UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OCT 21 2013

OFFICE OF
WATER AND
WATERSHEDS

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Carl Rutz
Alyeska Pipeline Service Co.
P.O. Box 196660
Anchorage, AK 99519

Re: National Pollutant Discharge Elimination System (NPDES) Permit Modification for Alyeska Pipeline Service Co. Valdez Marine Terminal, Ballast Water Treatment Facility (NPDES Permit No. AK-002324-8)

Dear Mr. Rutz:

The U.S. Environmental Protection Agency has issued a permit modification for the NPDES Permit for the Alyeska Pipeline Service Co. Valdez Marine Terminal (Permit), Permit Number AK-002324-8. This permit modification provides changes to the whole effluent toxicity monitoring requirements as a result of the negotiated settlement process, and the response to comments process.

This letter serves as service of notice under 40 CFR §124.15(a). The Permit will become effective on the date indicated in the Permit unless a timely appeal meeting the requirements of 40 CFR §124.19 is received by the Environmental Appeals Board. Information about the administrative appeal process may be obtained on-line at http://www.epa.gov/eab or by contacting the Clerk of the Environmental Appeals Board at (202) 233-0122.

Please feel free to contact Michael Lidgard at (206) 553-1755 (Lidgard.Michael@epa.gov) or Erin Seyfried at (206) 553-1448 (Seyfried.Erin@epa.gov) should you have any questions regarding this letter.

Sincerely

Daniel D. Opalski
Director
Office of Water and Watersheds

Enclosures

cc: Clerk of the Environmental Appeals Board
Mr. Mark Swanson, Executive Director, PWS RCAC
Mr. Wade Strickland, Program Manager, ADEC – Anchorage
Mr. Gerry Brown, Oil & Gas Manager, ADEC – Anchorage

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA)
REGION 10
1200 SIXTH AVENUE, SUITE 900
SEATTLE, WASHINGTON 98101

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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

ALYESKA PIPELINE SERVICE COMPANY
P.O. BOX 196660
900 EAST BENSON BOULEVARD
ANCHORAGE, ALASKA 99519

is authorized to discharge from the

VALDEZ MARINE TERMINAL
located near Jackson Point, Alaska

to

PORT VALDEZ (the "receiving waters"),
at Latitude 61° 05' 23"N and Longitude 146° 23' 12"W (Outfall 001),
and at Latitude 61° 05' 10"N and Longitude 146° 23' 33"W (Outfall 002)

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective: **JANUARY 1, 2013**[1]

This permit and the authorization to discharge shall expire at midnight, December 31, 2017

THE PERMITTEE SHALL REAPPLY FOR A PERMIT REISSUANCE ON OR BEFORE JULY 4, 2017 (180 days before the expiration of this permit) if the Permittee intends to continue operations and discharges at the facility beyond the term of this permit.

Signed this 30th day of October, 2012

// Signed //
Daniel D. Opalski, Director
Office of Water and Watersheds

This permit modification shall become effective: **December 1, 2013**

This permit and the authorization to discharge shall expire at midnight, December 31, 2017

Signed this 18th day of October, 2013

Daniel D. Opalski, Director
Office of Water and Watersheds

[1] This permit was issued to the Alyeska Pipeline Service Company – Valdez Marine Terminal on October 30, 2012, with a scheduled effective date of January 1, 2013. December 4, 2012, Alyeska filed a Petition for Review and supporting materials seeking review of the Permit by the Environmental Appeals Board ("EAB"). Alyeska sought review of the whole effluent toxicity monitoring requirements in Section I.H. of the Permit.

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF SUBMITTALS

The following is a summary of some of the items the permittee must complete and/or submit to EPA during the term of this permit:

ITEM	PERMIT SECTION	DUE DATE
DISCHARGE MONITORING REPORT (DMR)	III.C.	DMRs are due monthly and must be postmarked on or before the 15th day of the month following the monitoring month.
QUALITY ASSURANCE PLAN (QAP)	I.G.	The Permittee must provide EPA and ADEC with written notification that the Plan has been developed, or updated, and implemented within 60 days after the effective date of the final permit. The Plan must be kept on site and made available to EPA and ADEC upon request.
BEST MANAGEMENT PLAN (BMP)	II.B.	The Permittee must provide EPA and ADEC with written notification that the Plan has been developed, or updated, and implemented within 90 days after the effective date of the final permit. The Plan must be kept on site and made available to EPA and ADEC upon request.
ANNUAL POLLUTION PREVENTION REPORTS	II.C.2.	The Permittee must provide EPA and ADEC with written notification that the Plan has been reviewed and updated, and is being implemented within 90 days after the effective date of the final permit. The Plan must be kept on site and made available to EPA and ADEC upon request.
ANNUAL BMP REVIEW	II.D.3.	The Permittee must provide EPA and ADEC with an annual statement that the Plan has been reviewed and 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 EPA and ADEC on or before June 15th of each year of operation under this permit after the initial BMP submittal.
WHOLE EFFLUENT TOXICITY REPORTING	I.H.8.a.	The Permittee must submit to EPA and ADEC a full toxicity testing report within 45 days after the completion of the tests.

