be applied to all wastes and other substances to be discharged.*

Advanced alternative methods employing tertiary treatments, such as activated charcoal filtration, walnut shell filtration, dissolved air floatation, induced gas coalescence, as well as underground injection wells and disposal off site, were investigated as alternative means of waste disposal of discharges from the above outfalls. While some existing sites do employ off site removal and underground injection wells to some degree, the remote locations preclude the use of these methods of disposal. The broad employment of tertiary treatment methods was deemed too impractical or too expensive for the small volume discharges that will typically occur under this permit. The methods of prevention, control, and treatment DEC finds to be most effective and reasonable are the practices, requirements, and limits set out in the NPDES permit. The permit requires the permittee to follow prescribed BMPs via developing a BMP Plan and implementation schedule to achieve the following objectives:

- The number and quantity of pollutants and the potential toxicity of effluent generated, discharged, or potentially discharged at the facility shall be minimized by the permittee to the extent feasible by managing each pollutant source in the most appropriate manner.

- Under the BMP Plan, and any Standard Operating Procedures (SOPs) included in the Plan, the permittee shall ensure proper operation and maintenance of the treatment facility.

The department has determined that a discharge from a facility operating under the terms and conditions of the permit has no reasonable potential to exceed WQS.

DEC finds that the methods of pollution prevention, control, and treatment included in the permit are the most effective and reasonable and that this requirement is met.

- *18 AAC 70.15(a)(2)(E) all wastes and other substances discharged will be treated and controlled to achieve (i) for new and existing point sources, the highest statutory and regulatory requirements; and (ii) for nonpoint sources, all cost-effective and reasonable best management practices.*

The highest statutory and regulatory requirements are defined in the 2003 version of the Alaska WQS at 18 AAC 70.990(30) as

(A) any federal technology-based effluent limitation identified in 40 C.F.R. 125.3 and 40 C.F.R. 122.29, as amended through August 18, 1997, adopted by reference;
(B) minimum treatment standards in 18 AAC 72.040; and
(C) any treatment requirement imposed under another state law that is more stringent than a requirement of this chapter.

Federal technology-based effluent limitation guidelines (ELGs) have been developed by EPA for particular categories of industrial dischargers and have been applied in this permit. In the absence of ELGs for a particular category of industrial discharger, Best Professional Judgment (BPJ) has been used to establish permit limitations through the use of best available technology designed to address similar operations in other types of facilities, as well as prescribed practices, limits, BMPs, and BPJ in the NPDES permit.

18 AAC 70.990(30)(B) (2003) appears to be in error, as 18 AAC 72.040 describes discharge to sewers and not minimum treatment. The correct reference appears to be 18 AAC 72.050, Minimum treatment. This section refers to domestic wastewater and not the wastewater types addressed in this permit, and therefore does not apply to this analysis.

Other regulations beyond 18 AAC 70 that apply to this permitting action include 18 AAC 15 and 18 AAC 72. Neither the regulations in 18 ACC 15 and 18 AAC 72 nor another state law that DEC is aware of impose more stringent treatment requirements than those found in 18 AAC 70.

DEC finds that the treatment of the discharges conforms to the highest statutory and regulatory requirements and that this requirement is met.

12/19/11 — Sharon Morgan

Date

Sharon Morgan
Program Manager