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

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

BP Exploration, Alaska (BPXA)
900 E. Benson Boulevard
Anchorage, AK 99508

is authorized to discharge from the Northstar Development Unit located on Seal Island, Stafansson Sound, Beaufort Sea, Alaska, in accordance with discharge points, effluent limitations, monitoring requirements, and other conditions set forth herein.

This permit (AK-0052779) shall become effective on June 23rd, 1999.

This permit (AK-0052779) and the authorization to discharge shall expire at midnight, June 23rd, 2004.

Signed this 21st day of May 1999.

/s/ Roger Mochnick for
Randall F. Smith
Director, Office of Water
Region 10
U.S. Environmental Protection Agency

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this National Pollutant Discharge Elimination System (NPDES) Permit, the Permittee is authorized to discharge from Outfalls 001, 002, and 005, subject to the restrictions set forth herein. This Permit does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that are not consistent with the operation of the facility as disclosed in the Final NPDES Permit Application (BPXA, 1997), or any pollutants that are not identified in the application.

A. Primary Discharge (Outfall 001)

During the effective period of this Permit, the Permittee is authorized to discharge uncontaminated flushwater (Stream 001a), vapor compression distillate (Stream 001b), and treated domestic and sanitary wastewater (Stream 001c) through Outfall 001. All discharges are subject to the following conditions.

Waste streams from the sources listed above are permitted for discharge by the Northstar Development through Outfall 001 in accordance with the requirements of this Permit. Any waste stream not listed in this Permit or in quantities greater than the listed limit amounts in Part I.A.1 of this Permit, shall not be discharged unless specifically authorized by the U.S. Environmental Protection Agency (EPA), in consultation with the Alaska Department of Environmental Conservation (ADEC), prior to discharge.

The discharge end of Outfall 001 is located at latitude 70° 29' 25.98" N and longitude 148° 41' 35.47" W, on the south end of Seal Island.

1. **Effluent Limitations:** Discharges from Outfall 001 shall be limited by the Permittee as specified in Table 1 below.

Table 1 Primary Discharge (Outfall 001) Effluent Limitations [1]

Parameter	Daily Maximum (24 hour)	Weekly Average (7 day)	Monthly Average (30 day)	Units
BOD_5 [2]	60.0	45.0	30.0	mg/L
TSS[2]	60.0	45.0	30.0	mg/L
TRC[3]	0.018	NA	0.009	mg/L
Fecal coliform [2, 4]	230	NA	115	FC#/100 ml
Temperature	No more than 7°C above or below ambient			°C
Flow[5]	49,020	NA	27,930	gpd

Table 1 (Cont.) Primary Discharge (Outfall 001) Effluent Limitations [1]

Notes:
1. TRC, fecal coliform, temperature, and flow discharge limits apply to Outfall 001 end-of-pipe values. BOD_5 and TSS discharge limits apply to the Outfall 001c discharge pipe prior to commingling of the 001c effluent with 001a and/or 001b.
2. BOD_5, TSS, and fecal coliform limits are applicable only during discharge of the domestic and sanitary waste stream 001c.
3. The effluent limit for chlorine is not quantifiable using EPA-approved analytical methods, as published in Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, edited by Greenberg et al. Therefore, the EPA will use the interim minimum level of 0.020 mg/L as the compliance evaluation level for this parameter.
4. Fecal coliform is to be measured using an EPA-approved analytical method, as published in Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, edited by Greenberg et al. The count per 100 ml is to be the most probable number (MPN) derived using the approved analytical method. The method of analysis shall be either 9221E, Fecal Coliform Procedure, or 9222D, Fecal Coliform Membrane Filter Procedure.
5. Flow shall be measured using a continuous flow meter or other methods of similar accuracy (accurate to within ± 5% of actual flow), as approved in advance by the EPA, in consultation with ADEC.

BOD	=	Biochemical oxygen demand	NA	=	Not applicable
°C	=	Degrees Celsius	%	=	Percent
FC#/100 ml	=	Fecal coliform count per 100 milliliters	TRC	=	Total residual chlorine
gpd	=	Gallons per day	TSS	=	Total suspended solids
mg/L	=	Milligrams per liter			

2. Effluent Monitoring Requirements: The Permittee shall monitor the effluent from the primary discharge as specified in Table 2 below, subject to the other monitoring and reporting requirements set forth in this Permit.

Table 2 Primary Discharge (Outfall 001) Monitoring Requirements

Parameter	Measurement Requirements	Sample Type	Reported Value(s) [1]
BOD_5 [2]	Weekly	Grab	Daily maximum, weekly average, and monthly average (mg/L)
TSS[2]	Weekly	Grab	Daily maximum, weekly average, and monthly average (mg/L)
TRC [3]	Weekly	Grab	Daily maximum, monthly average (mg/L)
Fecal Coliform[2]	Weekly	Grab	Daily maximum, monthly average (FC#/100 ml)
Temperature, effluent and ambient [4]	Continuous	Recording	Maximum difference between corresponding daily effluent and ambient for the month. Report all exceedances (°C)
Flow	Continuous	Recording	Maximum daily and monthly average (gpd)
WET[5]	1 per summer, 1 per winter	Grab	TUc [5]
Salinity[6]	Weekly	Grab	Daily maximum, monthly average (ppt)
pH[7]	Weekly	Grab	Daily maximum and minimum (Standard Units)

Table 2 (Cont.) Primary Discharge (Outfall 001) Monitoring Requirements

Notes:
1. If an analytical value is "less than the method detection limit", the permittee shall report "<[numerical method detection limit]" on the Discharge Monitoring Report (DMR). For example, if the laboratory reports "not detected" for a sample, and states that the method detection limit is "5 µg/L" then the permittee shall report "<5 µg/L" on the DMR (µg/L means micrograms per liter).
2. BOD_5, TSS, and fecal coliform shall be monitored during discharge of domestic and sanitary wastewater, waste stream 001c. The Permittee is not required to monitor these parameters at Outfall 001 at other times. BOD_5 and TSS shall be monitored at Outfall 001c, prior to commingling with 001a and /or 001b.
3. At a minimum, analytical methods shall achieve a method detection limit of 0.010 mg/L for TRC.
4. Permittee shall continuously monitor ambient water temperatures in addition to effluent water temperatures. Ambient water temperature shall be obtained using a calibrated thermistor installed along the outside of the island's sheet piling. This thermistor shall be approximately 15 feet (ft) west of the seawater intake and at a depth of –14 to -16 ft MLLW.
5. See Part III.A of this Permit for specifics regarding the Whole Effluent Toxicity (WET) monitoring requirement. WET monitoring shall be conducted for 1 year. Effluent samples for these WET tests shall include discharges from Outfall 001b.
6. Salinity shall be monitored during discharge of vapor compression distillate, waste stream 001b. The Permittee is not required to monitor this parameter at Outfall 001 at other times.
7. pH shall be monitored during discharge of vapor compression distillate, waste stream 001b, and domestic and sanitary wastewater, waste stream 001c. The Permittee is not required to monitor this parameter at Outfall 001 at other times.

DMR = Discharge Monitoring Reporting
ppt = Parts per thousand
TU_C = Chronic toxic unit

3. Other Limitations and Requirements:

a. Surface and Shoreline - The discharge shall not, alone or in combination with other substances, cause a film, sheen or discoloration on the surface of the receiving water or adjoining shorelines.

b. Clean Water - Introduction of water, including "clean" water to the treatment system effluent for the purpose of achieving the effluent limitations in Part I.A.1 of this Permit is prohibited. "Clean" water is segregated waters which meet the effluent limitations without treatment.

c. There shall be no discharge of floating solids, garbage, grease, free oil, or foam.

d. Sludge Handling - Sludge removed from the treatment systems during cleaning of the treatment units shall not be reintroduced into the treatment system or discharged to waters of the United States.

The Permittee shall provide the EPA and ADEC upon request with information on the Permittee's processing of sludge and disposal of solids. The Permittee will dispose of sewage sludge either through injection into the Class I waste disposal injection well (waste disposal well), if permitted and available, or by transportation to an approved North Slope facility for treatment and disposal.

B. Fire Suppression System Test Water (Outfall 002)

1. Effluent Limitations

The Permittee shall limit test discharges (Outfall 002) from the fire suppression system to one test discharge per year for a 30 minute duration at the maximum estimated flow rate of 3,000 gallons per minute (gpm) (11,356 liters per minute). The Permittee shall comply with the flow limit at all times, regardless of the frequency of monitoring or reporting required by other provisions of this Permit. The discharge shall be untreated, unheated, and unstored seawater.

Outfall 002 shall be from fire monitors and/or soft hoses connected to standpipes on Seal Island, itself centered at latitude 70°29'29.69" N and longitude 148°41'36.66" W. The Outfall shall be discharged into the surface of marine water. Prior to the test the system pack water shall be flushed and replaced with untreated seawater. The volume of flush water used to flush pack water shall be at least two times the volume of the pack water. The flush and pack water shall be disposed of through the island's waste disposal well or at other approved disposal location(s).

2. Effluent Monitoring Requirements

Upon the first test, the Permittee shall record the test duration and estimate the discharge rate. The method for estimating discharge rate shall be specified in the Best Management Practices Plan developed for Outfall 002 (Part II.E.5).

3. Other Limitations and Requirements:

a. The discharge shall not, alone or in combination with other substances, cause a film, sheen, or discoloration on the surface of the receiving water or adjoining shorelines.

b. There shall be no discharge of floating solids, garbage, grease, free oil, or foam.

Outfall 002 does not include the weekly tests of the fire control pumps which will circulate seawater from the seawater intake sump through the pumps and thereafter directly back into the seawater intake sump. This seawater is untreated and will have nothing added.

C. Construction Dewatering (Outfall 005)

The Permittee shall limit discharges from the construction dewatering discharge as specified in Table 3 below; all values represent maximum effluent limits. The Permittee shall comply with the following effluent limits at all times, regardless of the frequency of monitoring or reporting required by other provisions of this Permit.

The dewatering streams shall be through one or more hoses discharging dewatering effluent within 200 ft (61 m) of Seal Island's outer perimeter sheet pile wall, the island itself centered at latitude 70°29'29.69" N and longitude 148°41'36.66" W. These hoses shall discharge through diffusers submerged in either naturally occurring open water or below slots cut through the surface ice. These diffuser nozzles shall be placed at least 5 ft (1.5 m) below the ice-water surface interface and at least 10 ft (3 m) above sea bottom. The total number of discharge diffusers shall not exceed six.

1. **Effluent Limitations:** Discharges from Outfall 005 shall be limited by the Permittee as specified in Table 3:

Table 3 Construction Dewatering Discharge (Outfall 005) Effluent Limitations

Parameter	Daily Maximum	28 day Average	Units	Duration
Flow rate	2,000,000	1,000,000	gpd	During Activity; Not to exceed 28 contiguous days

2. **Effluent Monitoring Requirements:** The Permittee shall monitor the effluent from the construction dewatering discharge as specified in Table 4 below, subject to the other monitoring and reporting requirements set forth in this Permit.

Table 4 Construction Dewatering Discharge (Outfall 005) Monitoring Requirements

Parameter	Measurement Requirements	Sample Type	Reported Value(s)	Duration
Flow rate	Continuous During Discharges	Temporal log of number and type of pumps in operation.	Daily max., min., and avg. (gpd). Estimate based on number of pumps in operation and estimated pump rate per pump.	During Activity; Not to exceed 28 contiguous days

Notes: avg. = Average

max. = Maximum
min. = Minimum

3. Other Limitations and Requirements:

a. The discharge shall not, alone or in combination with other substances, cause a film, sheen or discoloration on the surface of the receiving water or adjoining shorelines.

b. There shall be no discharge of floating solids, garbage, grease, free oil, or foam.

c. The Permittee shall comply with the Construction Dewatering Discharge Pollution Prevention Plan and the Best Management Practices Plan specific to this discharge as provided in Appendix A of this Permit.