WHOLE EFFLUENT TOXICITY – TOXICITY TRIGGER EXCEEDANCES	I.H.5.b., I.H.7.a and I.H.8.b.	The Permittee shall report to EPA, in writing, within 5 days of receipt of test results indicating a toxicity trigger exceedance.
ENVIRONMENTAL MONITORING PROGRAM ANNUAL REPORT	III.A.6.	The Permittee shall submit an annual data report to EPA and ADEC by July 15th of the year following each sampling period (Part III.A.6.).
ENVIRONMENTAL MONITORING PROGRAM SUPPLEMENTAL OVERVIEW REVIEW	III.A.7.	The Permittee must provide EPA with a supplemental comprehensive analytical and interpretative overview report no later than September 15th of the year following the sampling conducted during the fourth year of the permit.
ENVIRONMENTAL MONITORING PROGRAM DIGITAL DATA SUBMISSION	III.A.8.	The Permittee must submit the environmental monitoring data to EPA and ADEC in electronic format using a commercially available software package by July 15th of the year following each sampling period.
TWENTY-FOUR HOUR NOTICE OF NONCOMPLIANCE REPORTING	III.H.1. and III.I.	The Permittee must report certain occurrences of noncompliance by telephone within 24 hours from the time the Permittee becomes aware of the circumstances.
CONSTRUCTION AND MAINTENANCE REPORTING	III.K. and II.D.8.e	The Permittee must notify EPA and ADEC in writing of all expected dates and times of abrasive blasting projects at least 15 days prior to project startup, or receive written approval for activities occurring within the 15 day-notification period.
COMPLIANCE SCHEDULE REPORTS	I.E.2.(d)	The Permittee must provide EPA reports of compliance or noncompliance with, or any progress reports on, interim and final requirements of Part I.E.2.(d). in writing no later than 14 days following each schedule date.
NPDES APPLICATION RENEWAL	V.B	The application must be submitted at least 180 days before the expiration date of the permit.
DUTY TO PROVIDE INFORMATION	V.C	As specified in the request for information.

I. SPECIFIC LIMITATIONS AND MONITORING REQUIREMENTS

A. DISCHARGE AUTHORIZATION

During the term of the permit, the Permittee is authorized to discharge wastewater from the Ballast Water Treatment Facility (BWTF; Outfall 001) and the Sewage Treatment Plant (STP; Outfall 002) to Port Valdez, subject to the conditions set forth herein. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

B. BWTF EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (OUTFALL 001)

1. The Permittee must limit and monitor discharges from Outfall 001 as specified in Table 1 and Table 2. The values represent maximum effluent limits unless otherwise indicated. The Permittee must comply with the effluent limits in Table 1 at all times, unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

TABLE 1: *Ballast Water Treatment Facility Effluent Limitations (Outfall 001)*

PARAMETER	AVERAGE MONTHLY LIMIT	MAXIMUM DAILY LIMIT	SAMPLING METHOD AND FREQUENCY	REPORTED VALUES
Flow	5.54 MGD	10.1 MGD	Calculation or Meter; Continuous	Average Monthly and Maximum Daily; *MGD*
pH[1]	6.0 s.u. – 8.5 s.u. at all times		Meter; Continuous	Minimum and Maximum Values, Exceedances; *s.u.*
Total Suspended Solids (TSS)[2]	25 *mg/L*	40 *mg/L*	24-hour Composite; 3/week	Average Monthly and Maximum Daily; *mg/L*
Total Suspended Solids (TSS)[3]	--	170 *mg/L*		
Total Aromatic Hydrocarbons (TAH)[4]	0.21 *mg/L*	0.73 *mg/L*	Grab; Weekly	Average Monthly and Maximum Daily; *mg/L*

NOTES: [1] Indicates the range of permitted values. Under 40 CFR §401.17, when pH is continuously monitored, excursions between 5.0 and 6.0, or 8.5 and 9.5 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 26 minutes per month. Any excursions below 5.0 and above 9.5 are violations. The instantaneous maximum and minimum pH shall be reported monthly.

[2] TSS measured on the day of and the day after BTT effluent packed-tower air stripper activation shall not be included in the calculation of the monthly average or maximum daily reported values.

[3] On day of and day after BTT effluent packed-tower air stripper activation.

[4]Total aromatic hydrocarbons (TAH) shall be determined by summing the concentrations of the isomers: benzene, toluene, ethylbenzene and xylene. Each aforementioned component shall be separately quantified by the methods identified in 40 CFR Part 136 or other applicable EPA-approved methods, and reported as TAH on the DMR.

