ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT

Permit Number: AK0043206

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 *et seq*., as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations. The

HECLA GREENS CREEK MINING COMPANY

is authorized to discharge from the Greens Creek Mine facility located on Admiralty Island at the following locations:

Outfall	Receiving Water or Body	Latitude	Longitude
002	Hawk Inlet	58° 06’ 06” N	134° 46’ 30” W
003	Hawk Inlet	58° 07’ 32” N	134° 45’ 16” W
004	Wetlands	58° 09’ 01” N	134° 45’ 16” W
005.2	Zinc Creek	58° 05’ 28” N	134° 44’ 10” W
005.3	Greens Creek	58° 04’ 23” N	134° 43’ 25” W
005.4	Greens Creek	58° 04’ 21” N	134° 43’ 12” W
005.5	Greens Creek	58° 04’ 41” N	134° 39’ 07” W
006	Greens Creek	58° 04’ 43” N	134° 38’ 49” W
007	Greens Creek	58° 04’ 50” N	134° 38’ 27” W
008	Greens Creek	58° 04’ 52” N	134° 38’ 06” W
009	Greens Creek	58° 04’ 47” N	134° 37’ 47” W

In accordance with the discharge points, effluent limitations, monitoring requirements, and other conditions set forth herein:

This permit shall become effective October 1, 2015

This permit and the authorization to discharge shall expire at after September 30, 2020

The Permittee shall reapply for a permit reissuance on or before April 3, 2020, 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.

The Permittee shall post or maintain a copy of this permit to discharge at the facility and make it available to the public, employees, and subcontractors at the facility.

Wade Strickland	August 20, 2015
Signature	Date
Wade Strickland	Program Manager
Name	Title

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SCHEDULE OF SUBMISSIONS

Table 1 - Schedule of Submissions summarizes some of the required submissions and activities the Permittee must complete and/or submit to the Alaska Department of Environmental Conservation (DEC) during the term of this permit. The Permittee is responsible for all submissions and activities even if they are not summarized in Table 1.

Table 1: Schedule of Submissions

Permit Part	Submittal or Completion	Frequency	Due Date	Submit to
1.2.6	Outfall 002 Diffuser Condition Report	Annual	March 1st of the next year	Permitting & Compliance [a, b]
1.3.3.3	Corrective Action Plan	As required	Within 7 working days after verifying that corrective actions have been triggered	Permitting & Compliance [a, b]
1.6.1.5	Hawk Inlet Monitoring Program Report	Annual	March 1st of the next year	Compliance [b]
1.6.2.8	Storm Water Monitoring Report	Annual	March 1st of the next year	Compliance [b]
1.6.3.6	Mixing Zone Monitoring Report	Annual	March 1st of the next year	Compliance [b]
1.8	Annual Water Quality Monitoring Summary	Annual	March 1st of the next year	Compliance [b]
2.1	Quality Assurance Project Plan (QAPP) update notification	1/permit cycle	Within 60 days after the effective date of the permit	Compliance [b]
2.2.2	Written notification that the Best Management Practices (BMP) Plan has been developed and implemented	1/permit cycle	Within 60 days after the effective date of permit	Compliance [b]
2.2.6	BMP Plan Annual Report and Certification	Annual	March 1st of the next year	Compliance [b]

Permit Part	Submittal or Completion	Frequency	Due Date	Submit to
Appendix A, 1.3	Application for Permit Reissuance	1/permit cycle	No later than 180 days before expiration of the permit	Permitting [a]
Appendix A, 3.2	Discharge Monitoring Report (DMR)	Monthly	Postmarked or submitted electronically through the eDMR system, on or before the 15th of the next month	Compliance [b]
Appendix A, 3.4	Oral notification of noncompliance	As Necessary	Within 24 hours from the time the Permittee becomes aware of the circumstances of noncompliance	Compliance [c]
Appendix A, 3.4	Written documentation of noncompliance	As Necessary	Within 5 days after the Permittee becomes aware of the circumstances	Compliance [b]

a. Permitting address – Department of Environmental Conservation, Division of Water, Wastewater Discharge Authorization Program, 555 Cordova St., Anchorage, Alaska 99501

b. Compliance address – Department of Environmental Conservation, Division of Water, Compliance Enforcement Program, 555 Cordova St., Anchorage, Alaska 99501

c. Oral notifications must be reported to the Department's noncompliance reporting hotline: 1-907-269-4114 (from Alaska) or 1-877-569-4114 (nationwide).