II. BEST MANAGEMENT PRACTICES PLANS AND POLLUTION PREVENTION REQUIREMENTS

A. Purpose

Through implementation of the Best Management Practices (BMP) Plans and pollution prevention requirements, the Permittee shall prevent or minimize the generation and the potential for release of pollutants from the facility to the waters of the United States. Actions taken to reduce or eliminate the generation and release of pollutants to waters of the United States shall avoid, to the extent practicable, the transfer of pollutants to the air and land.

B. Objectives

- The Permittee shall ensure that the BMP Plans are consistent with the following objectives for the control of pollutants:

- The number and quantity of pollutants generated and potentially discharged from the facility to waters of the United States shall be minimized by the Permittee to the extent technically and economically feasible;

- Under the BMP Plans, the Permittee shall ensure proper operation and maintenance of the treatment facility;

- The Permittee shall establish specific objectives for the control of pollutants by addressing the pollution prevention requirements in Part II.C below; and

- The Permittee's BMP Plan for Outfall 005 is offered in Appendix A of this Permit. BMP Plans for other activities will be developed per Part II.D.

C. Pollution Prevention Requirements

The Permittee shall establish specific performance objectives for preventing or reducing pollutants by ensuring that the following pollution prevention (P2) planning activities and evaluations are conducted.

1. **Construction Dewatering Discharge Pollution Prevention Plan for Outfall 005:** Because of its short duration as a construction related discharge, Outfall 005's P2 Plan is submitted separately from P2 Plans associated with Outfalls 001 and 002. The Permittee's P2 Plan for Outfall 005 is presented in Appendix A.

2. **Pollution Prevention Plan Framework for Snow Removal/Disposal and for Outfalls 001 and 002:** No later than 180 days after the effective date of the Permit, the Permittee shall submit a P2 Plan document to the EPA and ADEC for incorporating pollution prevention into Northstar Development activities that discharge operation streams (or have the potential for such discharges) into waters of the United States through Outfalls 001 or 002. Similarly, the Permittee shall submit a P2 Plan document to the EPA and ADEC for incorporating pollution prevention into all snow removal/disposal activities on the Northstar Development Seal Island, itself centered at latitude 70°29'29.69" N and longitude 148°41'36.66" W. The EPA, in consultation with ADEC, shall have the right to disapprove any P2 Plan within 60 days of receipt by the EPA and ADEC, after which time the Plan shall be deemed approved, if neither Agency/Department disapproves them. The framework document shall include:

    a. A written policy of management support and commitment for planning and implementation of pollution prevention goals developed during the planning process.

    b. The methodology for considering the technical and economic feasibility of proposed pollution prevention options.

    c. A statement of specific and measurable pollution prevention objectives, goals, and priorities for the Northstar Development. Standards of measure may be quantitative or qualitative depending on the type or objective, priority, or goal.

    d. An identification of any significant toxic and/or hazardous products and waste streams, the processes which use these products or generate these waste streams, and opportunities for eliminating or reducing the use of these products and the generation of these waste streams.

    e. A summary of any current pollution prevention efforts at the facility and results of these efforts. Evaluate and prioritize pollution prevention and reduction opportunities. Establish a schedule for implementing technically and economically feasible pollution prevention opportunities.

3. **Annual P2 Reports:** The Permittee shall prepare annual P2 reports on the status of efforts to meet stated pollution prevention objectives, goals, and priorities, and submit these reports to the EPA and ADEC. The first progress report shall be due two (2) years after the effective date of the Permit. Subsequent reports shall be due annually on the anniversary of the effective date of this Permit. The P2 reports shall:

   a. Identify progress towards meeting P2 objectives, goals, and priorities. Problems encountered and/or highlights of efforts to prevent pollution shall also be identified.

   b. Describe pollution prevention projects implemented and for each project, to the extent possible (considering technical and economic feasibility) identify:

      (1) The type and quantity of any toxic and/or hazardous products reduced or eliminated.

      (2) The type and quantity of waste streams reduced or eliminated.

D. BMP Plan Development

As noted in Part II.B, the Permittee's BMP Plan associated with Outfall 005 is provided in Appendix A of this Permit. BMP Plans associated with other activities shall be developed as described below.

The Permittee shall develop BMP Plans which achieve the objectives noted in Part II.B and the specific requirements listed below in Part II.E. The Permittee shall, if necessary, modify these Plans to incorporate practices to achieve these objectives and specific requirements. In completing this task, the Permittee can incorporate or cross-reference existing pollution prevention, BMP, Safe Operating Procedures or other plans prepared by the facility in accordance with other state and federal requirements and/or directives internal to the facility.

A copy of each BMP Plan shall be submitted to the EPA and ADEC for approval no later than 180 days from the effective date of the Permit. The EPA, in consultation with ADEC, shall have the right to disapprove any BMP Plan within 60 days of receipt by the EPA, after which time the Plans shall be deemed approved, if neither Agency/Department disapproves them.

E. BMP Plan Requirements

All BMP Plans shall be consistent with the objectives in Part II.B above and the general guidance contained in the publication entitled Guidance Manual for Developing Best Management Practices (USEPA, 1993a) or any subsequent revisions to guidance documentation. BMP Plans shall continue to address the standard components of BMP Plans and shall also:

1. Be documented in narrative form, and shall include any necessary plot plans, drawings or maps, and shall be developed in accordance with good engineering practices.

2. Ensure that the requirements of a BMP Plan are considered as part of planned facility modifications, and that construction and supervisory personnel are aware of and take into account possible spills or releases of pollutants during construction.

3. Require an annual BMP Plan review by the responsible manager and a BMP Committee. The Plan shall also require an annual statement that the above reviews have been completed and that the BMP Plan fulfills the requirements set forth in this Permit. The statement shall be certified by the dated signatures of each BMP Committee member. This statement shall be submitted to the EPA and ADEC on or before July 1st of each year of operation under this Permit after the initial BMP Plan submittal as required by Part II.D above.

4. Establish specific BMPs to meet the objectives identified in Part II.B addressing each component or system capable of generating or causing a release of significant amounts of pollutants, and identifying specific preventative or remedial measures to be implemented. In particular, the control of scale inhibitor and foamer chemicals in Outfall 001b and the minimization of discharge pollutants from Outfall 001c will be addressed in BMPs specific to these outfalls.

5. Include the following BMP requirements specific to Fire Suppression System Testing (Outfall 002). The Permittee shall develop BMPs to limit, manage, and control the discharges from the firewater pump testing and maintenance. The BMPs shall:

    a. Direct only uncontaminated seawater discharges to the 002 Outfall; in particular, chlorinated pack water will be flushed from the fire suppression system and disposed of via the waste disposal well prior to flooding the system with seawater for subsequent testing.

    b. Testing will take place only during open water conditions, to the extent possible.

    c. Specify the method for estimating discharge rate. No fire suppression test water will be directed toward the facility's deck drainage collection system.

6. The BMPs developed for Outfall 001 shall provide the method employed to determine when domestic and sanitary wastewater will be discharged through waste stream 001c and when said wastewater will be discharged into the waste disposal well.

7. The Permittee shall develop a BMP for snow removal including visual checks of the snow for contaminants, or suspected contaminants, prior to disposal of snow over the island's edge (sea wall). This BMP shall define the method(s) to be employed for said visual inspections, specify the means by which contaminated, or suspected contaminated, snow shall be melted, and describe the disposal method(s) (disposal through the waste disposal well and/or transportation to an approved mainland disposal facility). This BMP shall also state the method(s) to be employed for the disposal of gravel and other debris collected with contaminated, or suspected contaminated, snow.

F. Documentation

The Permittee shall maintain copies of the most current BMP Plans, along with a copy of the NPDES Permit AK-0052779, for use by personnel on the Northstar Development Facility. The Permittee shall make the BMP Plans available to the EPA or ADEC upon request.

G. BMP Plan Modification

The Permittee shall modify the BMP Plans whenever there are physical or operational changes in the facility which materially increase the potential for a discharge of pollutants. The Permittee shall modify the BMP Plans whenever the plans do not effectively address the BMP Plan and P2 requirements stated above in Part II of this Permit. Any such changes to the BMP Plans shall be consistent with the purpose, objectives, and specific requirements listed above. All changes in BMP Plans shall be reviewed by the responsible manager and shall be reported to the EPA and ADEC in writing. The EPA, in consultation with ADEC, shall have the right to disapprove any such changes within 60 days of receipt, after which time such changes shall be deemed approved.

H. Outfall 005 (Construction Dewatering) Pollution Prevention Plan and Best Management Practices Plan

The long-term, well understood, operational natures of snow removal/disposal and of Outfalls 001 and 002 allow the generation of P2 and BMP Plans for snow removal/disposal and for these outfalls over a 180-day period following the issuance of this Permit. However, because of the short-term, temporary and less understood nature of Outfall 005 (Construction Dewatering), the P2 and BMP Plans for this outfall are approved with the issuance of this Permit. The Permittee shall implement the P2 and BMP Plans for Outfall 005 (Construction Dewatering), dated October 15, 1998, as provided in Appendix A of this Permit.

III. MONITORING, RECORDING, AND REPORTING REQUIREMENTS

A. Whole Effluent Toxicity Monitoring Requirements

The Permittee shall conduct Whole Effluent Toxicity (WET) tests on samples of the discharge from Outfall 001 as indicated below.

Chronic Toxicity Testing. The Permittee shall perform chronic toxicity tests of the effluent in accordance with 1 through 8 below. Beginning with or following the first calendar quarter after the initial discharge from Outfall 001, the Permittee shall conduct semi-annual chronic toxicity tests. One such test shall be conducted during the winter, under ice period, and the other shall be conducted during the summer, open water period. This test schedule shall be maintained for 1 year. Effluent samples for these tests shall include discharges from Outfall 001b.

1. **Test Species and Methods:** The Permittee shall conduct chronic toxicity testing with the following organisms:

a. Top Smelt (*Atherinops affinis*).

b. Purple Sea Urchin (*Strongylocentrotus purpuratus*) or Sand Dollar (*Dendraster excentricus*), depending on availability.

c. Pacific Oyster (*Crassostrea gigas*) or mussel (*Mytilus* sp.), depending on availability.

The presence of chronic toxicity shall be estimated using tests as specified in Section 16 of Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms (USEPA, 1995). If possible, fertilization tests will be completed for the purple sea urchin or sand dollar.

2. Dilution Series: The Permittee shall conduct testing on a series of six dilutions ranging from zero percent effluent (control) to 100 percent effluent, with a minimum of four replicates per concentration. Based on available data, dilutions shall be selected that will bracket the IWC (see glossary). Salinity adjustments shall be used if appropriate. Concurrent testing as appropriate with reference toxicants (see U.S. EPA Regions 9 and 10 Guidance Manual for Whole Effluent Toxicity Tests for reference toxicants) shall also be conducted (see Part III.A.6.b below).

3. Reporting Units: The chronic toxicity test results shall be reported in TUc, where $TUc = 100/IC_{25}$ (in percent effluent).

4. Sample Collection: Testing shall be conducted on grab samples of primary discharge effluent collected at the NPDES sampling location. Each sample shall be large enough to provide enough effluent to conduct toxicity tests, as well as chemical tests required in Paragraph 5 below.