TABLE 2: *Ballast Water Treatment Facility Monitoring Requirements (Outfall 001)*

PARAMETER	SAMPLING METHOD	FREQUENCY	REPORTED VALUES
Flow	Meter	Continuous	Average Monthly and Maximum Daily; *MGD*
pH	Meter	Continuous	Maximum, Minimum and all exceedances; *s.u.*
Total Suspended Solids (TSS)[1]	24-hour Composite	3/week (and on the day of and day after stripper activation)	Average Monthly and Maximum Daily; *mg/L*
TAH [2]	Grab	Weekly	Average Monthly and Maximum Daily; *mg/L*
Total Aqueous Hydrocarbons (TAqH)[3]	Grab	Monthly	Concentration; *mg/L*
Total Recoverable Oil and Grease	Grab	Monthly	Concentration; *mg/L*
Density	Meter	Monthly	Monthly Average and Maximum Daily; *sigma t*
Dissolved Inorganic Phosphorus	Grab	Quarterly	Concentration; *mg/L as P*
Ammonia	Grab	Quarterly	Concentration; *mg/L as N*
Total Recoverable Zinc	24-hour Composite	Twice per year	Concentration; *mg/L*
Chronic Whole Effluent Toxicity (WET)[4]	Grab	Monthly[5]	Report; TU_C

NOTES: [1]A minimum of three TSS samples shall be analyzed per week. If the BTT effluent packed-tower air strippers are activated then the effluent samples collected on the day of and the day after stripper activation shall also be analyzed for TSS. TSS samples associated with the BTT effluent packed-tower air stripper activation may satisfy the three times per week measurement frequency monitoring requirements. The Permittee shall submit with the DMR a monthly air stripper activity report, which identifies the dates and times of the BTT effluent packed-tower air stripper activation and deactivation.

[2] Total aromatic hydrocarbons (TAH) shall be determined by summing the concentrations of the isomers: benzene, toluene, ethylbenzene and xylene. Each aforementioned component shall be separately quantified by the methods identified in 40 CFR Part 136 or other applicable EPA-approved methods.

[3] Total aqueous hydrocarbons (TAqH) shall be determined using a combination of EPA Method 625 to measure polynuclear aromatic hydrocarbons (PAHs) listed in EPA Method 610 and any applicable EPA-approved test procedure identified in 40 CFR Part 136 to measure TAH.

[4] Monthly sublethal (chronic) WET testing using: 1) echinoderm gametes of either the purple sea urchin or the sand dollar; and 2) a topsmelt larval growth and survival test.

[5] Chronic WET testing frequency will be reduced from monthly (12 times per year) to quarterly (4 times per year) after the effluent exhibits 12 consecutive tests that do not exceed the toxicity trigger in Part I.H.5. The Permittee must notifiy EPA and ADEC upon receipt of the 12th consecutive chronic toxicity test below the chronic toxicity trigger (See Part I.H.3.a. and Part 1.H.8.a.).

2. The Permittee must report all violations of the maximum daily limits for any pollutant in Table 1 in accordance with the 24-hour reporting requirement in Part III.H.1. Violations of all other effluent limits are to be reported in the monthly Discharge Monitoring Reports (DMRs); See Parts III.B., III.G. and III.H.).

3. The Permittee must collect all effluent samples from the effluent stream after the last treatment prior to discharge into the receiving water.

4. 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 part of the normal operation of the facility as disclosed in the permit application.

C. STP EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (OUTFALL 002)

1. The Permittee must limit and monitor discharges from Outfall 002 as specified in Table 3. The values represent maximum effluent limits unless otherwise indicated. The Permittee must comply with the effluent limits in Table 3 at all times, unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

TABLE 3: *Sewage Treatment Plant Effluent Limitations and Monitoring Requirements (Outfall 002)*

Parameter	Maximum Daily Limit	Weekly Average Limit	Monthly Average Limit	Sampling Method and Frequency	Reported Values
Flow	10,000 *gpd*	--	Report	Calculation or Meter; Continuous	Maximum Daily and Average Monthly; *gpd*
pH	6.0 *s.u.* – 9.0 *s.u.* at all times			Grab or Meter; 2/Day or Continuous	Maximum and Minimum values; *s.u.*
Total Suspended Solids (TSS)	60 *mg/L*	45 *mg/L*	30 *mg/L*	Grab; Monthly	Maximum Daily, Weekly and Monthly Averages; *mg/L*
	5 *lb/day*[1]	3.8 *lb/day*[1]	2.5 *lb/day*[1]		
Biological Oxygen Demand (BOD_5)	60 *mg/L*	45 *mg/L*	30 *mg/L*		
	5 *lb/day*[1]	3.8 *lb/day*[1]	2.5 *lb/day*[1]		
Fecal Coliform Bacteria[5]	396 FC/100mL[4]	--	129 FC/100mL[2]	Grab; Quarterly	Maximum Daily, Weekly and Monthly Averages; *#FC/100 mL*
Total Residual Chlorine (TRC)[3]	0.14 *mg/L*	--	0.07 *mg/L*	Grab; Monthly	Maximum Daily and Average Monthly; *mg/L*
Enterococci[5]	2,540 cfu /100mL[4]	--	322 cfu/100mL[2]	Grab; Quarterly	Maximum Daily and Monthly Average; *#cfu /100mL*

NOTES:
[1] Loading (*lb/day*) = Concentration (*mg/L*) * Flow (MGD) * 8.34 (conversion factor)
[2] The Permittee must report the geometric mean fecal coliform/*Enterococci* concentration. If any value used to calculate the geometric mean is less than 1, the Permittee must round that value up to 1 for purposes of calculating the geometric mean
[3] Applicable when chlorine is used for disinfection.
[4] Instantaneous maximum limit
[5] The Permittee shall achieve compliance with these effluent limitations within 36 months after the effective date of this permit in accordance with the schedule of compliance in Part I.E.2.(d).

