

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

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

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

Coeur-Alaska, Inc.

is authorized to discharge from the **Kensington Project** located 40 miles north of Juneau, Alaska, at the following locations:

<u>Outfall</u>	<u>Receiving Water</u>	<u>Latitude</u>	<u>Longitude</u>
001	Sherman Creek	58° 52' 04"N	135° 06' 55"W
002	East Fork Slate Creek	58° 49' 58"N	134° 57' 58"W
003	Lynn Canal	58° 51' 58"N	135° 08' 28"W

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

This permit shall become effective **September 1 , 2005**

This permit and the authorization to discharge shall expire at midnight, **August 31, 2010**

The permittee shall reapply for a permit reissuance on or before **March 1, 2010**, 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 **28th** day of July 2005.

/s/Michael Gearheard
Michael Gearheard
Director, Office of Water & Watersheds
Region 10
U.S. Environmental Protection Agency

TABLE OF CONTENTS

Cover Page	1
I. LIMITATIONS AND MONITORING REQUIREMENTS	3
A. Effluent Limitations and Monitoring - Outfall 001	3
B. Effluent Limitations and Monitoring - Outfall 002	7
C. Effluent Limitations and Monitoring Requirements - Outfall 003	10
D. Whole Effluent Toxicity Testing (WET) Requirements	11
E. Receiving Water Monitoring	15
F. Quality Assurance Plan (QAP)	20
II. BEST MANAGEMENT PRACTICES PLAN	21
A. Purpose	21
B. Development and Implementation Schedule	21
C. Objectives	21
D. Elements of the BMP Plan	22
E. Documentation	23
F. BMP Plan Modification	23
III. MONITORING, RECORDING AND REPORTING REQUIREMENTS	24
A. Representative Sampling (Routine and Non-Routine Discharges)	24
B. Reporting of Monitoring Results	24
C. Monitoring Procedures	25
D. Additional Monitoring by Permittee	25
E. Records Contents	25
F. Retention of Records	25
G. Twenty-four Hour Notice of Noncompliance Reporting	25
H. Other Noncompliance Reporting	26
I. Changes in Discharge of Toxic Substances	26
J. Compliance Schedules	27
IV. COMPLIANCE RESPONSIBILITIES	27
A. Duty to Comply	27
B. Penalties for Violations of Permit Conditions	27
C. Need to Halt or Reduce Activity not a Defense	29
D. Duty to Mitigate	29
E. Proper Operation and Maintenance	29
F. Bypass of Treatment Facilities	29
G. Upset Conditions	30
H. Toxic Pollutants	30
I. Planned Changes	30
J. Anticipated Noncompliance	31
V. GENERAL PROVISIONS	31
A. Permit Actions	31
B. Duty to Reapply	31
C. Duty to Provide Information	31
D. Other Information	31
E. Signatory Requirements	31
F. Availability of Reports	32
G. Inspection and Entry	33
H. Property Rights	33
I. Transfers	33
J. State Laws	33
VI. DEFINITIONS	33
Appendix A: Maps showing sampling locations	36

I. LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the Permittee is authorized to discharge pollutants from the outfalls specified herein to Sherman Creek, East Fork Slate Creek, and Lynn Canal within the limits and subject to the conditions set forth herein. This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

A. Effluent Limitations and Monitoring - Outfall 001

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

1. Table 1

Table 1 - Outfall 001 Effluent Limitations and Monitoring Requirements							
Parameter ¹	Hardness as mg/L CaCO ₃	Units	Effluent Limitations		Monitoring Requirements		
			Maximum Daily	Average Monthly	Sample Frequency ²	Sample Location	Sample Type
Aluminum ³	—	ug/L	143	71	weekly	Influent (I) /Effluent (E)	24 hr. comp.
Ammonia, Total	—	mg/L as N	4.0	2.0	weekly	E	24 hr. comp.
Arsenic	—	ug/L	—	—	monthly	I/E	24 hr. comp.
Cadmium ³	50≤H<100	ug/L	0.3	0.1	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	0.4	0.2	weekly	I/E	24 hr. comp.
	H≥200	ug/L	0.7	0.4	weekly	I/E	24 hr. comp.
Copper ³	50≤H<100	ug/L	7.3	3.6	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	14.0	7.0	weekly	I/E	24 hr. comp.
	H≥200	ug/L	26.9	13.4	weekly	I/E	24 hr. comp.

Table 1 - Outfall 001 Effluent Limitations and Monitoring Requirements							
Parameter ¹	Hardness as mg/L CaCO ₃	Units	Effluent Limitations		Monitoring Requirements		
			Maximum Daily	Average Monthly	Sample Frequency ²	Sample Location	Sample Type
Chromium, Total ⁴	—	ug/L	—	—	weekly	I/E	24 hr. comp.
Chromium VI ⁴	—	ug/L	16	8	---	I/E	24 hr. comp.
Iron	—	ug/L	1700	800	weekly	I/E	24 hr. comp.
Lead ³	50≤H<100	ug/L	2.2	1.1	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	5.2	2.6	weekly	I/E	24 hr. comp.
	H≥200	ug/L	12.6	6.3	weekly	I/E	24 hr. comp.
Manganese	—	ug/L	—	—	weekly	I/E	24 hr. comp.
Mercury ^{3,5}	—	ug/L	0.02	0.01	weekly	I/E	24 hr. comp.
Nickel ³	50≤H<100	ug/L	47.7	23.8	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	85.7	42.7	weekly	I/E	24 hr. comp.
	H≥200	ug/L	154.0	76.8	weekly	I/E	24 hr. comp.
Nitrate	—	mg/L as N	20	10	weekly	E	24 hr. comp.
Selenium ³	—	ug/L	8.2	4.1	weekly	I/E	24 hr. comp.
Silver ³	50≤H<100	ug/L	1.2	0.6	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	4.1	2.0	weekly	I/E	24 hr. comp.
	H≥200	ug/L	13.4	6.6	weekly	I/E	24 hr. comp.
Zinc ³	50≤H<100	ug/L	66.6	33.2	weekly	I/E	24 hr. comp.
	100≤H<200	ug/L	119.8	59.7	weekly	I/E	24 hr. comp.
	H≥200	ug/L	215.6	107.5	weekly	I/E	24 hr. comp.
TDS	—	mg/L	1000	1000	weekly	E	24 hr. comp.
TDS anions/cations ⁶	—	mg/L	—	—	quarterly	E	24 hr. comp.