1.0 LIMITATIONS AND MONITORING REQUIREMENTS

1.1 Discharge Authorization

1.1.1 During the effective period of this permit, the Permittee is authorized to discharge pollutants from outfalls 002 and 003 to Hawk Inlet, outfall 004 to wetlands, outfall 005.2 to Zinc Creek, and outfalls 005.3, 005.4, 005.5, 006, 007, 008, and 009 to Greens Creek, 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.

1.2 Effluent Limitations and Monitoring for Outfall 002

1.2.1 The Permittee must limit and monitor discharges from outfall 002 as specified in Table 2. Outfall 002 discharges treated wastewater contributed by the following waste streams: mine contact water, storm water, mill process water, treated domestic wastewater, and intercepted groundwater. All values 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.

Table 2: Outfall 002 Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limits		Monitoring Requirements	
		Daily Maximum	Monthly Average	Minimum Frequency	Sample Type
Flow	mgd	4.6	3.7	continuous	recording
Cadmium [a]	µg/L	100	50	weekly	24-hour composite
Copper [a]	µg/L	99	39	weekly	24-hour composite
Lead [a]	µg/L	327	123	weekly	24-hour composite
Mercury [b]	µg/L	1.9	1.0	weekly	24-hour composite
Zinc [a]	µg/L	1,000	500	weekly	24-hour composite
TSS	mg/L	30	20	weekly	24-hour composite
pH	s.u.	See Permit Part 1.2.4		continuous	recording
Cyanide [c]	µg/L	19	9.2	weekly [d]	24-hour composite
Temperature	°C	-	-	weekly	grab
BOD_5	mg/L	-	-	monthly	grab
Fecal coliform bacteria	#/100 mL	-	-	monthly	grab

Notes:
a. Metals shall be measured as total recoverable.
b. Mercury shall be measured as total.
c. Cyanide shall be measured as weak acid dissociable (WAD).
d. Weekly sampling may be reduced to monthly after four months (16 weeks) if all samples have levels of WAD cyanide below the detection level of 5 µg/L. Otherwise, 16 consecutive weeks of WAD cyanide concentrations below 5 µg/L is necessary to reduce monitoring frequency to monthly. Before monitoring frequency may be reduced, the permittee must receive written DEC approval.

1.2.2 Discharge from outfall 002 shall not cause a violation of Alaska Water Quality Standards (WQS), 18 AAC 70, unless allowed in this permit through exceptions to the standards or in a compliance schedule.

1.2.3 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.

1.2.4 During continuous pH monitoring required in Table 2, pH must not be less than 6.0 standard units (s.u.) or greater than 9.0 s.u.

1.2.4.1 Excursions outside the range of 6.0 to 9.0 s.u. are permitted provided that the total time during which the pH values are outside 6.0 to 9.0 s.u. does not exceed 7 hours and 26 minutes in any calendar month or 60 minutes per individual excursion.

1.2.4.2 The Permittee shall monitor the total time outside the range of 6.0 to 9.0 s.u. for the month, length, date of each excursion, and the number of pH excursions.

1.2.4.3 For reporting pH, allowable pH excursions under Permit Part 1.2.4.1 shall be excluded from the DMR form. However appended to each DMR, the Permittee shall report the total time outside the range of 6.0 to 9.0 s.u. for the month, length, date of each excursion, and the number of pH excursions.

1.2.5 The Permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.

1.2.6 Annually, a video and written report on the condition of outfall 002 diffuser and diffuser ports must be included in the Annual Report and submitted to DEC by March 1st of the next year. See Permit Part 1.8.

1.2.7 For all effluent monitoring, the Permittee must use a test method that can achieve a Minimum Level of Quantification (ML) less than the effluent limitation. For a parameter without an effluent limitation, the Permittee must use a method that can achieve a Method Detection Limit (MDL) less than or equal to the MDL specified in Table 5.

1.2.8 For purposes of reporting on the Discharge Monitoring Report (DMR) for this permit only, 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.

1.3 Effluent Limitations and Monitoring for Storm Water Outfalls

1.3.1 The Permittee must monitor discharges from outfalls 003, 004, 005.2, 005.3, 005.4, 005.5, 006, 007, 008, and 009 as specified in Table 3 and the receiving water as specified in Permit Part 1.6.2. See Figure 1.