2. The Permittee must report all violations of the maximum daily limits for any pollutant in Table 3 in accordance with the 24-hour reporting requirement in Part III.H.1. Violations of all other effluent limits are to be reported in the monthly Discharge Monitoring Reports (DMRs); See Parts III.B., III.G. and III.H.).

3. The Permittee must collect all effluent samples from the effluent stream after the last treatment prior to discharge into the receiving water.

D. MIXING ZONES

1. BWTF – Outfall 001

(a) Chronic Mixing Zone. A 100-meter by 161-meter, rectangular chronic mixing zone for Outfall 001 has been granted by ADEC for TAH, TAqH, pH, ammonia-nitrogen, total zinc, and chronic WET. The chronic mixing zone is centered on a 61-meter diffuser barrel with 20 ports, such that the boundary of the chronic mixing zone is 50-meters from the outfall in all directions. It extends from the seafloor, excluding sediments, to the receiving water surface. This mixing zone provides a 56:1 dilution factor.

(b) Acute Mixing Zone. A 10-meter by 71-meter rectangular, acute mixing zone for Outfall 001 has been granted by ADEC for WET and total zinc. The acute mixing zone boundary is 5-meters from the outfall in all directions, centered above the diffuser barrel described above in Part I.D.a. It extends from the sea floor, excluding sediments, to the receiving water surface. This mixing zone provides a 23:1 dilution factor.

2. STP – Outfall 002

(a) A 0.32-meter mixing zone for Outfall 002 has been granted by ADEC for fecal coliform bacteria, pH, ammonia, *Enteroccoci* bacteria, and total residual chlorine. The mixing zone is defined as a cylinder with a radius of 0.32 meters centered on the outfall. It extends from the seafloor, excluding sediments, to the receiving water surface. This mixing zone provides a 9.2:1 dilution factor.

E. OTHER EFFLUENT CONDITIONS AND REQUIREMENTS

1. BWTF – Outfall 001

(a) *State Water Quality Standards.* The Permittee shall not discharge any parameter in concentrations that exceed applicable State water quality criteria, except for those parameters for which ADEC has authorized a mixing zone. A chronic mixing zone has been authorized by ADEC for the following parameters (Part I.D.1): TAH, TAqH, pH, ammonia-nitrogen, total zinc, and chronic WET. Mixing zones in State waters and State water quality standards are defined at 18 AAC 70.240.

(b) *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 waste or adjoining shorelines.

(c) There shall be no discharge of floating solids, garbage, grease, or foam.

(d) *Clean Ballast.* Introduction of water, including "clean ballast", to the treatment system for the purpose of achieving the effluent limitations at Part I.B.1. of this permit is prohibited. "Clean ballast" is segregated ballast waters which meet the effluent limitations without treatment.

(e) *Incoming Ballast Water Review.* In order to determine whether incoming ballast water for each tanker is contaminated with pollutants not authorized for discharge, the Permittee shall (1) examine the tanker's oil record book and (2) obtain a completed copy of Alyeska's Valdez Marine Terminal (VMT) Ballast Water Survey Form (see BMP Plan Appendices), containing specific information on the amount and constituents of the ballast and bilge water to be off loaded.

(i) If the VMT Ballast Water Survey Form indicates that the ballast water contains substances that are not permitted for discharge at the BWTF (e.g. contains a cleaning agent that does not meet specified criteria) then the ballast water shall not be off loaded, unless specific approval is obtained from EPA.

(ii) The Permittee shall keep a record of the above determinations for each tanker (copies of pertinent pages from the tanker's oil record book and completed VMT Ballast Water Survey Form) at the facility and make the records available to EPA and/or ADEC upon request.

(f) *Permittee Notice to Tankers.* The Permittee shall notify active tanker vessels in the Trans-Alaska Pipeline System trade, within 30 days, of BMP Plan changes that will affect those vessels.

2. STP – Outfall 002

(a) *State Water Quality Standards.* The Permittee shall not discharge any parameter in concentrations that exceed applicable State water quality criteria, except those parameters for which ADEC has authorized a mixing zone. ADEC has authorized a mixing zone for the following parameters (Part I.D.2): pH, ammonia, fecal coliform bacteria, *Enterococci*, and total residual chlorine. Mixing zones in State waters and State water quality standards are defined at 18 AAC 70.240.

(b) *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 waster or adjoining shorelines.

(c) There shall be no discharge of floating solids, garbage, grease, or foam.

(d) *Compliance Schedule*

The Permittee must achieve compliance with the fecal coliform bacteria and *Enterococci* effluent limitations in Table 3 of the permit. The Permittee shall install and operate a disinfection treatment process for sanitary wastewater discharges through Outfall 002.

Until compliance with the effluent limits is achieved, the Permittee is required to implement the following steps and procedures:

(i) Within 18 months of the effective date of this permit, the Permittee shall conduct and complete a study and decide on the course of action that the Permittee will take to meet the fecal coliform bacteria and *Enterococci* effluent limitations for Outfall 002. EPA and ADEC must be notified in writing within the 18- month time frame of the results of the study and final decision.