Table 1 - Outfall 001 Effluent Limitations and Monitoring Requirements							
Parameter ¹	Hardness as mg/L CaCO ₃	Units	Effluent Limitations		Monitoring Requirements		
			Maximum Daily	Average Monthly	Sample Frequency ²	Sample Location	Sample Type
Sulfate	—	mg/L	200	200	weekly	E	24 hr. comp.
Turbidity, effluent	—	NTU	see Permit Part 1.A.5.		weekly	E	grab
Turbidity, natural condition	—	NTU	—	—	weekly	background	grab
Hardness	—	mg/L CaCO ₃	—	—	weekly	downstream	grab
pH	—	s.u.	see Permit Part 1.A.4.		Continuous	E	Recorder
TSS	—	mg/L	30	20	daily	I/E	24 hr. comp.
Flow	—	gpm	—	—	Continuous	I/E	Recorder
Temperature	—	°C	—	—	Weekly	E	Grab
Dissolved Oxygen	—	mg/L	—	—	Weekly	E	Grab
Chronic Whole Effluent Toxicity ⁷ (WET)	—	TU _c	1.6	1.1	Monthly	E	24 hr. comp.

1 - Parameters must be analyzed and reported as total recoverable unless otherwise noted.
2 - Weekly sampling shall occur on the same day of each week, unless the Permittee can document that sampling could not be performed due to extreme conditions. In such cases, a detailed explanation of the reason sampling could not be performed shall be prepared and kept with the analytical results for that day.
3 - Reporting of a maximum daily limit violation is required according to Permit Part III.G.
4 - Chromium VI (Cr VI) must be analyzed during the next sampling event when results are received showing a total chromium measure exceeding 11 ug/L - the sample holding time for chromium VI is 24 hours. Cr VI must be analyzed and reported as dissolved.
5 - Mercury must be analyzed and reported as total.
6 - This monitoring shall include a standard and complete suite of those cations and anions contributing to TDS including but not limited to boron (B), sodium (Na), potassium (K), calcium (Ca), magnesium (Mg), fluoride (F), chloride (Cl), sulfate (SO₄), total alkalinity, hardness, pH, and electrical conductivity.
7 - See Permit Part I.D. for whole effluent toxicity testing requirements.

- Until underground activities commence, the following monitoring frequencies shall apply. These frequencies shall also apply during a long term shut down of the mine. These frequencies shall be implemented after a 6 month closure period.

TABLE 2 Monitoring Requirements for Outfall 001 (During Non-Mining Periods)			
Effluent Parameter ¹	Units	Monitoring Requirement	
		Sampling Frequency	Sample Type
Aluminum	ug/L	Quarterly	Grab
Ammonia, Total	mg/L	Quarterly	Grab
Arsenic	ug/L	Quarterly	Grab
Cadmium	ug/L	Quarterly	Grab
Copper	ug/L	Quarterly	Grab
Total Chromium	ug/L	Quarterly	Grab
Iron	ug/L	Quarterly	Grab
Lead	ug/L	Quarterly	Grab
Mercury ²	ug/L	Quarterly	Grab
Nickel	ug/L	Quarterly	Grab
Nitrate	mg/L	Quarterly	Grab
Selenium	ug/L	Quarterly	Grab
Silver	ug/L	Quarterly	Grab
Zinc	ug/L	Quarterly	Grab
Total Dissolved Solids	mg/L	Quarterly	Grab
TDS anions/cations	mg/L	Annually	Grab
Sulfate	mg/L	Quarterly	Grab
Hardness ³	mg/L	Monthly - Instream	Grab
pH ⁴	s.u. ⁴	Quarterly	Grab
Total Suspended Solids	mg/L	Daily	Grab
Flow	MGD	Continuous	Recorder
Temperature	°C	Quarterly	Grab
WET, Chronic	TU _c ⁵	Annually	Grab
¹ The Permittee shall conduct analysis for total recoverable and dissolved. ² Mercury shall be analyzed as total. ³ The Permittee shall sample the receiving water hardness downstream of the discharge. ⁴ The Permittee shall monitor and report the number of pH excursions outside the range of 6.5 to 8.5 Standard Units. ⁵ Chronic toxic units (See Definitions).			

- The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.
- The pH must not be less than 6.5 standard units (s.u.) nor greater than 8.5 standard units (s.u.). During continuous monitoring required in Table 1, the

Permittee shall monitor the total time outside the range for the month, the length of each excursion and the number of pH excursions outside the range of 6.5 to 8.5 Standard Units (s.u.). The Permittee shall report the total time outside the range for the month as well as the number of individual excursions which exceed 60 minutes.

5. The turbidity measured in nephelometric turbidity units (NTU) must not be more than 5 NTUs above the natural condition. The natural condition sample taken from Sherman Creek must be taken upstream of the discharge point within an hour of the effluent sample.
6. The permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
7. Minimum Levels. For all effluent monitoring, the permittee must use analytical methods that can achieve a minimum level (ML) less than the effluent limitation, if possible. For parameters that do not have effluent limitations, the permittee must use methods that can achieve MLs less than or equal to those specified in Table 6 (Permit Part I.E.1.).
8. Chromium VI has an average monthly effluent limit that is not quantifiable using EPA approved or approvable analytical methods. EPA will use 10 ug/L (the ML for EPA Method 218.4) as the compliance evaluation level for this parameter.
9. For purposes of reporting on the DMR, for a single sample, if a value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if a value is less than the ML, the permittee must report "less than {numeric value of the ML}." For purposes of calculating monthly averages, zero may be assigned for values less than the MDL, the {numeric value of the MDL} may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a value is greater than the ML, the permittee must report and use the actual value.