1.3.2 If monitoring required by Permit Parts 1.3.1 and 1.6.2 and listed in Table 3 demonstrates that effluent from 003, 004, 005.2, 005.3, 005.4, 005.5, 006, 007, 008, or 009 exceeds a water quality criterion for oil & grease, lead, zinc, pH, or TSS and indicates a statistically significant reduction in the receiving water quality for the same criterion, then corrective action is triggered, and the Permittee shall verbally notify DEC no later than the end of the next State of Alaska working day after receipt of monitoring results.

1.3.3 After reporting under Permit Part 1.3.2, the Permittee shall perform the following tasks.

1.3.3.1 Determine the extent of the exceedance.

1.3.3.2 In consultation with DEC and documented in writing, implement a plan to determine the cause and source of the exceedance.

1.3.3.3 Submit to DEC, within seven working days after an exceedance is verified by the Permittee, a plan for corrective actions to prevent adverse environmental impacts and further exceedances.

1.3.3.4 Implement the Corrective Action Plan as approved by DEC.

1.3.3.5 Abide by any DEC-approved Corrective Action Plan.

Table 3: Storm Water Outfall Monitoring Requirements

Outfall	Location	Parameters [a]	Minimum Frequency [b]	Sample Type
003	Southern part of Hawk Inlet facilities area near the cannery buildings	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
004	Pit 7 (inactive rock quarry and topsoil storage) off of A-road at mile 1.9	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
005.2	Zinc Creek (east side of bridge) off of B-road at mile 3.0	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
005.3	Site E (inactive waste rock storage area) off of B-road at mile 4.7	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
005.4	Pit 6 (inactive rock quarry and top soil storage) off of B-road at mile 4.6	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
005.5	Culvert at B-road mile 7.8	Flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	Grab
006	Pond D (sediment pond from inactive waste rock storage area D) off of B-road at mile 8.0	Flow, lead, zinc, TSS, pH, hardness	twice per year	Grab
007	Pond C (sediment pond from inactive waste rock storage area C) off of B-road at mile 8.2	Flow, lead, zinc, TSS, pH, hardness	twice per year	Grab
008	960 laydown site (initial portal development waste rock)	Flow, lead, zinc, TSS, pH, hardness	twice per year	Grab
009	Site 1350 adit inactive waste rock storage area	Flow, lead, zinc, TSS, pH, hardness	twice per year	Grab

Notes:
a. Flow shall be reported in gpm, lead and zinc shall be measured as total recoverable in µg/L, oil & grease and TSS shall be measured in mg/L, pH shall be measured in s.u., and hardness shall be measured as mg/L of $CaCO_3$.
b. The samples must be collected once during the spring runoff or snow-melt and once during the fall rainfall events. Sampling is only required when an outfall is discharging.

1.3.4 The Permittee must collect effluent samples from the effluent stream after the last treatment unit prior to discharge into the receiving waters.

1.3.5 MDLs. For storm water monitoring, the Permittee must use methods that can achieve an MDL of at least 0.5 µg/L for lead, with the exception of Hawk Inlet outfall 003 receiving water, where the MDL for lead is 1.0 µg/L, and 20 µg/L for zinc at all storm water sites.

1.3.6 For purposes of reporting 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 calculations using storm water data, zero may be assigned for values less than the MDL, and the {numeric value of the MDL} may be assigned for values between the MDL and the ML.

1.3.7 For each storm water sampling event, the Permittee must provide the date and duration (in hours) of the storm event sampled; rainfall measurements or estimates (in inches) of the storm event; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge based on observation of the outfall, duration of the event, and best professional judgment.

1.4 Monitoring for Internal Monitoring Locations 010 and 011

1.4.1 The Permittee must monitor discharges from internal monitoring locations 010 and 011 as specified in Table 4. Internal monitoring location 010 is the effluent monitoring location for the discharge of treated domestic wastewater from the Hawk Inlet sequencing batch reactor (SBR) and internal monitoring locations 011 is the effluent monitoring location for the discharge of treated domestic wastewater from the 920 Area SBR. Both the Hawk Inlet SBR and 920 Area SBR discharge to the TSF WWTF pond.

Table 4: Internal Monitoring Locations 010 and 011 Requirements

Parameter	Units	Effluent Limits		Monitoring Requirements	
		Daily Maximum	Monthly Average	Minimum Frequency	Sample Type
BOD_5	mg/L	-	-	monthly	grab
* Samples must be taken on the same day as outfall 002 BOD_5 sampling.					

1.4.2 For purposes of reporting 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 calculations using data from internal monitoring locations 010 and 011, zero may be assigned for values less than the MDL, and the {numeric value of the MDL} may be assigned for values between the MDL and the ML.