5. Chemical Analyses: Chemical testing for the parameters for which effluent limitations exist shall be performed on a split of each sample collected for WET testing. To the extent that the timing of sample collection coincides with that of the sampling required in Part I, chemical analysis of the split samples will fulfill the requirements of Part I as applicable.

6. Quality Assurance (QA) Requirements:

a. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity test (i.e., same test duration).

b. If the test organisms are not cultured in-house, concurrent testing with reference toxicants shall be conducted.

c. If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manuals, then the Permittee must resample and commence a retest within fourteen (14) days.

d. Control and dilution water should be lab water, as described in the U.S. EPA Regions 9 and 10 Guidance for Whole Effluent Toxicity Tests (Denton and Narvaez, 1996). The Permittee may request using uncontaminated receiving water as control and/or dilution water. If the dilution water used is different from the culture water, a second control using culture water shall also be used.

7. Reporting Requirements:

a. The full toxicity testing report shall be submitted to the EPA (two copies) and ADEC (two copies) within 45 days after completion of the test. At a minimum, the full report shall consist of:

(1) The toxicity test results.
(2) The dates of sample collection and initiation of each toxicity test.
(3) The flow rate at the time of sample collection.
(4) The results of the analyses for chemical/physical parameters on split effluent samples as required in Part III.A.5 above.
(5) All raw data and statistical analyses from the tests, including reference toxicant tests.
(6) Demonstration of compliance with Quality Assurance Requirements (Part III.A.6 above).

b. WET test results shall be prepared in accordance with the Report Preparation chapter in the relevant toxicity testing manual. If the Permittee uses the TOXIS database, the data shall also be submitted on an electronic diskette (3.5 inch).

8. Reopener: This Permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information.

B. Environmental Monitoring Requirements

1. Objectives: The Permittee shall develop and implement an environmental monitoring program which addresses the following objectives:

a. Early detection/warning of any significant adverse effects due to the Northstar Development Project discharges.

b. Ensure compliance with state water quality standards.

c. Collect data that will allow the EPA to determine statistically and ecologically significant changes in water quality and the biota nearshore of the island.

d. Determine whether changes to the monitoring program are warranted.

e. Gather information for Permit renewal or future regulatory decisions (e.g., trends, exceedances of benchmarks or criteria, etc.).

2. Monitoring Stations: Locations and approximate depths of stations for environmental monitoring sampling collection are identified in Figures 1 and 2 and Table 5. The latitude and longitude coordinates are the intended sampling locations. The depth values reflect the reported ranges.

3. Receiving Water Monitoring: The receiving water monitoring shall address the question of whether the Northstar Development Project discharges are adversely impacting survival, growth, or reproduction of marine species in the water column by performing the following monitoring. Receiving water monitoring under this section shall be conducted in July or August beginning with the first July or August following initial discharges from Outfall 001. A second and final monitoring shall be performed two (2) years thereafter. Monitoring shall be conducted at the following established stations (see Part III.B.2 above for station locations): D3, D4, D5, D6, D7, and D8. Monitoring shall also be conducted at the most upcurrent of stations D1 or D2.

The following items shall be monitored in the receiving water using samples obtained from the locations listed in Table 5:

Temperature (°C)	Biochemical Oxygen Demand, 5 day (mg/L)
Total Suspended Solids (mg/L)	Fecal Coliform Bacteria (#/100 ml)
Total Residual Chlorine (Fg/L)	pH (Standard Units)
Dissolved Oxygen (mg/L)	Salinity (ppt)

Table 5 Location of Environmental Monitoring Stations

Station Number	Depth Range (meters)	Location Narrative
		Water Column
D1	4-6	Due east of island center; 100 m from island MLLW mark
D2	4-6	Due west of island center; 100 m from island MLLW mark
D3	4-5	5 m along 247° radial from 001 port
D4	4-7	5 m along 177° radial from 001 port
D5	4-5	5 m along 107° radial from 001 port
D6	4-6	10 m along 247° radial from 001 port
D7	4-8	10 m along 177° radial from 001 port
D8	4-6	10 m along 107° radial from 001 port
		Sediment
S1	bottom	100 m along 114° radial from 001 port
S2	bottom	100 m along 240° radial from 001 port

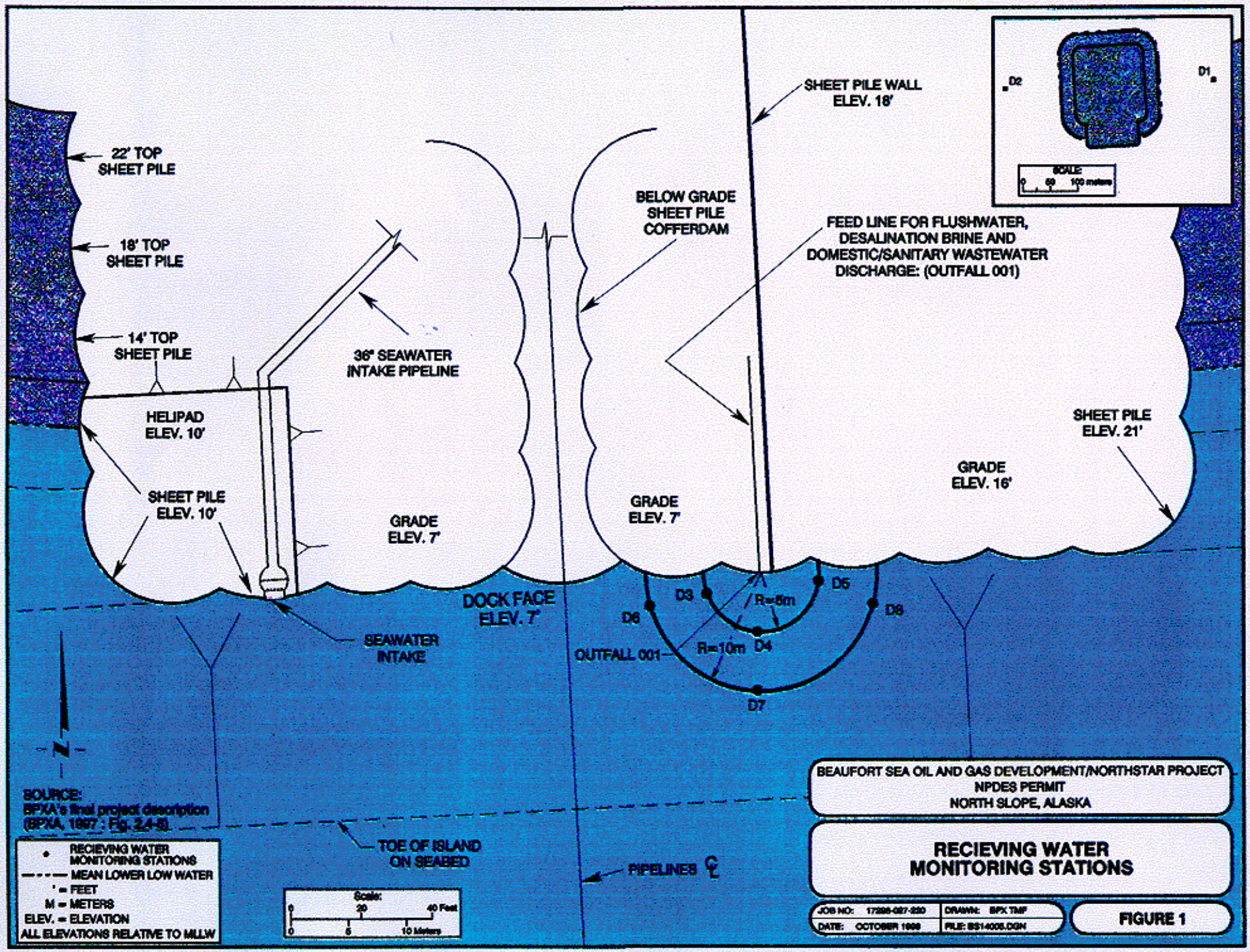
Note: All radials are relative to true north. MLLW is "mean lower low water".

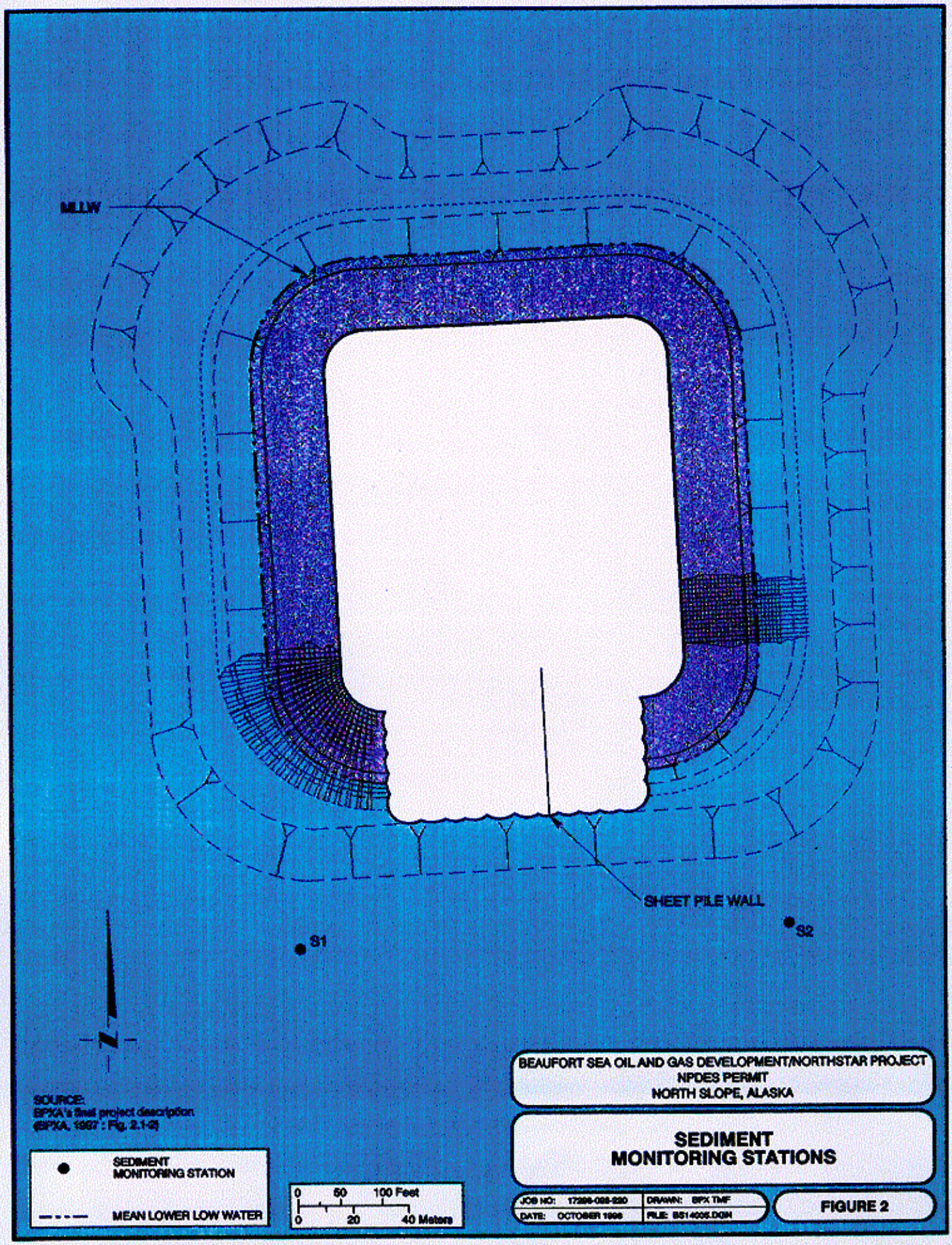
4. Sediment Monitoring: The sediment monitoring program shall address the question of whether the contaminants discharged by the Northstar Development Facility bioaccumulate, concentrate, or persist above natural levels in sediments to significantly adverse levels.