(ii) Within 24 months of the effective date of this permit, the Permittee shall design and obtain plan approval from ADEC for any additions or modifications to the facility needed to install and operate the chosen disinfection treatment process.

(iii) Within 36 months of the effective date of the permit, the Permittee shall construct and have operational any additions and/or modifications to the facility needed to install and operate the chosen disinfection treatment process.

(iv) Within 36 months of the effective date of the permit (January 1, 2016), the Permittee shall achieve compliance with the fecal coliform bacteria and *Enterococci* effluent limitations in Part I.C.1., Table 3.

(v) Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in the compliance schedule of this permit (Parts

I.E.2.(d)(i)-(iv)) shall be submitted in writing to EPA and ADEC no later than 14 days following each schedule date (40 CFR 122.41(l)(5)).

Until completion of the project is achieved, the Permittee shall submit a semi-annual Report of Progress to EPA and ADEC, which outlines the progress made toward reaching compliance with the fecal coliform bacteria and *Enterococci* effluent limits. The first semi-annual Report of Progress is due within six months of the effective date of the permit and six months thereafter, until compliance with the permit's fecal coliform bacteria and *Enterococci* effluent limits is achieved. At a minimum, the semi-annual report must include:

(i) An assessment of the previous year's fecal coliform bacteria, *Enterococci* and chlorine data (if applicable) and a comparison to the effluent limitations in Table 3.

(ii) A report on progress made towards meeting the fecal coliform bacteria and *Enterococci* effluent limitations.

(iii) Further actions and milestones targeted for the upcoming six months.

F. Monitoring Procedures

Monitoring shall be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been approved by EPA.

1. Sample and measurements shall be representative of the volume and nature of the monitoring discharge.

2. The Permittee shall ensure that all effluent monitoring is conducted in compliance with good quality assurance and control procedures and the requirements of the permit.

G. Quality Assurance Requirements

The Permittee must develop, or update, a quality assurance plan (QAP) for all monitoring required by this permit. Within 60 days of the effective date of this permit, the QAP must be implemented, and EPA and ADEC must be notified in writing that the QAP has been developed and implemented. Any existing QAPs may be modified to fulfill the requirements under this section.

1. The QAP must be designed to assist in planning for the collection and analysis of effluent and receiving water samples in support of the permit and in explaining data anomalies when they occur.

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

3. Throughout all sample collection and analysis activities, the Permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in: *EPA Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). The QAP must be prepared in the form specified in these documents.

   At a minimum the QAP 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).

   (f) Analytical methods (including quality control checks, quantification/detection levels, precision and accuracy requirements.

   (g) Qualification and training of personnel.

4. The Permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP or a change in the guidance cited above.

5. Copies of the QAP must be kept on site and made available to EPA and/or ADEC upon request.

H. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

The Permittee must conduct monthly (i.e., twelve (12) times per year) short-term chronic toxicity tests on effluent samples from Outfall 001. The chronic toxicity testing frequency will be reduced from monthly to quarterly (i.e. four (4) times per year, once every three months) after the effluent exhibits 12 consecutive tests

that do not exceed the toxicity trigger (See Part I.H.5). The Permittee must submit a letter to the permitting authority certifying that there have been 12 consecutive chronic toxicity test results below the toxicity trigger. This letter must be sent within 45 days of receipt of the 12th consecutive chronic toxicity test, along with the information required under Part I.H.8.a. Testing must be conducted in accordance with Part I.H.1 through Part I.H.7.

The calculation of 12 consecutive months shall exclude any months where a valid WET test could not be completed because of weather related transportation interruptions outside of the Permittee's control. In the event a transportation interruption prevents the collection of a monthly WET test, the Permittee must: 1) provide EPA with documentation demonstrating the cause of the shipping/transportation problem, such as chain-of-custody slips and shipping receipts, and; 2) resample and retest as soon as possible, but no more than 21-days after the missed monthly test was terminated. In the event 12 consecutive months of WET monitoring data are not collected, the Permittee is still required to submit 12 months of WET monitoring data before the monitoring frequency will be reduced to quarterly, provided there is no exceedance of the 56 TU_C trigger.

1. Toxicity testing must be conducted on grab samples of effluent. In addition, a split of each sample collected must be analyzed for the chemical and physical parameters required in Part I.B., above, with a required sampling frequency of monthly or more frequently. When the timing of sample collection for toxicity testing coincides with the sampling required in Part I.B., analysis of the split sample will fulfill the requirements of Part I.B. as well.

2. WET samples holding times are established at 36 hours and samples must not exceed a holding time of 72 hours. The permittee must document the conditions that resulted in the need for the holding time to exceed 36 hours and the potential effect on the test results in the DMR for the month following sample collection (See *"Reporting of Monitoring Results"* in Section III.C.).

3. Chronic Test Species and Methods

(a) For Outfall 001, short-term chronic toxicity tests must be conducted monthly. The chronic toxicity testing frequency will be reduced from monthly to quarterly (four (4) times per year, once every three months) after the effluent exhibits 12 consecutive tests that do not exceed the chronic toxicity trigger (See Part I.H.5). The Permittee must submit a letter to the permitting authority certifying that there have been 12 consecutive chronic toxicity test results below the chronic toxicity trigger. This letter must be sent within 45 days of receipt of the 12th consecutive chronic toxicity test, along with the information required under Part I.H.8.a.