B. Effluent Limitations and Monitoring - Outfall 002

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

1. Table 3

Table 3 - Outfall 002 Effluent Limitations and Monitoring Requirements					
Parameter ¹	Units	Effluent Limitations		Monitoring Requirements	
		Maximum Daily	Average Monthly	Sample Frequency ²	Sample Type
Aluminum	ug/L	143	71	weekly	24 hr. comp.
Ammonia, Total	mg/L as N	3.5	1.7	weekly	Grab
Arsenic	ug/L	—	—	monthly	24 hr. comp.
Cadmium ³	ug/L	0.2	0.1	weekly	24 hr. comp.
Copper ³	ug/L	3.8	1.9	weekly	24 hr. comp.
Chromium, Total ⁴	ug/L	—	—	weekly	24 hr. comp.
Chromium VI ^{3,4}	ug/L	16	8	---	24 hr. comp.
Iron	ug/L	1700	800	weekly	24 hr. comp.
Lead ³	ug/L	0.9	0.5	weekly	24 hr. comp.
Manganese	ug/L	—	—	weekly	24 hr. comp.
Mercury ^{3,5}	ug/L	0.02	0.01	weekly	24 hr. comp.
Nickel ³	ug/L	26	13	weekly	24 hr. comp.
Selenium ³	ug/L	8.2	4.1	weekly	24 hr. comp.
Silver ³	ug/L	0.4	0.2	weekly	24 hr. comp.
Zinc ³	ug/L	37	18	weekly	24 hr. comp.
TDS	mg/L	500	500	weekly	24 hr. comp.
TDS anions/cations	mg/L	—		quarterly	24 hr. comp.
Nitrates	mg/L	—		weekly	grab
Sulfates	mg/l	250	250	weekly	24 hr. comp.
Turbidity, effluent	NTU	see Permit Part 1.B.4.		weekly	grab
Turbidity, natural condition	NTU	—	—	weekly	grab
pH	s.u.	see Permit Part 1.B.3.		Continuous	Recorder
TSS	mg/L	20	30	daily	24 hr. comp.
Outfall Flow	gpm	1,100	—	Continuous	Recorder
Temperature	°C	—	—	weekly	grab
Hardness, as CaCO ₃	mg/l	—	—	weekly	grab

Table 3 - Outfall 002 Effluent Limitations and Monitoring Requirements					
Parameter ¹	Units	Effluent Limitations		Monitoring Requirements	
		Maximum Daily	Average Monthly	Sample Frequency ²	Sample Type
Chronic Whole Effluent Toxicity ⁶	TU _c	1.6	1.1	Monthly	24 hr. comp.
<p>1 - Parameters must be analyzed and reported as total recoverable unless otherwise indicated.</p> <p>2 - Weekly sampling shall occur on the same day of each week, unless the Permittee can document that sampling could not be performed due to extreme conditions. In such cases, a detailed explanation of the reason sampling could not be performed shall be prepared and kept with the analytical results for that day.</p> <p>3 - Reporting of a maximum daily limit violation is required according to Permit Part III.G.</p> <p>4 - Cr VI must be analyzed during the next sampling event when results are received showing a total chromium measure exceeding 11 ug/L - the sample holding time for Cr VI is 24 hours. Cr VI must be analyzed and reported as dissolved.</p> <p>5 - Mercury must be analyzed and reported as total.</p> <p>6 - See Permit Part I.D. for whole effluent toxicity testing requirements.</p>					

2. The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.
3. The pH must not be less than 6.5 standard units (s.u.) nor greater than 8.5 standard units (s.u.). The Permittee shall monitor the total time outside the range for the month, the length of each excursion and the number of pH excursions outside the range of 6.5 to 8.5 Standard Units (s.u.). The Permittee shall report the total time outside the range for the month as well as the number of individual excursions which exceed 60 minutes.
4. The turbidity measured in nephelometric turbidity units (NTU) must not be more than 5 NTUs above the natural condition. The background level for turbidity shall be measured at a point upstream of the discharge point in the diversion around the TSF.
5. The permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
6. Minimum Levels. For all effluent monitoring, the permittee must use analytical methods that can achieve a minimum level (ML) less than the effluent limitation, if possible. For parameters that do not have effluent limitations, the permittee must use methods that can achieve MLs less than or equal to those specified in Table 6 (Permit Part I.E.1.).
7. Chromium VI has an average monthly effluent limit that is not quantifiable using EPA approved or approvable analytical methods. EPA will use 10 ug/L (the ML for EPA Method 218.4) as the compliance evaluation level for this parameter.
8. For purposes of reporting on the DMR, for a single sample, if a value is less

than the MDL, the permittee must report “less than {numeric value of the MDL}” and if a value is less than the ML, the permittee must report “less than {numeric value of the ML}.” For purposes of calculating monthly averages, zero may be assigned for values less than the MDL, the {numeric value of the MDL} may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report “less than {numeric value of the MDL}” and if the average value is less than the ML, the permittee must report “less than {numeric value of the ML}.” If a value is greater than the ML, the permittee must report and use the actual value.

C. Effluent Limitations and Monitoring Requirements - Outfall 003

The permittee must limit and monitor discharges from outfall 003 as specified in the Table 4, below. All figures represent maximum effluent limits unless otherwise indicated. The permittee must comply with the effluent limits in the table at all times unless otherwise indicated, regardless of the frequency of monitoring or reporting required by other provisions of this permit.