Sediment monitoring for Sediment Chemistry (Subparagraph a) and Benthic Abundance and Community Structure (Subparagraph b) shall be conducted: the first July or August following initial discharge from Outfall 001 and during the last July or August of the effective period of this permit. Sediment monitoring for sediment chemistry (Subparagraph a) shall also be conducted prior to island reconstruction. Sediment monitoring shall be at the following established stations (see Part III.B.2 above for station locations): S1 and S2.

The description of the gross characteristics of the sediment shall also address the presence or absence of oil, oil globules, tar balls, and visible sheen in the aqueous or solid phase of the sediment samples. These written descriptions shall be included in the monitoring report. Sediment samples shall be archived for one year after submission of the annual monitoring report unless the EPA or ADEC request that samples be held for a longer period.

a. Sediment Chemistry. The Permittee shall collect sediment samples at the stations identified in Part III.B.2. Concentrations of the following shall be determined from the collected sediment samples:


22' TOP SHEET PILE
18' TOP SHEET PILE
14' TOP SHEET PILE
HELIPAD ELEV. 10'
SHEET PILE ELEV. 10'
36" SEAWATER INTAKE PIPELINE
GRADE ELEV. 7'
SEAWATER INTAKE
DOCK FACE ELEV. 7'
BELOW GRADE SHEET PILE COFFERDAM
SHEET PILE WALL ELEV. 18'
FEED LINE FOR FLUSHWATER, DESALINATION BRINE AND DOMESTIC/SANITARY WASTEWATER DISCHARGE: (OUTFALL 001)
GRADE ELEV. 7'
GRADE ELEV. 16'
SHEET PILE ELEV. 21'
D1
D2
D3
D4
D5
D6
D7
D8
R=5m
R=10m
OUTFALL 001
SCALE: 0 50 100 meters
N
SOURCE: BPXA's final project description (BPXA, 1997 : Fig. 2.4-5)
TOE OF ISLAND ON SEABED
PIPELINES
RECIEVING WATER MONITORING STATIONS
MEAN LOWER LOW WATER
' = FEET
M = METERS
ELEV. = ELEVATION
ALL ELEVATIONS RELATIVE TO MLLW
Scale: 0 20 40 Feet 0 5 10 Meters
BEAUFORT SEA OIL AND GAS DEVELOPMENT/NORTHSTAR PROJECT
NPDES PERMIT
NORTH SLOPE, ALASKA
RECIEVING WATER MONITORING STATIONS
JOB NO: 17288-027-220
DRAWN: BPX TMF
DATE: OCTOBER 1999
FILE: BS14006.DGN
FIGURE 1


MLLW
SHEET PILE WALL
S1
S2
N
SOURCE:
BPXA's final project description
(BPXA, 1997 : Fig. 2.1-2)
SEDIMENT
MONITORING STATION
MEAN LOWER LOW WATER
0 50 100 Feet
0 20 40 Meters
BEAUFORT SEA OIL AND GAS DEVELOPMENT/NORTHSTAR PROJECT
NPDES PERMIT
NORTH SLOPE, ALASKA
SEDIMENT
MONITORING STATIONS
JOB NO: 17299-028-220
DRAWN: BPX TMF
DATE: OCTOBER 1999
FILE: BS14005.DGN
FIGURE 2

Ammonia	Nickel
Cadmium	Polynuclear Aromatic Hydrocarbons (PAH)
Manganese	Sulfides
Mercury	Vanadium

PAH and their alkylated homologues shall be analyzed using a gas chromatographic/mass spectrometer (GC/MS) technique in the selected ion monitoring (SIM) mode as described by the Geochemical and Environmental Research Group (GERG) Laboratory, Texas A&M University, College Station, Texas, in GERG SOP-8905. Alternative methods may be used with prior approval by the EPA and ADEC. Sediment chemistry data shall be normalized to dry weight, total organic carbon, and sediment grain size.

Results of sediment hydrocarbon analyses shall be compared to historic Prudhoe Bay and other Beaufort Sea values and to EPA, NOAA, and State of Washington accepted published PAH and TAH levels in marine sediments. Sediment quality guidelines or benchmarks which may be used for comparison include the EPA's draft Sediment Quality Criteria (USEPA, 1993b,c,d), State of Washington marine sediment quality standards - chemical criteria (WDE, 1995), and NOAA's Effects Range-Low and Effects Range-Medium Criteria (Long and Morgan, 1990; Long, 1992). If the above guidelines are revised or new guidelines are published, the most recent guidelines should be used for comparison.

b. Benthic Abundance and Community Structure. Sampling methods and analyses conducted shall be those used by Woodward-Clyde Consultants (WCC) in the 1995 Northstar Unit Sampling Program (WCC, 1996), or the equivalent, as determined by the EPA in consultation with ADEC prior to sampling. The sampling stations are those identified in Table 5.

5. Annual Data Report:

a. Beginning with or following the first calendar quarter after the initial discharges from Outfall 001, the Permittee shall submit an annual data report to the EPA (two copies), the National Marine Fisheries Services (Juneau, Alaska office) (two copies), and ADEC (two copies) by February 15. This report will be required for the life of this Permit, both during years of environmental monitoring activities (per Part III.A and Part III.B.1-4) and during years without said activities. Effluent monitoring data (Parts I.A.2, I.B.2, and I.C.2) will be addressed annually. Reporting related to sediment monitoring required prior to island reconstruction (Part III.B.4) shall be included in the first annual data report. The report shall:

(1) Describe sampling and analytical methodologies used and quality assurance/quality control procedures.

(2) Discuss how the monitoring addresses the environmental monitoring program objectives (see Part III.B.1) by using appropriate descriptive, analytical, and statistical methods to test for and describe impacts of the effluent on the receiving water, sediment, and benthic community.

(3) Provide an interpretative summary of the results of Parts III.B.3 and III.B.4 of the Permit which address the magnitude and environmental significance of observed changes in parameters over time and, for water quality, distance from Outfall 001.

(4) Demonstrate compliance with Quality Assurance Requirements.

(5) The Permittee shall use the effluent chemistry data collected under Part I.A.2 of this Permit to quantitatively assess whether applicable water quality standards are being met at the edge of the mixing zone for Outfall 001. This assessment may be performed using computed dilutions expected to occur at this mixing zone boundary. In the years that WET tests are performed, the Permittee shall also use WET testing data collected under Part III.A of this Permit to quantitatively assess whether applicable water quality standards are being met at the edge of the mixing zone for Outfall 001.

b. At the written request of ADEC, the Permittee shall discuss specific ADEC or public comments on the annual data reports in writing.

6. Digital Data Coding and Submission Requirements: The Permittee shall submit the environmental monitoring data to the EPA in electronic format using a commercially available software package by February 15 of the year following each sampling period.

7. Continuation of Monitoring: The environmental monitoring program shall be continued until the Permit is reissued or adjusted per Part III.B.8 (Adjusted Monitoring) below.

8. Adjusted Monitoring: Based on the results of the Annual Data Report required under Part III.B.5 of this Permit, the Permittee may be required to adjust sampling frequency, modify sampling locations, and/or adjust the sampling design. The EPA shall not reduce the requirements without the concurrence of ADEC. Increases in the sampling frequency, the number of monitoring stations, and additional monitoring requirements shall be made as part of a Permit modification in accordance with 40 CFR 122 and 124.

C. Quality Assurance Requirements

1. Implementation: The Permittee, or the Permittee's designated water quality analysis laboratory(ies) and/or designated sampling contractor, shall follow the procedures given in the Quality Assurance Plan, Water and Wastewater Sampling and Analysis (QA Plan) or in accordance with subsequent amendments. The Permittee shall amend this Plan to incorporate practices to achieve the objectives and specific requirements listed below (see Part III.C.8 below).

A copy of the QA Plan shall be submitted to the EPA for approval, in consultation with ADEC, no later than 60 days from the effective date of this NPDES Permit. The EPA, in consultation with ADEC, shall have the right to disapprove the QA Plan. If neither Agency/Department disapproves of the QA Plan within 60 days of receipt by the EPA, it shall be deemed approved. The QA Plan shall be implemented: 1) no later than 150 days from the effective date of this NPDES Permit; and 2) prior to the commencement of sample collection and analysis (including effluent monitoring requirements set forth in Part I).

2. Objectives: The objectives of the QA Plan shall be to assist in planning for the collection and analysis of samples in support of the effluent monitoring requirements in Part I of this Permit and in explaining data anomalies when they occur.

3. Monitoring Equipment: All monitoring equipment shall be maintained in good working order and routinely calibrated. Calibration records shall be kept on all laboratory and effluent monitoring equipment, including but not limited to effluent flow meters, temperature meters, and weighing balances.

4. QA Plan Requirements: Throughout all sample collection and analysis activities, the Permittee, or the Permittee's designate, shall use the EPA's Interim Guidelines and Specifications For Preparing Quality Assurance Project Plans (USEPA, 1980), EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations (USEPA, 1994), or any subsequent revisions to the guidance documentation. The Permittee's QA Plan shall be prepared in the format which is specified in listed references. The following reference may be helpful in preparing the QA Plan for this Permit, You and Quality Assurance in Region 10 (USEPA, 1988).

At a minimum, the QA Plan shall include the following information:

a. Name(s), address(es) and telephone number(s) of the laboratories used by or proposed to be used by the Permittee.

b. Sample collection techniques and quality samples (field blanks, replicates, duplicates, control samples, types of containers, holding times, etc).

c. Sample preservation methods.

d. Sample shipping requirements.

e. Instrument calibration procedures and preventative maintenance (frequency, standard, spare parts) to be used by the Permittee's laboratory.

f. Analytical methods (including quality control checks, quantification/detection levels, precision and accuracy requirements) to be used by the Permittee's laboratory.

g. Qualification and training of personnel to conduct sampling and analysis.

5. **Discharge Monitoring Report (DMR) Certification:** The Permittee shall require the responsible laboratory manager of each laboratory providing measurement results in support of this Permit to sign and submit to the Permittee following the statement of the analytical results:

   I certify that this data is in compliance with requirements under 40 CFR 136 and other analytical requirements specified in NPDES Permit No. AK-0052779.

   Signature: _____ Date: _____

   Title: _____

6. **Verification:** Annually, no later than February 15, the Permittee shall verify to the EPA and ADEC that all laboratories used in the previous year for the purpose of measuring Permit samples have facilities, equipment, staff, quality assurance programs, and quality control procedures necessary to perform sample measurements in support of this Permit.

7. **Documentation:** The Permittee shall maintain a copy of the most current QA Plan at the Northstar Development Facility and provide the QA Plan to all laboratories which conduct analysis pursuant to requirements of this NPDES Permit.

8. **QA Plan Modification:** The Permittee shall amend the QA Plan when conditions or requirements of the quality assurance practices related to the NPDES Permit change. Any such changes to the QA Plan shall be reported in writing to the EPA and ADEC and shall be consistent with the objectives and specific requirements listed in the Permit. The EPA, in consultation with ADEC, shall have the right to disapprove of changes to QA Plan within 60 days of receipt by the EPA, after which time such changes shall be deemed approved.

D. Representative Sampling (Routine and Non-Routine Discharges)

The Permittee shall collect all effluent samples from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

In order to ensure that the effluent limits set forth in this Permit are not violated at times other than when routine samples are taken, the Permittee shall collect additional samples at the appropriate outfall(s) whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The Permittee shall analyze the additional samples for those parameters listed in Part I of this Permit that are likely to be affected by the discharge.