(b) The Permittee must conduct the following two chronic toxicity tests on each sample, using the species and protocols in Table 4.

TABLE 4: *Toxicity Test Species and Protocols*

MARINE CHRONIC TOXICITY TESTS	SPECIES	METHOD
Sand dollar fertilization test **or** Purple sea urchin fertilization test[1,2]	*Dendraster excentricus or Strongylocentrotus purpuratus*	EPA/600/R-95/136
Topsmelt larval growth and survival test[1]	*Atherinops affinis*	EPA/600/R-95/136

NOTES: [1]Each of the above referenced chronic toxicity tests should be performed monthly (twelve (*12*) tests per year per species).
[2]Either the echinoderm gametes of the purple sea urchin or the sand dollar may be used to meet the requirements of invertebrate test requirements.

(c) The presence of chronic toxicity must be determined as specified in the methods manuals corresponding to the individual testing protocols and identified in Section I.H.3.b., above.

(d) Results must be reported in TU_C (chronic toxic units), which is defined as follows:

(i) For all chronic survival endpoints, $TU_C = 100/NOEC$.

(ii) For all other chronic test endpoints, $TU_C = 100/IC_{25}$

(iii) IC_{25} means "25% inhibition concentration." The IC_{25} is a point estimate of the toxicant concentration, expressed in percent effluent, that causes a 25% reduction in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).

(iv) NOEC means "no observed effect concentration." The NOEC is the highest concentration of toxicant, expressed in percent effluent, to which organisms are exposed in a chronic toxicity test [full life-cycle or partial life-cycle (short term) test], that causes no observable adverse effects on the test organisms (i.e., the highest concentration of effluent in which the values for the observed responses are not statistically significantly different from the controls).

(e) For the vertebrate toxicity tests, daily observation of mortality will also be taken to establish the 24-h, 48-h, and 96-h LC_{50}'s. LC_{50} is defined in Part VI.

4. Quality Assurance

The toxicity testing on each organism must include a series of eight test dilutions and a control. The test concentrations for the chronic tests shall be 100, 75, 50, 10, 7.5, 3.6, 1.8, and 0.9% effluent. If the addition of brine solution or dry salts is necessary to adjust the salinity of the effluent, it may not be possible to achieve 100% effluent as one of the test concentrations. If this occurs, the maximum effluent concentration achievable after salinity adjustment will be used as a substitute for, and treated as, the 100% effluent concentration. Salinity adjustments will be documented in the next WET report. The other test concentrations shall remain the same.

(a) All quality assurance, test acceptability criteria, and statistical analyses used for chronic and reference toxicant tests must be in accordance with the methods manuals and individual testing protocols. Toxicity tests that do not meet the quality assurance or test acceptability criteria shall be repeated using fresh effluent samples.

(b) In addition to those quality assurance measures specified in the methodology, the following quality assurance procedures must be followed:

(i) If organisms are not cultured in-house, concurrent testing with reference toxicants must be conducted. If organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests must be conducted using the same test conditions as the effluent toxicity tests.

(ii) If either the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the Permittee must repeat the test using fresh effluent samples.

Control and dilution water must be receiving water or lab water, as appropriate, as described in the methods manuals. If the dilution water used is different from the culture water, a second control, using culture water must also be used. Receiving water may be used as control and dilution water upon notification of the permitting authority. In no case shall water that has not met test acceptability criteria be used for either dilution or control.

5. Toxicity Triggers

(a) *Chronic Toxicity Trigger.* If the results of the chronic toxicity test exceed 56 TU_C, the Permittee must conduct accelerated toxicity testing pursuant to Part 6, below.

(b) Exceedance of a toxicity trigger must be reported to EPA and ADEC in writing within 5 calendar days of receipt of the test results indicating the exceedance.

6. Accelerated Testing

(a) If the source of toxicity causing the exceedance is known (e.g., temporary plant upset), the Permittee shall conduct one additional toxicity test using the same species and test method. This test shall begin within 14 days of the receipt of test results indicating an exceedance. If the additional toxicity test does not exceed 56 TU_C for a chronic test, then the Permittee may return to their regular testing frequency.

(b) If the source of toxicity is not known, the Permittee shall conduct six additional toxicity tests using the same species and test method that resulted in the trigger exceedance, approximately every two weeks, over a 12 week period. This testing shall begin within 14 days of the receipt of test results indicating an exceedance. If none of the additional toxicity tests exceed 56 TU_C for a chronic test, then the Permittee may return to their regular testing frequency.

(c) If one of the additional toxicity tests (in Parts I.H.6.a and I.H.6.b, above) exceeds 56 TU_C for a chronic test, then, within 14 days of receipt of this test result, the Permittee shall initiate a TRE/TIE in accordance with Part I.H.7, below.

7. Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

(a) The Alaska Department of Environmental Conservation has authorized a chronic mixing zone for WET. The chronic mixing zone provides a dilution of 56:1. The authorized chronic WET dilution value results in an end-of-pipe toxicity allocation of 56 TU_C, respectively. Any toxicity result above this value indicates an exceedance of the allocation provided for WET, and the Permittee shall notify the permitting authority, in writing, within 5 calendar days of receipt of the test results indicating the exceedance.

(b) If any accelerated test required under Part I.H.6.a or I.H.6.b exceeds 56 TU_C for a chronic test (I.H.7.a.), the Permittee must begin implementation of the toxicity reduction evaluation (TRE) requirements below. Implementation of the TRE requirements shall begin within 14 calendar days of receipt of the accelerated toxicity testing results demonstrating the exceedance.

(c) In accordance with EPA manual EPA/600/2-88/070 (Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations), the Permittee must develop as expeditiously as possible a detailed TRE workplan, which includes:

(i) Actions to investigate and identify the cause of toxicity;

(ii) Actions the Permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and

(iii) A schedule for these actions.

(d) The Permittee shall initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, EPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

(e) If a TIE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

8. Reporting

(a) The Permittee shall submit a full laboratory report with the results of the toxicity tests within 45 days after completion of the tests. The laboratory report must include the following:

(i) The toxicity test results;

(ii) The dates of sample collection and initiation of each toxicity test;

(iii) The flow rate at the time of sample collection;

(iv) The results of the effluent analysis for chemical parameters required for Outfall 001 as defined in Part I.B of this permit;

(v) All raw data and statistical analyses from the tests, including reference toxicant tests; and

(vi) Progress reports on any TIE/TRE investigations.

(b) Exceedance of a toxicity trigger must be reported to EPA in writing within 5 calendar days of receipt of the test results indicating the exceedance.

II. BEST MANAGEMENT PRACTICES (BMP) PLAN

A. PURPOSE

Through implementation of the BMP Plan, the Permittee must prevent or minimize the generation and the potential for release of pollutants from the facility to the waters of the United States through normal and ancillary activities of the facility. Discharges that cannot be prevented or reduced shall be recycled or treated and discharged in an environmentally safe manner.

B. DEVELOPMENT AND IMPLEMENTATION SCHEDULE

The Permittee must develop and implement a BMP Plan that achieves the objectives and the specific requirements listed below. Any existing BMP Plans may be modified to comply with this section and the general guidance contained in *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004, October 1993) and *Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R.92.006) or any subsequent revision to these guidance documents.

The Permittee shall develop its BMP Plan consistent with these objectives:

(a) The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility shall be minimized by the Permittee to the extent feasible by managing each influent waste stream in the most appropriate manner.

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

(c) The Permittee shall establish specific objectives for the control of pollutants by addressing the pollution prevention requirements in Part II.C, below.

Within 90 days of the effective date of this permit, the Permittee must submit a letter to EPA and ADEC certifying that the BMP Plan has been developed or updated and is being implemented.

C. POLLUTION PREVENTION REQUIREMENTS

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

1. Pollution Prevention Framework. The Permittee shall continue to maintain a Pollution Prevention Framework Program consistent with the Framework document submitted by letter to EPA and ADEC on June 12, 2000, Letter No. 00-15799. The Framework document shall be reviewed

by the Permittee annually to ensure that its objectives, goals and priorities are current and effective. Any amendments to the Framework document must be submitted to EPA and ADEC.

2. Annual Pollution Prevention Notification. The Permittee shall submit a letter to EPA and ADEC certifying that the Pollution Prevention Framework has been reviewed and updated, if necessary, and is being implemented. The letter shall be submitted with the BMP annual statement, Part II.D.3., on or before June 15th of each year.

D. BMP REQUIREMENTS

The BMP Plan shall be consistent with the objectives in Part II.B, above, and the general guidance developed by EPA. The BMP plan 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 the 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 the 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 EPA and ADEC on or before June 15th of each year of operation under this permit after the initial BMP submittal.

4. Establish specific best management practices for each component or system capable of generating or causing a release of significant amounts of pollutants, and identify specific preventative or remedial measures to be implemented.

5. Continue to ensure proper management of solid and hazardous waste in accordance with regulations promulgated under the Resource Conservation and Recovery Act (RCRA) and the Alaska Solid Waste Management (ASWM) Regulations (18 AAC 60). Management practices required under RCRA and ASWM regulations shall be referenced in the BMP Plan.

6. Continue to reflect requirements for Spill Prevention, Control, and Countermeasure plans under Section 311 of the Act and 40 CFR Part 112

and may incorporate any part of such plans into the BMP Plan by reference.

7. Continue to reflect appropriate storm water controls to eliminate, to the extent practicable, the contamination of storm water runoff at the Valdez Marine Terminal through the development and implementation of storm water pollution prevention practices. Monitoring of storm water discharges shall meet the minimum monitoring requirements of 40 CFR 122.44(i)(4)(i, ii, and iii). If the evaluation required by 40 CFR 122.44(i)(4)(i) identifies that additional measures are necessary to reduce pollutant loading, then the storm water pollution prevention practices shall be amended within six months to appropriately reduce pollutant loading. The term "storm water" as used in this paragraph is given the meaning of "storm water" associated with industrial activity as defined in 40 CFR 122.26(b)(14).