1. Table 4:

TABLE 4						
Parameter	Units	Effluent Limitations			Monitoring Requirements	
		Maximum Daily	Average Monthly	Weekly Average	Sample Frequency	Sample Type
Flow	gpd	60,000	30,000	—	Daily	Recording
Biochemical Oxygen Demand (BOD ₅)	mg/L	60	30	45	Weekly	Grab
Total Suspended Solids (TSS)	mg/L	60	30	45	Weekly	Grab
Fecal Coliform	#/100 ml	150,000	100,000	—	Weekly	Grab
Chlorine ¹	mg/L	0.02	—	—	Weekly	Grab
pH	s.u.	See Permit Part I.C.3.			Weekly	Grab

1 - Monitoring required only if chlorine is used. See Permit Part I.C.6., below.

2. The permittee must not discharge any floating solids, visible foam in other than trace amounts, or oily wastes that produce a sheen on the surface of the receiving water.
3. The pH must not be less than 6.5 standard units (s.u.) nor greater than 8.5 standard units (s.u.).
4. Influent (prior to treatment) measures of BOD₅ and TSS shall be done on a quarterly basis. From this information, percent removal shall be calculated and reported on the DMR in January, April, July, and September for the previous quarter. Percent removal shall meet or exceed 85% for both

parameters.

5. The permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.
6. If chlorine (Cl) is used for disinfection, the compliance evaluation level will be 0.1 mg/L as a daily maximum. The effluent limit for chlorine is not quantifiable using EPA approved analytical methods. The ML for EPA Methods 330.3 and 330.4 is 0.1 mg/L and is used as the compliance evaluation level for this parameter.
7. For purposes of reporting on the DMR, for a single sample, if a value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if a value is less than the ML, the permittee must report "less than {numeric value of the ML}." For purposes of calculating monthly averages, zero may be assigned for values less than the MDL, the {numeric value of the MDL} may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than {numeric value of the MDL}" and if the average value is less than the ML, the permittee must report "less than {numeric value of the ML}." If a value is greater than the ML, the permittee must report and use the actual value.
8. The permittee is required to place signs along the beach near the mixing zone and outfall line for Outfall 003. The signs must provide the identity and telephone numbers of the permittee, must inform the public that a mixing zone exists, that treated wastewater is being discharged, and that users of the area should exercise caution.
9. The Permittee is required to inform ADEC and local fishing organizations of any upset in the treatment system likely to result in an exceedance of the permit limitations of Outfall 003.

D. Whole Effluent Toxicity Testing (WET) Requirements. The permittee must conduct chronic toxicity tests on effluent samples from outfall 001 and outfall 002. Testing must be conducted in accordance with subsections 1 through 6, below.

1. Toxicity testing must be conducted on 24-hour composite sample of the effluent. In addition, a split of each sample collected must be analyzed for the chemical and physical parameters required in Permit Part I.A. and B., above. The sample for toxicity testing should be of adequate size to accommodate the split sample. When the timing of sample collection coincides with that of the sampling required in Permit Parts I.A. and B., analysis of the split sample will fulfill the requirements of Permit Parts I.A. and I.B. as well.
2. Chronic Test Species and Methods
 - a. The permittee shall perform chronic toxicity test on samples

representative of the effluents discharged from Outfalls 001 and 002.

- b. The permittee shall conduct one chronic toxicity test per month. Of the twelve annual tests:

Four tests shall be conducted using:

the fathead minnow, *Pimephales promelas* - static, renewal, larval survival and growth test;

Four tests shall be conducted using:

the water flea, *Ceriodaphnia dubia* - 7-day static renewal, survival and reproduction test;

Four tests shall be conducted using:

green algae, *Selenastrum capricornutum* - 4-day static, growth.

- c. The presence of chronic toxicity must be determined as specified in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002.
- d. Results must be reported in TU_c (chronic toxic units), where $TU_c = 100/IC_{25}$. See Permit Part VI. for a definition of inhibition concentration (IC).

3. Quality Assurance

- a. The toxicity testing on each organism must include a series of five test dilutions (e.g., 100%, 75%, 50%, 25%, and 12.5%) and a control.
- b. All quality assurance criteria and statistical analyses used for chronic tests and reference toxicant tests must be in accordance with *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October 2002. If logistical problems beyond the control of the permittee, prevent the delivery of a sample to the laboratory, the permittee may collect only two samples for WET testing and the acceptable sample holding times can be extended from 36 to 48 hours.
- c. 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 of 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 re-sample and re-test within 14 days of receipt of the test results.
- iii) Control and dilution water must be receiving water or lab water, as appropriate, as described in the manual. 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 EPA and ADEC. In no case shall water that has not met test acceptability criteria be used for either dilution or control.

4. Accelerated Testing.

- a. Initial Investigation. If the permittee demonstrates through an evaluation of facility operations that the cause of the exceedence is known and corrective actions have been implemented, only one accelerated test is necessary. If toxicity exceeding the limit is detected in this test, then the TRE requirements in Permit Part I.D.6. shall apply, or
- b. If chronic toxicity is detected above the limits specified in Table 1 or Table 3 and no initial investigation is conducted or no cause is determined by an initial investigation then the permittee must conduct four more biweekly tests over an eight week period. This accelerated testing must be initiated within two weeks of receipt of the test results that indicate an exceedence.
- c. The permittee must notify EPA and ADEC of the exceedence in writing within two weeks of receipt of the test results. The notification must include the following information:
 - i) A status report on any actions required by the permit, with a schedule for actions not yet completed.
 - ii) A description of any additional actions the permittee has taken or will take to investigate and correct the cause(s) of the toxicity.
 - iii) Where no actions have been taken, a discussion of the reasons for no taking action.
- d. If none of the four accelerated tests exceed the toxicity limit, the permittee may return to the normal testing frequency. If any of the four tests exceed the limit, then the TRE requirements in Permit Part I.D.5., shall apply.

5. Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE):
 - a. If chronic toxicity limits are exceeded during accelerated testing under Permit Part I.D.4., the permittee must initiate a toxicity reduction evaluation (TRE) in accordance with *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070) within two weeks of the receipt of the test results showing an exceedence. At a minimum, the TRE must include:
 - i) Further 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.
 - b. If a TRE is initiated prior to completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TRE.
 - c. The permittee may initiate a Toxicity Identification Evaluation (TIE) as part of the TRE process. Any TIE must be performed in accordance with EPA guidance manuals, *Toxicity Identification Evaluation; Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F), *Methods for Aquatic Toxicity Identification Evaluations, Phase II: Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080), and *Methods for Aquatic Toxicity Identification Evaluations, Phase III: Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA-600/R-92/081).
6. Reporting
 - a. The permittee shall submit the results of the monthly toxicity tests in TU_c with the discharge monitoring report (DMR) for the month in which the results are received.
 - b. The permittee must submit the results of any accelerated testing, under Permit Part I.D.4., within 2 weeks of receipt of the results from the lab. The full report must be submitted within 4 weeks of receipt of the results from the lab. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, the result of the investigation must be submitted with the DMR for the month following completion of the investigation.
 - c. The report of toxicity test results must include all relevant information outlined in Section 10, Report Preparation, of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA/821-R-02-013, October

2002. In addition to toxicity test results, the permittee must report: dates of sample collection and initiation of each test; flow rate at the time of sample collection; the results of the monitoring required in Permit Parts I.A. and I.B.; and an explanation of logistical problems described in Permit Part I.D.3.b., if encountered.

E. Receiving Water Monitoring. The permittee must conduct the following receiving water monitoring program in the vicinity of the mine.

1. Water Column Monitoring

a. The permittee must conduct monthly monitoring at the following stations:

- 1) SL-B 10 m upstream of confluence with West Fork Slate Creek,
- 2) SL-C 30 m downstream of confluence with West Fork Slate Creek,
- 3) a newly named station that is representative of the flow diversion pipeline prior to commingling with the discharge from Outfall 002 (this could be within the diversion pipe and should be used as the background monitoring location for turbidity sampling).
- 4) Station 109 (or equivalent baseline location in Upper Sherman Creek),
- 5) Station 105,
- 6) a station downstream of Outfall 001,
- 7) a point in Johnson Creek immediately above the process area, and
- 8) a point in Johnson Creek immediately below the process area.

The date, time, and weather conditions shall be recorded for each sample taken.

b. All ambient samples must be grab samples.

c. All samples must be analyzed for the parameters listed in Table 5, below to achieve MLs less than the effluent limitations of the limited parameters. For parameters not limited in Permit Parts I.A. or I.B., the MLs in Table 6 should be utilized.

Table 5 Receiving Water Monitoring Parameters		
pH	TDS	Copper
Dissolved Oxygen	TSS	Manganese
Conductivity	Hardness	Mercury
Temperature	Aluminum	Nickel
Turbidity	Arsenic	Selenium
Total Ammonia	Cadmium	Silver
Nitrate	Chromium	Zinc
Sulfates	Lead	Color

Table 5		
Receiving Water Monitoring Parameters		
Iron	Chlorides	
Ambient Monitoring shall be done in dissolved metals.		

Table 6: Addition MLs		
Parameter	Units	Minimum Level (ML)
Manganese	ug/L	10
Chromium, Total	ug/L	10

- d. Quality assurance/quality control (QA/QC) plans for all the monitoring must be documented in the Quality Assurance Plan required under Permit Part I.F., "Quality Assurance Plan".
- e. Results shall be included with the DMRs for the month samples were taken and all results shall be included in the Annual Water Quality Monitoring Summary (Permit Part I.E.4.). At a minimum, the monthly reports must include the following:
 - 1) Dates of sample collection and analyses.
 - 2) Results of sample analysis.
 - 3) Relevant QA/QC information.

2. Sediment Monitoring

- a. Samples shall be taken (1) immediately downstream of Outfall 001 and below the fish barrier in Sherman Creek, (2) immediately downstream of Outfall 002 and below the fish barrier in Slate Creek, and (3) immediately below the process area in Johnson Creek. If a site immediately downstream of the outfall or process area is not suitable for sample collection, the permittee shall sample at the nearest downstream site suitable for sampling.
- b. One baseline sampling shall be conducted in Slate Creek prior to commencement of tailings disposal and in Johnson Creek prior to the initiation of process facility construction.
- c. Sampling shall be conducted annually after the first baseline sample.
- d. The Permittee shall monitor the parameters in Table 7 and shall achieve the listed detection levels for each sediment sample.

TABLE 7			
Sediment Monitoring Parameters and Analytical Methods			
Parameter	Preparation Method	Analysis Method	Sediment MDL ¹
Aluminum (mg/kg)	PSEP ²		