The Permittee shall collect such additional samples as soon as possible after the discharge. The samples shall be analyzed in accordance with Part III.F below. In the event of an anticipated bypass as defined in Part VI of

this Permit, the Permittee shall collect and analyze additional samples as soon as the bypassed effluent reaches the Outfall. The Permittee shall report all additional monitoring in accordance with Part III.G below.

E. Reporting of Monitoring Results

The Permittee shall summarize monitoring results each month on the Discharge Monitoring Report (DMR) Form (EPA No. 3320-1). The Permittee shall submit reports monthly, postmarked by the 15th day of the following month. The Permittee shall sign and certify all DMRs, and all other reports, in accordance with the requirements of Part V.E of this Permit (Signatory Requirements). The Permittee shall submit the originals of these documents to the Director, Office of Water, with copies to ADEC, at the following addresses:

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

Copy to: Alaska Department of Environmental Conservation
Attn: Watershed Management
610 University Avenue
Fairbanks, Alaska 99709

F. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other test procedures have been specified in this Permit or are approved in advance by the EPA.

G. Additional Monitoring by Permittee

If the Permittee monitors any pollutant more frequently than required by this Permit, using test procedures approved under 40 CFR 136 or as specified in this Permit, the Permittee shall include the results of this monitoring in the calculation and reporting of the data submitted in the DMR. The Permittee shall indicate on the DMR whenever it has performed additional monitoring, and shall explain why it performed such monitoring.

Upon request by the Director, the Permittee shall submit results of any other sampling, regardless of the test method used.

H. Records Contents

All effluent monitoring records shall bear the hand-written signature of the person who prepared them. In addition, all records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements.
2. The names of the individual(s) who performed the sampling or measurements.

3. The date(s) analyses were performed.
4. The names of the individual(s) who performed the analyses.
5. The analytical techniques or methods used.
6. The results of such analyses.

I. Retention of Records

The Permittee shall retain records of all monitoring information, including, but not limited to, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, copies of DMRs, a copy of this NPDES Permit, and records of all data used to complete the application for this Permit, for a period of at least five (5) years from the date of any sample, measurement, report or application, or for the term of this Permit, whichever is longer. This period may be extended by request of the Director or ADEC at any time.

J. Twenty-four Hour Notice of Noncompliance Reporting

1. The Permittee shall report the following occurrences of noncompliance by telephone, (206) 553-1213, within 24 hours from the time the Permittee becomes aware of the circumstances:

a. Any noncompliance that may endanger health or the environment;

b. Any unanticipated bypass that results in or contributes to an exceedance of any effluent limitation in the Permit (See Part IV.G, Bypass of Treatment Facilities);

c. Any upset that results in or contributes to an exceedance of any effluent limitation in the Permit (See Part IV.H, Upset Conditions); or

d. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this Permit.

2. The Permittee shall also provide a written submission within five (5) days of the time that the Permittee becomes aware of any event required to be reported under Part III.J.1 above. The written submission shall contain:

a. A description of the noncompliance and its cause.
b. The period of noncompliance, including exact dates and times.
c. The estimated time noncompliance is expected to continue if it has not been corrected.
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
e. The results of any required monitoring data.

3. The Director may, at his or her sole discretion, waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Compliance Section in Seattle, Washington, by telephone, (206) 553-1213.

4. Written reports shall be submitted to the addresses listed in Part III.E (Reporting of Monitoring Results).

K. Other Noncompliance Reporting

The Permittee shall report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Part III.E (Reporting of Monitoring Results) are submitted. The reports shall contain the information listed in Part III.J.2 (Twenty-four Hour Notice of Noncompliance Reporting).

L. Reporting Requirements for Construction/Maintenance Activities

The Permittee shall notify the EPA and ADEC, in writing, of all expected dates and times of projects disturbing the sea bed at least 15 days prior to project startup (e.g., construction dewatering Outfall 005). This notification may be done for the entire project prior to initial startup.

The Permittee shall record: 1) the construction/maintenance activity performed, 2) the days during which these were conducted, and 3) the type and amount of material used. This information shall be made available to the EPA or ADEC upon request.

IV. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

The Permittee shall comply with all conditions of this Permit. Any Permit noncompliance constitutes a violation of the Clean Water Act (the Act) and is grounds for enforcement action, for Permit termination, revocation and reissuance, or modification, or for denial of a Permit renewal application. The Permittee shall give reasonable advance notice to the Director and ADEC of any planned changes in the Permitted facility or activity that may result in noncompliance with Permit requirements.

B. Penalties for Violations of Permit Conditions

1. Civil and Administrative Penalties: Any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall be subject to a civil or administrative penalty, not to exceed the maximum amounts authorized by Sections 309(d) and 309(g) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. ' 3701 note).

2. Criminal Penalties:

a. Negligent Violations. Any person who negligently violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(1) of the Act.

b. Knowing Violations. Any person who knowingly violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(2) of the Act.

c. Knowing Endangerment. Any person who knowingly violates a permit condition implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subjected to a fine and/or imprisonment as specified in Section 309(c)(3) of the Act.

d. False Statements. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this Act, shall, upon conviction, be punished by a fine and/or imprisonment as specified in Section 309(c)(4) of the Act.

Except as provided in Permit conditions in Part IV.G, (Bypass of Treatment Facilities) and Part IV.H, (Upset Conditions), nothing in this Permit shall be construed to relieve the Permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with this Permit.

D. Duty to Mitigate

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

E. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the Permit.

F. Removed Substances

Solids, sludges, or other pollutants removed in the course of treatment or control of water and wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the United States, except as specifically authorized in Part I.

G. Bypass of Treatment Facilities

1. Bypass Not Exceeding Limitations: The Permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs 2 and 3 of this Subpart.

2. Notice:

a. Anticipated bypass - If the Permittee knows in advance of the need for a bypass, it shall submit prior notice to the EPA, if possible at least 10 days before the date of the bypass.

b. Unanticipated bypass - The Permittee shall submit notice of an unanticipated bypass as required under Part III.J (Twenty-four Hour Notice of Noncompliance Reporting).

3. Prohibition of Bypass:

a. Bypass is prohibited, and the Director or ADEC may take enforcement action against the Permittee for a bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.

(3) The Permittee submitted notices as required under Paragraph 2 of this Subpart.

b. The Director and ADEC may approve an anticipated bypass, after considering its adverse effects, if the Director and ADEC determine that it will meet the three conditions listed above in Paragraph 3.a of this Subpart.

H. Upset Conditions

1. Effect of an Upset: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based Permit effluent limitations if the Permittee meets the requirements of Part IV.H.2. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. Conditions Necessary for a Demonstration of Upset: To establish the affirmative defense of upset, the Permittee shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the Permittee can identify the cause(s) of the upset.

b. The Permitted facility was at the time being properly operated.

c. The Permittee submitted notice of the upset as required under Part III.J, (Twenty-four Hour Notice of Noncompliance Reporting).

d. The Permittee complied with any remedial measures required under Part IV.D, (Duty to Mitigate)

3. Burden of Proof: In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Toxic Pollutants

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the Permit has not yet been modified to incorporate the requirement.

J. Planned Changes

The Permittee shall give notice to the Director and ADEC as soon as possible of any planned physical alterations or additions to the Permitted facility whenever:

1. The alteration or addition to a Permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the Permit, nor to notification requirements under Part IV.K (Changes in Discharge of Toxic Substances).

The Permittee shall give notice to the Director and ADEC as soon as possible of any planned changes in process or chemical use whenever such change could significantly change the nature or increase the quantity of pollutants discharged.

K. Changes in Discharge of Toxic Substances

The Permittee shall notify the Director and ADEC as soon as it knows, or has reason to believe:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the Permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":

    a. One hundred micrograms per liter (100 Fg/L);

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

    c. Five (5) times the maximum concentration value reported for that pollutant in the Permit application in accordance with 40 CFR 122.21(g)(7); or

    d. The level established by the Director in accordance with 40 CFR 122.44(f).

2. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in the Permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":

   a. Five hundred micrograms per liter (500 Fg/L);

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

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Permit application in accordance with 40 CFR 122.21(g)(7); or

   d. The level established by the Director in accordance with 40 CFR 122.44(f).

L. Anticipated Noncompliance

The Permittee shall also give advance notice to the Director and ADEC of any planned changes in the Permitted facility or activity that may result in noncompliance with this Permit.

V. GENERAL PROVISIONS

A. Permit Actions

This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any Permit condition.

B. Duty to Reapply

If the Permittee intends to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must apply for and obtain a new Permit. The application shall be submitted at least 180 days before the expiration date of this Permit.

C. Duty to Provide Information

The Permittee shall furnish to the Director and ADEC, within the time specified in the request, any information that the Director or ADEC may request to determine if cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Director or ADEC, upon request, copies of records required to be kept by this Permit.

D. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a Permit application, or that it submitted incorrect information in a Permit application or any report to the Director or ADEC, it shall promptly submit the omitted facts or corrected information.

E. Signatory Requirements

All applications, reports or information submitted to the Director and ADEC shall be signed and certified.

1. All Permit Applications Shall Be Signed as Follows:

a. For a corporation: by a responsible corporate officer or by a manager meeting the requirements of 40 CFR 122.22(a)(1)(ii).

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the Permit and other information requested by the Director or ADEC shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described above and submitted to the Director and ADEC.

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company.

3. Changes to Authorization: If an authorization under Part V.E.2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.E.2 must be submitted to the Regional Administrator and ADEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification: Any person signing a document under this Part shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with this Permit shall be available for public inspection at the offices of the state water pollution control agency and the Director and ADEC. As required by the Act, Permit applications, Permits, and effluent data shall not be considered confidential.

G. Inspection and Entry

The Permittee shall allow the Director, ADEC, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit.

4. Sample or monitor at reasonable times, for the purpose of assuring Permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any relevant locations.

H. Oil and Hazardous Substance Liability

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under Section 311 of the Clean Water Act.

I. Property Rights

The issuance of this Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

J. Severability

The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit, shall not be affected thereby.

K. Transfers

This Permit may be automatically transferred to a new Permittee if:

1. The current Permittee notifies the Director at least 30 days in advance of the proposed transfer date.

2. The notice includes a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage, and liability between them.

3. The Director does not notify the existing Permittee and the proposed new Permittee of his or her intent to modify, or revoke and reissue the Permit.

If the notice described in Paragraph 3 above is not received, the transfer is effective on the date specified in the agreement mentioned in Paragraph 2 above.

L. State and Local Laws

Nothing in this Permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state or local law or regulation under authority preserved by Section 510 of the Clean Water Act.

M. Reopener Clause

1. This Permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, as amended, if the effluent standard, limitation, or requirement so issued or approved:

    a. Contains conditions more stringent than any effluent limitation in the Permit; or

    b. Controls any pollutant not limited in the Permit.

The Permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. This Permit may be modified, or alternatively, revoked and reissued in accordance with 40 CFR 122 and 124, to address the application of different Permit conditions, if new information, such as future water quality studies or waste load allocation determinations, or new regulations, such as changes in water quality standards, show the need for different conditions.

3. At the written request of ADEC, this Permit may be modified, or alternatively revoked and reissued to address the application of different Permit conditions if new information, such as future water quality studies and waste load allocation determinations, or new regulations, such as changes in water quality standards, show the need for different conditions. A modification of the Permit shall be conducted in accordance with the requirements of 18 AAC 15.120 through 18 AAC 15.170.