8. Continue to address the following specific BMP requirements:

   (a) *BTT Monitoring.* Dissolved oxygen shall be continuously monitored in the biological treatment tanks (BTTs) and temperature shall be continuously monitored at the effluent sampling location. Analytical results shall be made available to the EPA and/or ADEC upon request.

   (b) *Scraper Pigs.* The readily removable crude oil residues from scraper pigs shall be drained off and returned to the crude tanks. After such readily removable residues are removed, cleaning and wash down water used to clean off the crude, which requires scrubbing, may be treated through the BWTF.

   (c) *Sludge Handling.* Sludge removed from the treatment system 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 summarize sludge handling activities each month on the Discharge Monitoring Report (DMR) form (EPA No. 3320-1) or equivalent, and submit the form the following month. The Permittee will provide EPA and/or ADEC, upon request, with any additional information on the Permittee's processing of sludge and disposal of solids.

   (d) *Incoming Ballast Water Review Procedures.* The Permittee shall develop and update provisions in the BMP Plan addressing (1) incoming ballast water review procedures; (2) identification of pollutants and substances not allowed for discharge; (3) development and identification of procedures and specified criteria for evaluating substances that are not permitted for discharge and

obtaining specific EPA approval; and (4) record-keeping procedures.

(e) *Construction/Maintenance Activities.* The Permittee shall develop and update provisions in the BMP Plan to maximize the collection and minimize the discharge of wastes generated during construction and/or maintenance activities from the berths, Valdez Marine Terminal docks, main firewater pump house, boat launches, and navigational/mooring buoys. Activities covered shall include, but are not limited to, surface preparation, hydro blasting, cleaning, demolition, metal cutting, and welding. The Permittee shall develop best management practices within the BMP Plan to minimize to the extent technically and economically feasible the discharge of construction and maintenance wastes. The Permittee shall notify EPA and ADEC, in writing, of the expected dates of the activity at least 15 days prior to project startup. If activities need to occur within the 15-day notification period, the Permittee must receive prior written approval from the permitting authority.

(f) *Valdez Marine Terminal Fire Water System Discharges.* The Permittee shall develop and update BMPs to limit, manage, and control the discharges from the jockey pump, firewater pump testing and maintenance, berth fire foam system testing, and hydrant testing and maintenance. The BMPs shall to the extent possible, (1) direct discharges to the oily water sewer system, (2) minimize fire water discharges during snowless conditions, (3) minimize discharges into No Name and Dayville Creeks, (4) discharge when the ground surface is covered with snow and/or ice, and (5) minimize floating residue from the berth fire foam testing system.

(g) *Coagulants and Other Treatment Chemicals.* The Permittee shall insure that the BMP Plan addresses coagulants and other treatment chemical in the "Description of Influents."

(h) *Air Stripper Media Maintenance Practices.* The Permittee shall develop and update provisions in the BMP Plan to prevent the discharge of air stripper media.

E. DOCUMENTATION

1. The Permittee shall develop a BMP Plan in accordance with good engineering practices. The Permittee shall provide the necessary plot plans, drawings, or maps in its BMP Plan. The BMP Plan will be organized and written with the following structure:

(a) name and location of the facility;

(b) statement of BMP policy;

(c) identification and assessment of potential effects of the pollutant discharges;

(d) specific management practices and standard operating procedures to achieve the above objectives, including, but not limited to:

(i) The modification of equipment, facilities, technology, processes, and procedures, and

(ii) The improvement in management, inventory control, materials handling, or general operational phases of the facility;

(e) good housekeeping;

(f) preventative maintenance;

(g) inspections and records; and

(h) employee training.

2. The BMP Plan will include the following provisions concerning its review:

(a) provide for a review by the facility manager and appropriate staff; and

(b) include a statement that the above review has been completed and that the BMP Plan fulfills the requirements set forth in the permit – the facility manager must certify and date the statement.

3. The Permittee shall maintain a copy of its BMP Plan at the facility and shall make the plan available to EPA and ADEC for review and approval upon request.

F. MODIFICATION OF THE BMP PLAN

1. The Permittee shall amend the BMP Plan whenever there is a change in the facility, its operations, or when any other circumstances materially increase the generation of pollutants and their release or potential release to the receiving waters. The Permittee shall modify the BMP Plan, as appropriate, when facility operations covered by the Plan change. Any such changes to the BMP Plan must be consistent with the objectives and specific requirements listed in Part II. The facility manager or their

designee must review and approve each change to the BMP Plan in accordance with Part II.C.2.

2. If a BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release or potential release to the receiving waters and/or the specific requirements above, then the permit or the BMP Plan will be subject to modification to incorporate revised BMP requirements.

III. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. ENVIRONMENTAL MONITORING PROGRAM

1. *Purpose.* The purpose of the environmental monitoring requirements is to continue to monitor the level of impacts on the Port Valdez ecosystem from the BWTF discharge.

2. *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 BWTF discharge,

   (b) Ensure compliance with Alaska Water Quality Standards,

   (c) Determine statistically significant and ecologically significant changes in the sediment hydrocarbon concentrations over time and distance due to the BWTF discharge,

   (d) Determine whether changes to the monitoring program are warranted, and

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

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