TABLE 7			
Sediment Monitoring Parameters and Analytical Methods			
Parameter	Preparation Method	Analysis Method	Sediment MDL ¹
Arsenic (mg/kg)	PSEP ²	GFAA ³	2.5
Cadmium (mg/kg)	PSEP ²	GFAA ³	0.3
Chromium (mg/kg)	PSEP ²		
Copper (mg/kg)	PSEP ²	ICP ⁴	15.0
Lead (mg/kg)	PSEP ²	ICP ⁴	0.5
Mercury (mg/kg)	7471 ⁵	7471 ⁵	0.02
Nickel (mg/kg)	PSEP ²	ICP ⁴	2.5
Selenium (mg/kg)	PSEP ²		
Silver (mg/kg)	PSEP ²	GFAA ³	0.2
Zinc (mg/kg)	PSEP ²	ICP ⁴	15.0
Acute Toxicity	see below	see below	NA
Total Solids (%)	-----	PSEP ² , pg 17	0.1
Total Volatile Solids (%)	-----	PSEP ² , pg 20	0.1
Total Organic Carbon (%)	-----	PSEP ^{2,6} , pg 23	0.1
Total Sulfides (mg/kg)	-----	PSEP ² , pg 32	0.1
Grain Size	-----	Modified ASTM with Hydrometer	NA
<p>1 Dry weight basis</p> <p>2 Recommended Protocols for Measuring Selected Environmental Variables, in Puget Sound Estuary Program, EPA 910/9-86-157, as updated by Washington Department of Ecology; Subsection: Metals in Puget Sound Water, Sediment, and Tissue Samples</p> <p>3 Graphite Furnace Atomic Absorption Spectrometry, SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA 1986</p> <p>4 Inductively Coupled Plasma Emission Spectrometry, SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA 1986</p> <p>5 Mercury Digestion and Cold Vapor Atomic Absorption Spectrometry, SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, EPA 1986 The Permittee shall sample the receiving water hardness downstream of the discharge.</p> <p>6 Recommended Methods for Measuring TOC in Sediments, Kathryn Bragdon-Cook Clarification Paper, Puget Sound Dredged Disposal Authority Annual Review, May, 1993.</p>			

e. Biological Testing of Sediments

- 1) Sediment samples will undergo acute toxicity testing to assess the relative toxicity of the sediment to representative aquatic life. The following bioassays are required:
 - Test Method 100.1: *Hyalella azteca* 10-day survival test for sediments
 - Test Method 100.2: *Chironomus tentans* 10-day survival test for sediments
- 2) Test methods, QA/QC, data recording, data analysis and calculations, and reporting shall be in accordance with Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates, EPA/600/R-94/024.

Both *Hyalella azteca* and *Chironomus tentans* are representative species for their respective classes of aquatic life.

- f. The permittee shall collect sufficient sediment from each monitoring station to conduct all chemical and biological tests identified herein. Sediment samples shall consist of the upper two (2) centimeters of sediment. The minimum depth of sample penetration shall be four centimeters.

Sediment monitoring stations shall be located in areas where deposition is likely to occur (i.e. pools or moderately deep, slow-moving water with the surface not turbulent to the extent of being broken).

- g. Sediment monitoring results shall be reported in the Annual Water Quality Monitoring Summary (see Permit Part I.E.4.) and must include, at a minimum: dates of sample collection and analyses, locations of samples collected, results of the monitoring required in Permit Parts I.E.2.d. and e., and relevant QA/QC information.

3. Aquatic Resource Monitoring

The Permittee shall monitor aquatic resources as described below and shall report results, including relevant quality assurance/quality control data, in the Annual Water Quality Monitoring Report.

a. Benthic Invertebrates

- 1) Benthic invertebrates shall be monitored using methods and locations established in baseline surveys in Sherman and Sweeny Creeks. The Permittee shall establish reaches to be sampled in Slate and Johnson Creeks that are representative of potential project impacts. Sweeny Creek data will provide baseline data for benthic invertebrates. Sherman Creek data shall be collected downstream of mine discharges to assess potential impacts.

For Sherman and Sweeny Creeks, two reaches in each creek shall be sampled. For Slate and Johnson Creeks, one reach shall be sampled. Sweeny Creek reaches shall be those identified in Reconnaissance Photograph Study of Sherman and Sweeny Creeks, Located Near the Kensington Mine, Alaska, During Mid-July 1991 (Konopacky Environmental, January 1992).

Each reach shall be delineated for all possible sampling sites (those areas containing stream substrate with particles <20 cm along the long axis). Every third or fourth sampling site shall be sampled until a total of 6 samples is obtained for each reach.

- 2) Samples shall be collected using a 0.093 m² Surber sampler equipped with a 300-micron mesh collection net. Collected samples shall be placed in labeled plastic containers and preserved with 70 percent ethyl alcohol. Samples shall be enumerated and identified to the generic level (except for oligochaetes to order). For each sample the following shall be calculated: density per unit area, Shannon Diversity and Evenness indices, EPT (ephemeropterans, plecopterans, and tricopterans), and number of EPT taxa.

- 3) Sampling shall be conducted once during the construction period and annually thereafter. Surveys shall be conducted between late March and the end of May, after spring breakup (ice out) and before peak snowmelt.
- b. Resident Fish Monitoring - Population Status
 - 1) Abundance and condition of Dolly Varden char in Sherman, Slate and Johnson Creeks shall be monitored annually using snorkel observations, electroshocking techniques, or other appropriate techniques. Surveys shall be conducted in lower, middle and upper Sherman Creek as identified in Presence-Absence Survey for Fish in Small Unnamed Streams, Located In and Near the Area Proposed for the Dry Tailings Storage Facility Associated with the Kensington Mine, Alaska, During May 1996 (Konopacky Environmental, May 1996). Similar locations shall be identified in Slate and Johnson Creeks. These surveys shall focus on fish greater than 25 mm. Data to be derived from these surveys shall include: (1) population estimates by species, habitat type and stratum, and (2) condition factor by stratum.
 - 2) Monitoring shall be conducted annually between August 1 and September 15. Data shall be collected so that statistical comparisons can be made with the previous baseline data. Estimates shall be made of the variability of the data, including minimum detectable differences between samples as well as the precision of the 95 percent confidence interval. This information shall be used to refine or revise sampling protocols during the construction and operations phase.
 - c. Anadromous Fish Monitoring
 - 1) Abundance of Spawning Salmon and Survival of Embryos
 - a) Annual surveys of spawning salmon in Sherman, Slate, and Johnson creeks shall be conducted to assess the size of the escapement. Surveys shall consist of weekly stream counts throughout the spawning season documenting the distribution of salmon within the surveyed areas.
 - b) Outmigrating juvenile pink salmon from the Sherman, Slate, and Johnson creek drainages will be sampled during the spring following each year of adult counts. These counts are to be conducted in April until population counts diminish. Quantitative methods, such as a screw trap or inclined plane trap will be used to estimate the relationship between adult escapement and fry protection
 - 2) Quality of Spawning Substrate