VI. ACRONYMS, ABBREVIATIONS, AND SYMBOLS

The following terms, when used in this Permit, have the meanings given below:

AAC means Alaska Administrative Code.
The Act refers to the Clean Water Act.

ADEC means the Alaska Department of Environmental Conservation.

Administrator means the Administrator of the EPA, or an authorized representative.

avg. means average.

BMP means best management practices.

BOD means biochemical oxygen demand.

BPXA refers to BP Exploration (Alaska) Inc.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility, as specifically defined at 40 CFR 122.41(m).

CFR means Code of Federal Regulations.

Daily discharge means the discharge measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass

or volume, the *daily discharge* is calculated as the average measurement over the sampling day. When grab samples are used, the *daily discharge* determination of concentration shall be collected during that sampling day.

Daily Maximum - see Maximum Daily.

Degrees C (°C) means degrees Celsius.

Director means the Director of the Office of Water, U.S. EPA Region 10, or an authorized representative.

DMR means Discharge Monitoring Report.

DO means dissolved oxygen.

Domestic Wastes include wastes from showers, sinks, galleys, and laundries.

E means east.

elev means elevation.

EPA means U.S. Environmental Protection Agency.

FC means fecal coliform.

FC#/100 ml means fecal coliform count per 100 milliliters.

‘ means feet/foot.

ft means feet/foot.

Fire suppression system test water means the water released during the training of personnel in fire protection and the testing and maintenance of fire protection equipment.

GC/MS means gas chromatograph/mass spectrometer

GERG means Geochemical and Environmental Research Group Laboratory, Texas A&M University, College Station, Texas.

gpd means gallons per day.

gpm means gallons per minute.

Grab Sample means a single sample or measurement taken at a specific time or over as short a period of time as is feasible.

IC_{25} means the point estimate of the toxicant concentration that would cause a 25% reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (i.e., USEPA Interpolation Method).

" means seconds.

"Interim minimum level" is calculated when a method-specified minimum level does not exist. It is equal to 3.18 times the method-specified method detection limit rounded to the nearest multiple of 1,2,5,10,20,50, etc.

IWC means Instream Waste Concentration. IWC is the concentration of a toxicant in the receiving water after mixing. The IWC is inverse of the dilution factor.

m means meter.

max. means maximum.

Maximum means the highest measured discharge or pollutant concentration in a waste stream during the time period specified.

Maximum daily means the highest measured *daily discharge* during the monitoring month.

mgd means million gallons per day.

µg/L means micrograms per liter.

mg/L means milligrams per liter.

min. means minimum.

Minimum daily means the lowest measured *daily discharge* during the monitoring month.

Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point.

ml means milliliter.

MLLW means mean lower low water.

Monitoring month shall mean the period consisting of the calendar weeks which end in a given calendar month.

Monthly average means the average of *daily discharges* over a monitoring month, calculated as the sum of all *daily discharges* measured during a monitoring month divided by the number of *daily discharges* measured during that month. As a Permit limitation *monthly average* means the highest allowable value thus calculated.

N means north.

NA means not applicable.

NOAA means National Oceanic and Atmospheric Administration.

No discharge of free oil means that waste streams that would cause a film or sheen upon or a discoloration of the surface of the receiving water or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines may not be discharged.

NPDES means National Pollutant Discharge Elimination System.

P2 Plan means pollution prevention plan.
PAH means polynuclear aromatic hydrocarbon.

pH means protenz (power) of hydrogen.

QA Plan means Quality Assurance Plan.

RCRA means Resource Conservation and Recovery Act.

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

S means south.

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

Severe property damage is specifically defined in 40 CFR 122.41(m)(ii) and means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

SIM means selected ion monitoring (mode).

TAH means total aromatic hydrocarbons.

TRC means total residual chlorine.

TSERF is a Toxicity Standardized Electronic Reporting Form.

TSS means total suspended solids.

TU means toxic unit as in TUc (chronic toxic unit). TUc is a measure of chronic toxicity; the number of TUc is calculated as $100/IC_{25}$, where the IC_{25} is measured in Permit effluent.

Upset is specifically defined at 40 CFR 122.41(n) and means an exceptional incident in which there is temporary noncompliance with technology-based Permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

U.S. means United States.

W means west.

Waste stream means any non-deminimis stream of pollutants within the Permittee's facility that enters any Permitted Outfall or navigable waters. This includes spills and other unintentional, non-routine or unanticipated discharges.

Water depth means the depth of the water between the surface and the seafloor as measured from mean lower low water (0.0).

WCC refers to Woodward-Clyde Consultants.

WET means whole effluent toxicity.

3/week means three times per week.

24-hour composite sample shall mean a flow-proportioned mixture of not less than 8 evenly spaced discrete aliquots. Each aliquot shall be a grab sample which is as large as possible, but not less than 60 ml. Each aliquot shall be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.

VII. REFERENCES FOR TEXT AND APPENDICES

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Appendix A

BP Exploration (Alaska) Inc.
Northstar Development Project

NPDES Outfall 005
Construction Dewatering

Best Management Practices and
and
Pollution Prevention Plan

Permit No. AK-0052779
October 1998

BP Exploration (Alaska) Inc.

Northstar Development Project

NPDES Outfall 005
Construction Dewatering

Best Management Practices

and

Pollution Prevention Plan

Revision 2

October 1998

CONTENTS

SECTION PAGE

LIST OF FIGURES

MANAGEMENT APPROVAL

This combined Best Management Practices Plan and Pollution Prevention Plan is approved for dewatering activities during construction of the Seawater Intake System and Outfall 001 at Seal Island, Northstar Unit. The discharge has been designated as Outfall 005 in the NPDES permit application submitted for the facility on May 7, 1997. As required by the permit, the plan has been reviewed and endorsed by the Best Management Practices Committee indicated below.

10/22/98

BPXA Northstar Project Manager **Date**

10/22/98

BPXA Alaska Exploration and Development (ENS) **Date**
HSE Assurance Manager

10/22/98

Alaska Interstate Construction (AIC) Project Manager **Date**

10/22/98

BPXA Health, Safety, & Environmental (HSE) Business Manager **Date**

BEST MANAGEMENT PRACTICES

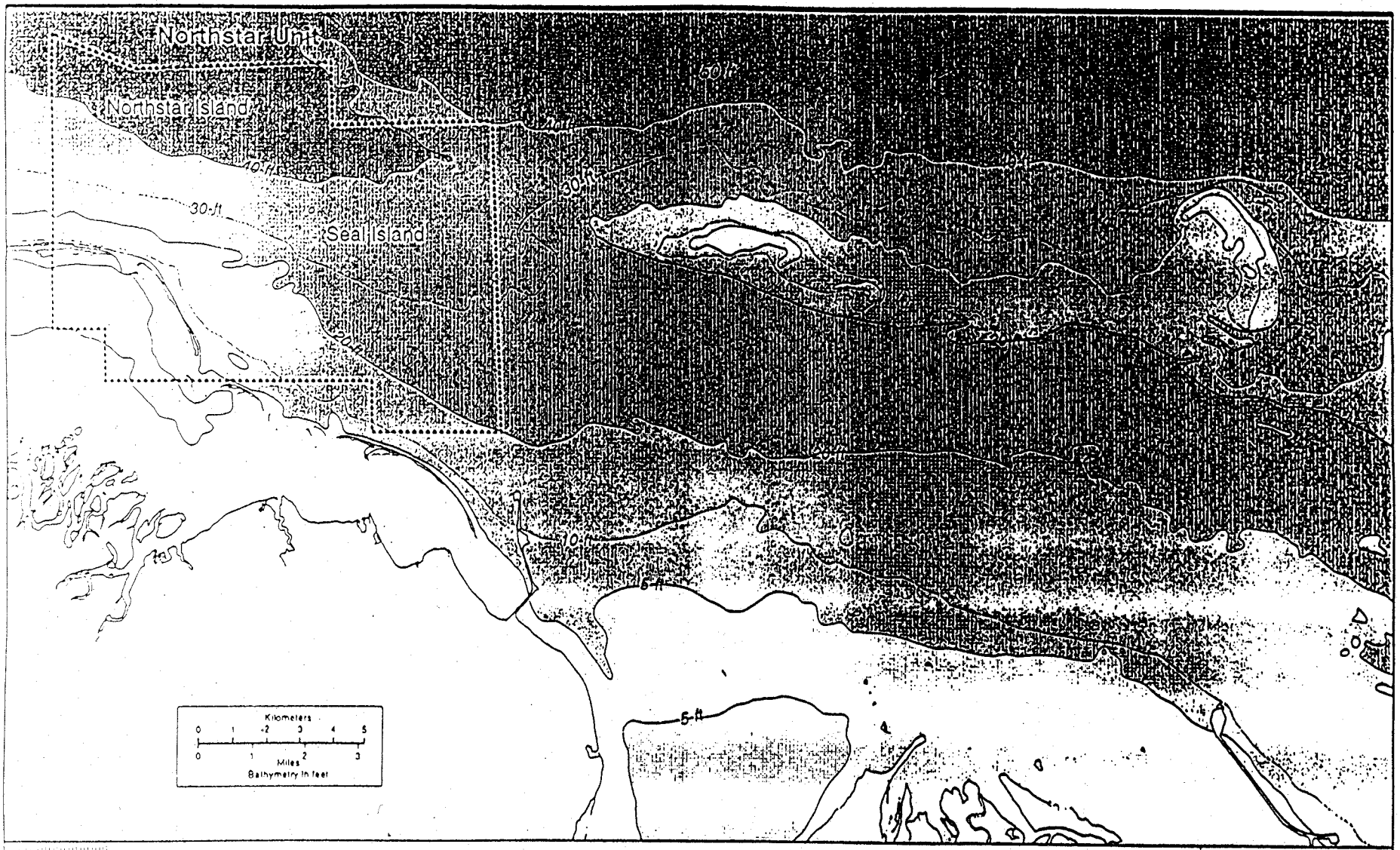
The primary pollutant expected in discharge from Outfall 005 will consist of fine sediments washed from the clean gravel fill used to construct the island. Therefore, the goal of this Best Management Practices (BMP) and Pollution Prevention (PP) Plan is to prevent the introduction of any other pollutants and to minimize the amount of sediment that may be contained in the discharge. The discharge from Outfall 005 will be placed either into waters adjacent to the island. The sediment discharged through Outfall 005 is the same as that expected to be leached from the outer perimeter of the island both during and after fill placement. The receiving water will already contain both sediment from the island perimeter and sediment disturbed from the seafloor during trenching and pipe placement activities. Discharge from Outfall 005 (described in Section 1.3 of this document), is considered to be a point source, and therefore must be covered under the NPDES permitting process.

1.0 GENERAL REQUIREMENTS

1.1 Name and Location of Facility

The offshore oil production facility for the Northstar Development Project will be located on Seal Island in the Beaufort Sea (Figure 1). The lease area is located northwest of the West Dock Causeway and offshore of the Return Islands. The southeast corner of the Northstar Unit reaches to Gwydyr Bay, north of the Kuparuk River delta. The unit extends seaward through the 3-mile territorial waters of Alaska and into the U.S. Federal outer continental shelf (OCS) lease area. Seal Island is situated about 9.6 km (6 miles) offshore in about 12 m (40 ft) of water.

The current design for the offshore production facility includes plans for marine discharge of flushwater, desalination brine, and treated domestic and sanitary wastewater (Outfall 001), fire water testing (Outfall 002), and construction dewatering (Outfall 005). An NPDES permit application has been submitted for these discharges. This document serves as a BMP and PP Plan for temporary discharges from Outfall 005, Construction Dewatering, as defined in the NPDES permit application.