The quality of spawning substrate used by pink salmon shall be

monitored annually to detect possible changes caused by potential introduction of fine sediments into lower Sherman, Slate, and Johnson Creeks. Sediment samples shall be collected in July prior to spawning activity. Four replicate samples shall be collected from 2 locations in each creek using a McNeil-type sampler, using techniques and locations comparable to those in Konopacky (1992). Reaches 1 and 3, as defined in Konopacky reports, shall be the sampling locations for Sherman Creek. The geometric mean particle size will be calculated for each sample.

d. Aquatic Vegetation

Annual visual surveys of aquatic vegetation in Sherman, Slate, and Johnson Creeks downstream of the discharges or project area shall be conducted during summer months. Evidence of algal mats, vegetation die-off, and/or other visible impacts shall be reported.

- e. Aquatic resource monitoring results shall be reported in the Annual Water Quality Monitoring Summary (see Permit Part I.E.4.) and must include, at a minimum: dates of sample collection and analyses, locations of samples collected, results of all monitoring required in Permit Parts I.E.3., and relevant QA/QC information.

4. All discharge and receiving water monitoring results for the year must be included in an Annual Water Quality Monitoring Summary and submitted by March 1 for the previous year. The report must include a presentation of the analytical results and an evaluation of the results. The evaluation must include an electronic spreadsheet containing all historical data, a graphical presentation of the data at each monitoring station, a comparison of upstream and downstream monitoring results (to show any differences) and a comparison of monitoring results for each station over time (to show any trends). This annual report may reference the monthly reports for QA/QC information.

F. Quality Assurance Plan (QAP). The permittee must develop a quality assurance plan (QAP) for all monitoring required by this permit. The QAP may be contained in an overall monitoring plan for the entire project. The QAP, or the QAP portion of an overall monitoring plan, must be submitted to EPA and ADEC for review and approval within 60 days of the effective date of this permit and implemented within 120 days of the effective date of this permit. Any existing QAPs may be modified for submittal 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. Throughout all sample collection and analysis activities, the permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in *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 format which is specified in these documents.

3. The permittee must amend the QAP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAP.
4. Copies of the QAP must be kept on site and made available to EPA and/or ADEC upon request.

II. BEST MANAGEMENT PRACTICES PLAN

- A. **Purpose.** Through implementation of the best management practices (BMP) plan the permittee must 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 and ancillary activities.
- B. **Development and Implementation Schedule.** The permittee must develop and implement a BMP Plan which achieves the objectives and the specific requirements listed below. A copy of the BMP Plan must be submitted to EPA and ADEC within 120 days of the effective date of the permit. Any existing BMP plans may be modified for submittal and approval under this section. The BMP Plan may be included as part of a project wide document. The permittee must implement the provisions of the plan as conditions of this permit within 180 days of the effective date of this permit.
- C. **Objectives.** The permittee must develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.
 1. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility must be minimized by the permittee to the extent feasible by managing each waste stream in the most appropriate manner.
 2. Under the BMP Plan and any Standard Operating Procedures included in the BMP Plan, the permittee must ensure proper operation and maintenance of water management and wastewater treatment systems. BMP Plan elements must be developed in accordance with good engineering practices.
 3. Each facility component or system must be examined for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to waters of the United States due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc. The examination must include all normal operations and ancillary activities including material storage areas, storm water, in-plant transfer, material handling and process handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, or drainage from raw material storage.

D. Elements of the BMP Plan. The BMP Plan should be consistent with the objectives above 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 BMP Plan must include, at a minimum, the following items:

1. Plan Components.

- a. Statement of BMP policy. The BMP Plan must include a statement of management commitment to provide the necessary financial, staff, equipment, and training resources to develop and implement the BMP Plan on a continuing basis.
- b. Structure, functions, and procedures of the BMP Committee. The BMP Plan must establish a BMP Committee responsible for developing, implementing, and maintaining the BMP Plan.
- c. Description of potential pollutant sources.
- d. Risk identification and assessment.
- e. Standard operating procedures to achieve the above objectives and specific best management practices (see below) and
- f. Reporting of BMP incidents. The reports must include a description of the circumstances leading to the incident, corrective actions taken and recommended changes to operating and maintenance practices to prevent recurrence.
- g. Materials compatibility.
- h. Good housekeeping.
- i. Inspections.
- j. Preventative maintenance and repair.
- k. Security
- l. Employee training.
- m. Recordkeeping and reporting.
- n. Prior evaluation of any planned modifications to the facility to ensure that the requirements of the BMP plan are considered as part of the modifications.

2. The permittee must amend the BMP Plan whenever it is found to be ineffective in achieving the general objective of preventing and minimizing the generation and the potential for the release of pollutants from the facility to the waters of the United States and/or the specific requirements above.
3. Any changes to the BMP Plan must be consistent with the objectives and specific requirements listed above. All changes in the BMP Plan must be reported to EPA and ADEC with the annual certification required under Permit Part D.3., above.

III. MONITORING, RECORDING AND REPORTING REQUIREMENTS

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

Samples and measurements must 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 must collect additional samples at the appropriate outfall whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited in Permit Part I.A. of this permit that are likely to be affected by the discharge.

The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with paragraph III.C ("Monitoring Procedures"). The permittee must report all additional monitoring in accordance with paragraph III.D ("Additional Monitoring by Permittee").

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

USEPA
Region 10
1200 Sixth Avenue, OW-133
Seattle, Washington 98101

ADEC
Division of Water
410 Willoughby, Suite 303
Juneau, Alaska 99801

- C. 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.