NORTHSTAR UNIT AND THE PRUDHOE BAY AREA

Figure 1

1.2 Nature of Construction Activity

The Northstar Development Project is a stand-alone, self-contained, offshore drilling and production facility located on a gravel island which will include all support infrastructure and necessary facilities. The island will be built over the existing Seal Island (Figure 1).

Additional gravel fill will be required to expand and shape Seal Island into the proposed production facility. When sufficient gravel fill is available, the south side of the island will be expanded to the planned dockface. The gravel will be graded to an elevation of +7 ft mean lower low water (MLLW) and sheetpile will be installed along the perimeter to form the dockface. As shown on Figures 2 and 3, the Seawater Intake System (SWIS) will be installed below water in the dockface on the southern end of the island, adjacent to the helipad; Outfall 001 will be located on the south side of the island through the dockface at an elevation of about -16 ft MLLW. Construction and installation of the SWIS and, the discharges will occur sequentially.

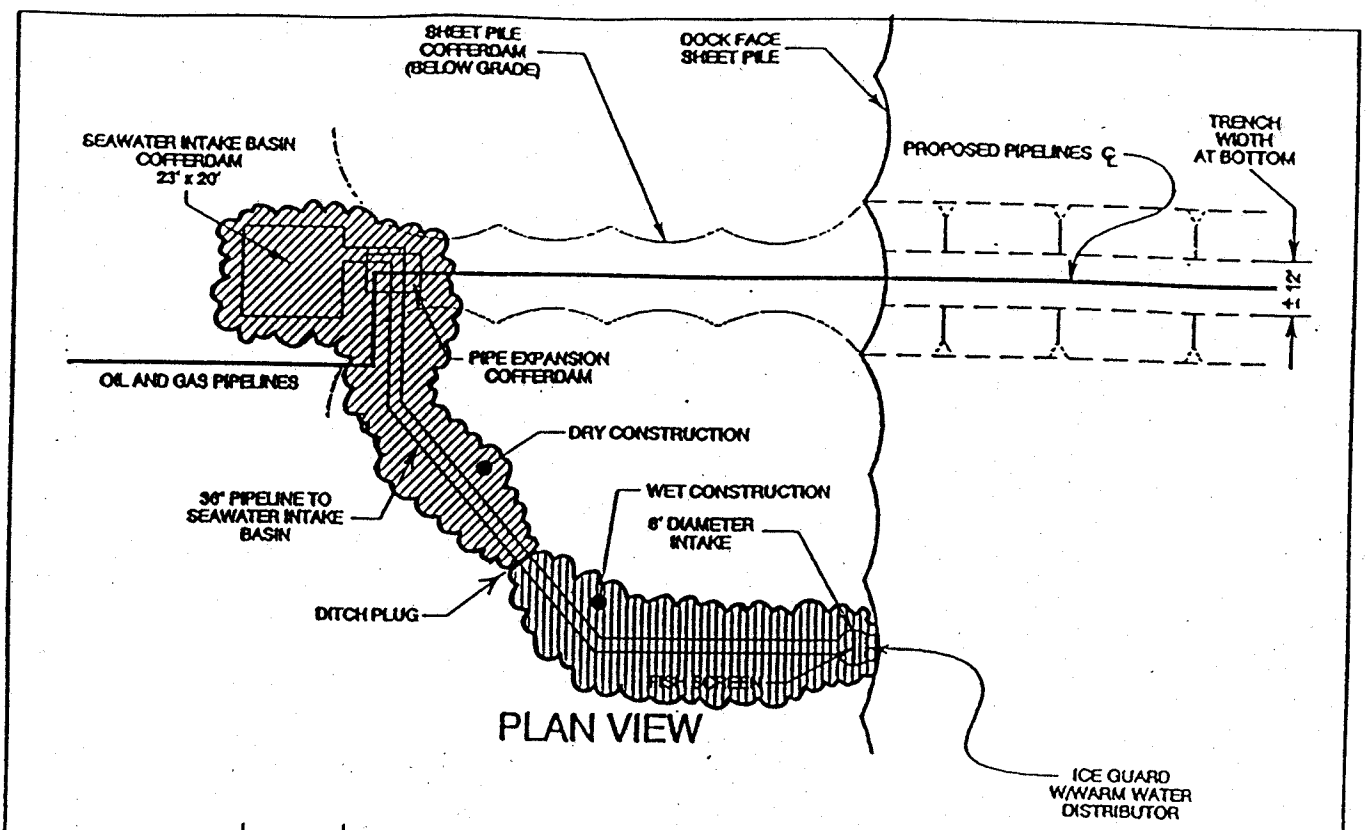
In order to minimize the infiltration of seawater into the SWIS excavation, the work will proceed in two sections. First, the excavation and feedline installation will occur in the section closest to the intake where seawater infiltration may be encountered (see Figure 2). Second, a ditch plug will be installed at the northern end of the excavation to allow dry excavation of the section from the ditch plug to the coffer dam. Information from a site investigation (by backhoe, March 1997) revealed a dry excavation to -23 ft in this area, thus this section is expected to remain dry.

The discharge line for Outfall 001 will be installed in a similar fashion as described above (see Figure 3).

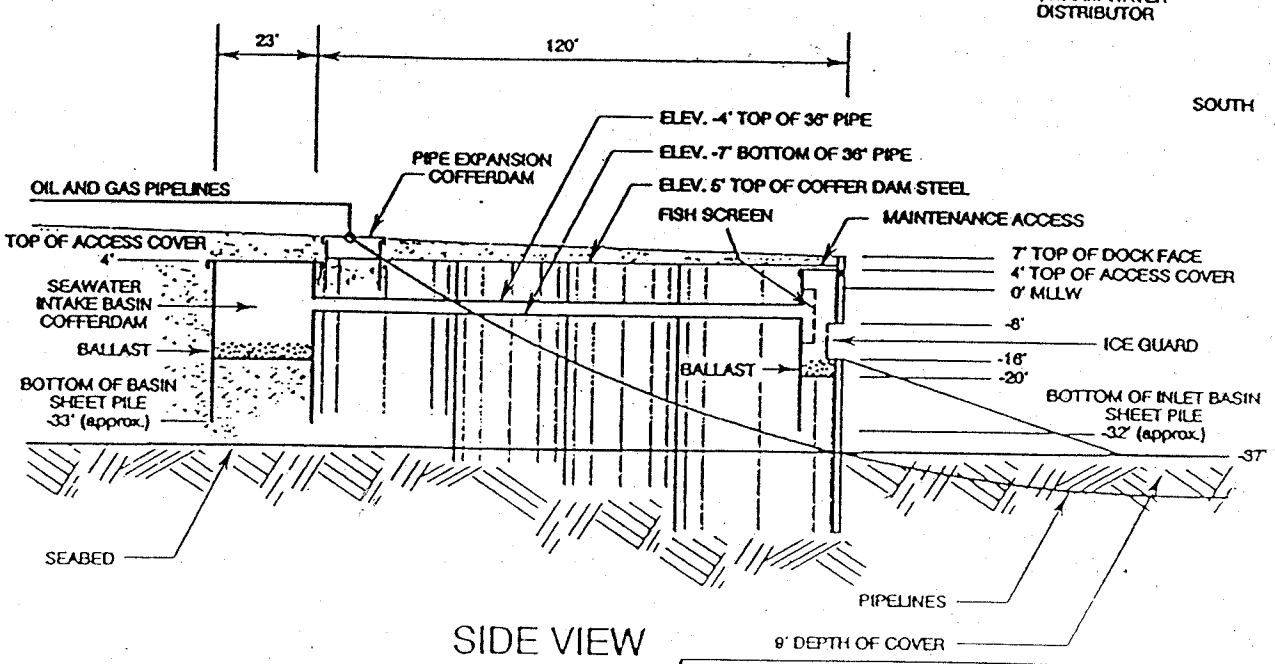
1.3 Description of Discharge Activity

Temporary dewatering activities are likely to be required during construction and installation of both the SWIS (Figure 2) and Outfall 001 (Figure 3). It is anticipated that the dewatering operations will be required discontinuously over a two to four week period during early spring (April - May).

Water discharged during construction dewatering will consist of Beaufort Sea water that has leaked through the sheetpiles or dockface or has percolated through the clean gravel fill to collect in the excavations. It is anticipated that an insignificant amount of storm water will be incorporated into the construction dewatering discharge. Clean gravel fill used to construct the island will contain fines which will be subsequently discharged with the excavation water.

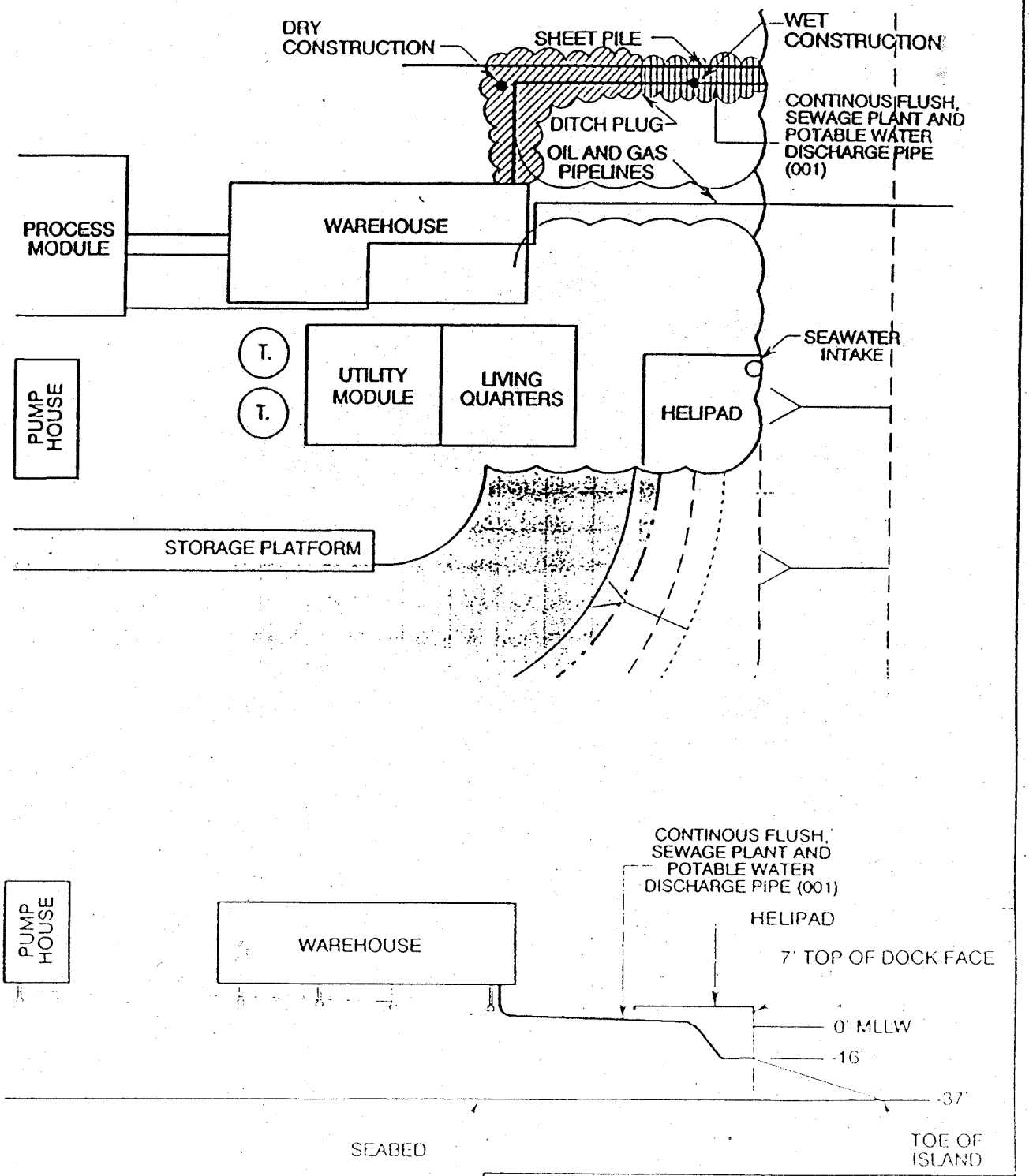


PLAN VIEW



SIDE VIEW

BP EXPLORATION (ALASKA) INC.		
NORTHSTAR DEVELOPMENT PROJECT SEAWATER INTAKE PLAN AND ELEVATION VIEWS		
DATE 05Sep97	SCALE N/A	FIGURE 2



BP EXPLORATION (ALASKA) INC.