- D. Additional Monitoring by Permittee.** If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR.
- E. Records Contents.** Records of monitoring information must include:
1. the date, exact place, and time of sampling or measurements;
 2. the individual(s) who performed the sampling or measurements;
 3. the date(s) analyses were performed;
 4. the individual(s) who performed the analyses;
 5. the analytical techniques or methods used; and
 6. the results of such analyses.
- F. Retention of Records.** The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of DMRs, a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least five years from the date of the sample, measurement, report or application. This period may be extended by request of the Director or ADEC at any time.
- G. Twenty-four Hour Notice of Noncompliance Reporting**
1. The permittee must report the following occurrences of noncompliance by telephone within 24 hours from the time the permittee becomes aware of the circumstances:
 - a. any noncompliance that may endanger health or the environment;
 - b. any unanticipated bypass that exceeds any effluent limitation in the permit (See Permit Part IV.F., "Bypass of Treatment Facilities");
 - c. any upset that exceeds any effluent limitation in the permit (See Permit Part IV.G., "Upset Conditions"); or
 - d. any violation of a maximum daily discharge limitation for any of the pollutants in Table 1 of Permit Part I.A.
 2. The permittee must also provide a written submission within five days of the time that the permittee becomes aware of any event required to be reported under subpart 1 above. The written submission must 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; and
 - d. steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
3. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.
 4. Reports must be submitted to the addresses in Permit Part III.B ("Reporting of Monitoring Results").

H. Other Noncompliance Reporting. The permittee must report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Permit Part III.B ("Reporting of Monitoring Results") are submitted. The reports must contain the information listed in Permit Part III.G.2 of this permit ("Twenty-four Hour Notice of Noncompliance Reporting").

I. Changes in Discharge of Toxic Substances. The permittee must notify the Director and ADEC as soon as it knows, or has reason to believe:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed the highest of the following "notification levels":
 - a. One hundred micrograms per liter (100 ug/L);
 - b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/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 ug/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).

J. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

IV. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

B. Penalties for Violations of Permit Conditions

1. **Civil and Administrative Penalties.** Pursuant to 40 CFR Part 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$32,500 per day for each violation).
2. **Administrative Penalties.** Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$27,500). Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$157,500).

3. Criminal Penalties:

- a. **Negligent Violations.** The Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.
- b. **Knowing Violations.** Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.
- c. **Knowing Endangerment.** Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- d. **False Statements.** The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000

per violation, or by imprisonment for not more than 6 months per violation, or by both.

- C. Need to Halt or Reduce Activity not a Defense.** It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this permit.
- D. Duty to Mitigate.** The permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
- E. Proper Operation and Maintenance.** The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- F. Bypass of Treatment Facilities**
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 Permit Part.
 2. Notice.
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior notice, if possible at least 10 days before the date of the bypass.
 - b. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required under Permit Part III.G ("Twenty-four Hour Notice of Noncompliance Reporting").
 3. Prohibition of bypass.
 - a. Bypass is prohibited, and the Director may take enforcement action against the permittee for a bypass, unless:
 - i) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii) 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; and

- iii) The permittee submitted notices as required under paragraph 2 of this Permit Part.
- b. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 3.a. of this Permit Part.

G. 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 paragraph 2 of this Permit Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under Permit Part III.G, "Twenty-four Hour Notice of Noncompliance Reporting;" and
 - d. The permittee complied with any remedial measures required under Permit Part IV.D, "Duty to Mitigate."
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

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

I. Planned Changes. The permittee must give notice to the Director and ADEC as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR 122.29(b); or
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 Permit Part III.I (“Changes in Discharge of Toxic Substances”).

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

V. GENERAL PROVISIONS

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

proprietor, respectively.

- c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Director or ADEC must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
 - c. The written authorization is submitted to the Director and ADEC.
 3. Changes to authorization. If an authorization under Permit 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 Permit Part V.E.2. must be submitted to the Director and ADEC prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification. Any person signing a document under this Permit Part must make the following certification:

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

- F. Availability of Reports.** In accordance with 40 CFR 2, information submitted to EPA pursuant to this permit may be claimed as confidential by the permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the

permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 2, Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

- G. Inspection and Entry.** The permittee must allow the Director, ADEC, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon the presentation of credentials and other documents as may be required by law, to:
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; and
 4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.
- H. Property Rights.** The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, nor any infringement of state or local laws or regulations.
- I. Transfers.** This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act. (See 40 CFR 122.61; in some cases, modification or revocation and reissuance is mandatory).
- J. State Laws.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

VI. DEFINITIONS

1. "Act" means the Clean Water Act.
2. "ADEC" means Alaska Department of Environmental Conservation.
3. "Administrator" means the Administrator of the EPA, or an authorized representative.

4. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
5. "Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
6. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
7. "Chronic toxic unit" ("TU_c") is a measure of chronic toxicity. The number of chronic toxic units in the effluent is calculated as $100/IC_{25}$ where the IC is measured in percent effluent.
8. "Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
9. "Director" means the Director of the Office of Water, EPA, or an authorized representative.
10. "DMR" means discharge monitoring report.
11. "EPA" means the United States Environmental Protection Agency.
12. "Grab" sample is an individual sample collected over a period of time not exceeding 15 minutes.
13. "Inhibition concentration", IC, is a point estimate of the toxicant concentration that causes a given percent reduction (p) in a non-quantal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., Interpolation Method).
14. "Maximum daily discharge limitation" means the highest allowable "daily discharge."
15. "Method Detection Limit (MDL)" means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

16. "Minimum Level (ML)" means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.
17. "QA/QC" means quality assurance/quality control.
18. "Regional Administrator" means the Regional Administrator of Region 10 of the EPA, or the authorized representative of the Regional Administrator.
19. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
20. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Appendix A: Maps showing sampling locations will be included in the final.

See last 3 pages of the File named D-1b pages 3-5.pdf for the maps included in the permit.