NORTHSTAR DEVELOPMENT PROJECT
SEAL ISLAND
EFFLUENT OUTFALL No. 001
PLAN AND ELEVATION VIEW

DATE
N.A.

Fines material discharged will be of the same composition as that which leaches from the perimeter of the island both during and after construction. Pumps rated at no greater than 650 gallons per minute will be used as required to dewater the construction trenches. Discharge hose(s) will be placed through slots cut through surface ice or into naturally occurring water. Diffusers will be used on the end of each discharge hose to prevent scouring of the seabed or ice bottom. These diffusers will be at least 5 ft below the water-ice interface and at least 10 ft above the seabed. No more than six hose placements will be used at any time. These discharges will occur within 200 ft of Seal Island's seawall.

1.3.1 Name of Receiving Water

Discharge will be into the waters of the Beaufort Sea in Stefansson Sound, adjacent to the island. The disturbance caused by the trenching activities will require a water quality variance from the State of Alaska under Section 404 of the Clean Water Act. The variance will cover all non-point source discharges that may occur during construction activities.

1.3.2 Anticipated Volume of Water to be Discharged

The maximum daily flow rate into the SWIS and Outfall 001 excavations is estimated to be approximately 1,000,000 gallons per day (GPD) [650 gal/min x 60 min/hr x 24 hrs/day= 936,000 gal]. A single pump is expected to be able to handle this discharge volume. However, should the maximum flow rate into either excavation exceed 1,000,000 GPD, an additional pump will be required. No more than two pumps will be used. The discharge, through slots cut through the surface ice and/or into naturally occurring water, will be collectively designated as Outfall 005. The slot cut through the ice for pipeline construction may also be used. In summary, the approximate maximum daily discharge from Outfall 005 is 2,000,000 GPD with an approximate 28-day average of 1,000,000 GPD.

1.4 Statement of BMP Policy and Objectives

The purpose of the BMP plan is to "prevent or minimize the generation and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities".

It is BPXA policy to promote full compliance with this BMP plan. Specific objectives of the BMP program include:

- Managing any influent wastes in the most appropriate manner, and
- Minimizing the number and quantity of pollutants and the toxicity of effluent discharged or potentially discharged.

2.0 SPECIFIC REQUIREMENTS

2.1 Best Management Practices Committee

As required by the NPDES permit, this plan has been prepared by a Best Management Practices Committee, whose responsibilities are:

- BPXA Northstar Project Manager - Responsible for overall regulatory compliance during all phases of construction
- BPXA Alaska Exploration and Development (ENS) HSE Assurance Manager - Responsible for BMP Plan approval and implementation. Schedules training for field staff and contractors. Maintains BMP and other permit documents.
- Alaska Interstate Construction (AIC) Project Manager - Advises contractor supervision and employees of their responsibilities under the BMP program.
- BPXA Health, Safety, & Environmental (HSE) Business Manager - Advise the engineering and construction staffs on permitting requirements and regulatory issues. Assists in preparation and review of the BMP.

2.2 Risk Identification and Assessment

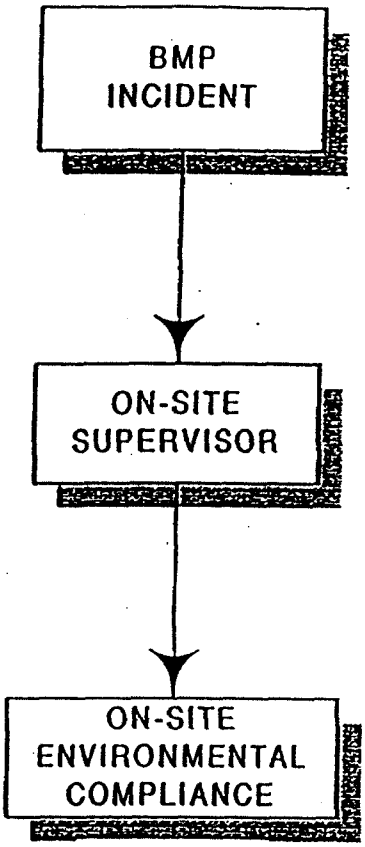
Water accumulated into the excavations during construction activities will consist of Beaufort Sea water that has leaked through the sheetpiles or dockface and has percolated through the clean gravel island fill to collect in the excavations. It is anticipated that an insignificant amount of storm water will be incorporated into the construction dewatering discharge.

The collected water itself is not considered to be a pollutant; the expected increase in suspended solids concentration in the discharge will be introduced only from clean gravel fill that has been placed and permitted as required. However, water in the excavation may be exposed to equipment and vehicles located in the vicinity and conducting the work. In addition, a diesel powered pump will be used to remove the collected water from the excavation. Potential pollutants from these sources include diesel fuel, lubricants, and hydraulic fluids. Good housekeeping practices (discussed in Section 3.5) will minimize the risk of these pollutants entering the discharge.

2.3 Incident Reporting Procedures

BMP incidents include spills, improper implementation of procedures, un-permitted discharges, and situations that may result in permit violations or environmental damage. BPXA reports all spills in accordance with local, state, and federal requirements. Spill reporting procedures are provided in detail in the Oil Discharge Prevention and Contingency Plan.

General procedures for BMP incident reporting are:



2.4 Recordkeeping

BMP-related records will be maintained as follows:

TYPE OF RECORD	LOCATION/RESPONSIBLE PARTY
BMP Plan	• BPXA Northstar Project Manager • BPXA ENS HSE Assurance Manager • AIC Project Manager • BPXA Health, Safety, & Environment
NPDES Permit	• BPXA ENS HSE Assurance Manager • AIC Project Manager • BPXA Health, Safety, & Environment
NPDES Discharge Monitoring Reports	• AIC Project Manager • BPXA Health, Safety, & Environment
BMP Incident Reports	• On-site Environmental Compliance • BPXA Health, Safety, & Environment
Daily Job Reports	• Site Foreman/AIC Project Manager
Routine Environmental Inspection Reports	• On-site Environmental Compliance

POLLUTION PREVENTION

3.0 MEASURES AND CONTROLS

3.1 Practices to Reduce Discharge Volume

The use of ditch plugs during excavation and installation of the SWIS and the feedlines for Outfall 001 will significantly reduce seawater seepage and the subsequent need for trench dewatering. The ditch plugs can be used to isolate a wetter area, possibly located closer to the dockface, from drier areas located towards the middle of the island.

The introduction of stormwater or sea spray runoff (expected to be nil during the expected time of construction) into either excavation can be minimized by the use of a small berm or dike around the perimeter of the open excavation. The dike can be periodically inspected to ensure integrity.

3.2 Timing

Since construction of the SWIS and the outfall feedlines will not occur simultaneously, discharge of construction dewatering fluids will occur from only one excavation at a time. Therefore, the total volume of discharge is not expected to exceed 2,000,000 GPD (maximum of 1,000,000 GPD from each of two pumps).

3.3 Equipment

The pumps intended for dewatering purposes will be powered by diesel fuel. The equipment will be placed in large drip pans to eliminate leaking of fuel, hydraulic fluids, and other liquids from the pumps into the excavation and subsequent dewatering stream. Water in the excavation prior to discharge and the discharge area will be periodically monitored to ensure no visible pollutants or oily sheen (see Section 3.8). Hoses with sufficient length to reach waters adjacent to the island will be used to drain the water.

3.4 Sediment Input Control

The pump suction hose will be placed in the excavation to minimize the amount of sediment entrained in the dewatering discharge. At a minimum, the hoses will be kept off of the bottom of the excavation and away from the excavation sidewalls with the use of floats. The pump intakes

will also be covered with a coarse screen to further eliminate coarser sediment materials from fouling the pumps or being discharged through the lines.

3.5 Good Housekeeping

General housekeeping guidelines are provided in the BPXA/ARCO Alaska Safety Handbook and the BPXA/ARCO Alaska North Slope Environmental Field Handbook, and are reinforced by training, regular meetings, and routine inspections. No chemicals, fuels, or lubricants will be stored in or around the excavation site. Any equipment that could potentially come into contact with the effluent will be kept clean and free of contaminants. Equipment will be removed from the excavation prior to all significant servicing needs.

Other good housekeeping practices include:

- Surface liners and/or catch pans during all fueling and fluid transfers
- Surface liners under parked vehicles and other engines, pumps etc. that potentially drip engine oil, antifreeze, or hydraulic fluid.
- Liners or secondary containment under fuel tanks
- Accurate labeling of all drums and containers
- Inventory control to avoid accumulating surplus materials
- Routine pickup and disposal of waste and/or surplus materials.

3.6 Preventive Maintenance

Construction equipment and pumps used in the dewatering process will be properly maintained to prevent loss of fuels, lubricants, antifreeze and hydraulic fluids. All contractor equipment is subject to inspection before it will be allowed to be used for the construction operations. Contractors are required to repair and/or replaces equipment that is leaking, or is susceptible to leakage due to worn or damaged parts. The site will be maintained to minimize or eliminate additional input or runoff of water into the excavation.

A spill response kit will be available in the immediate vicinity of excavation activities. The kit will contain absorbent squares, sorbent boom, shovels, and other absorbent and spill-response related equipment.

3.7 Training

Safety and environmental training is mandatory for BPXA workers and contractors assigned to this project. Training requirements and schedules will be established by BPXA ENS Assurance. Relevant training topics include:

- Environmental Awareness Training
- BPXA/ARCO Alaska Safety Handbook
- BPXA/ARCO North Slope Environmental Field Handbook
- Hazard Communication and Material Safety Data Sheets (MSDS)
- Overall Safety Orientation
- Spill Response.

3.8 Inspections

During construction dewatering operations, inspections will include:

- Receiving waters - daily inspections for visible pollutants and oily sheen
- Excavation water - daily inspections for visible pollutants and oily sheen
- Equipment and Vehicles - periodic inspections for leaks or spills
- Pumps and Discharge Lines - daily inspections for proper positioning and operation. Verify that permitted flow rate is not exceeded.
- Berms or dikes - check for integrity if placed around the excavation to prevent infiltration of water.

Inspections will be conducted as appropriate by the site foreman or other designated staff. BPXA On-site Environmental Compliance personnel will make periodic inspections during construction. Their duties include spill detection and response, waste management, and general compliance with BPXA environmental and safety policies.

3.9 Security

The construction site is located on a remote man-made island situated about 9.6 km (6 miles) offshore in 12 m (40 ft) of water. Access to the island will be by ice road and helicopter and will be strictly controlled and limited to construction and other authorized personnel. Unauthorized personnel will not be allowed access and the site supervisor is responsible for all personnel present during construction activities.