1.5 Mixing Zone

1.5.1 In accordance with state regulations at 18 AAC 70.240, as amended through June 23, 2003, a mixing zone is authorized in Hawk Inlet for discharge from outfall 002.

1.5.2 Outfall 002 Mixing Zone - A mixing zone for cadmium, copper, cyanide, lead, mercury, zinc, and pH, is authorized for this discharge. The mixing zone is defined as a rectangular box shape from the inlet floor to the water surface, 165 feet (ft.) wide, centered along the 160 ft. diffuser, and extending 40 ft. on either side of the diffuser for a total length of 80 ft. See Figure 3.

1.6 Receiving Waterbody Monitoring

1.6.1 Hawk Inlet Monitoring Program

1.6.1.1 Water Column Monitoring. Each calendar quarter, the Permittee must conduct water column monitoring at a depth of five ft. below the surface at established monitoring sites 106 (for outfall 002 background), 107, and 108 (as described in Permit Part 1.6.3). See Figure 2.

1.6.1.1.1 The date, time, and weather conditions must be noted and reported for each sample collected.

1.6.1.1.2 All receiving water samples must be grab samples.

1.6.1.1.3 All receiving water samples must be analyzed for the parameters listed in Table 5 with methods that achieve MDLs equivalent to or less than those listed in Table 5. The Permittee may request different MDLs. Such a request must be in writing and must be approved by DEC.

Table 5: Receiving Water Monitoring Parameters and MDLs

Parameter	Units	Minimum Frequency	MDL
Cadmium, dissolved[1]	µg/L	quarterly	0.1
Copper, dissolved[1]	µg/L	quarterly	0.03
Lead, dissolved[1]	µg/L	quarterly	0.05
Mercury, total	µg/L	quarterly	0.002
Zinc, dissolved[1]	µg/L	quarterly	0.2
TSS	mg/L	quarterly	-
pH	s.u.	quarterly	-
Cyanide, WAD	µg/L	quarterly	5
Temperature	°C	quarterly	-
Turbidity	NTU	quarterly	-
Conductivity	µS/cm	quarterly	-

Note:
1. To compare dissolved measurements with total recoverable measurements use translators specified in the *Alaska Water Quality Criteria Manual for Toxic and Deleterious Organic and Inorganic Substances*.

1.6.1.2 Sediment Monitoring. The Permittee must conduct sediment monitoring at least once per year at established monitoring stations S-1, S-2, and S-4, and once every five years at established monitoring stations S-5N and S-5S. See Figure 2.

1.6.1.2.1 The date, time, and weather conditions must be noted and reported for each sample collected.

1.6.1.2.2 The Permittee must collect at least six samples per sample year at each site and conduct all chemical tests identified herein.

1.6.1.2.3 The sediment samples must be analyzed for the parameters in Table 6 using the listed analytical protocols (or equivalent) for each sediment sample.

Table 6: Sediment Monitoring Parameters and Methods

Parameter	Preparation Method	Analysis Method	MDL [a] (mg/Kg)
Cadmium	PSEP [b]	GFAA [c]	0.3
Copper	PSEP [b]	ICP [d]	15.0
Lead	PSEP [b]	ICP [d]	0.5
Mercury	7471 [e]	7471 [e]	0.02
Zinc	PSEP [b]	ICP [d]	15.0

Notes:
a. Dry weight basis.
b. Recommended Protocols for Measuring Selected Environmental Variables in Puget Sound. Puget Sound Estuary Program (PSEP), EPA 910/9-86-157, as updated by Washington Department of Ecology. Subsection: Metals in Puget Sound Water, Sediment, and Tissue Samples, PSEP.
c. Graphite Furnace Atomic Absorption (GFAA) Spectrometry - SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods. EPA 1986.
d. Inductively Coupled Plasma (ICP) Emission Spectrometry - SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods. EPA 1986.
e. Mercury Digestion and Cold Vapor Atomic Absorption (CVAA) Spectrometry - Method 7471, SW846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods. EPA 1986.

1.6.1.3 In-situ Bioassays. The Permittee must conduct analysis of organism tissues at least once per year at established monitoring stations S-1, S-2, S-4, ESL, Stn 1, Stn 2, and Stn 3. See Figure 2.

1.6.1.3.1 The date, time, and weather conditions must be noted and reported for each sample collected.

1.6.1.3.2 The tissue samples must be collected from the organisms and locations listed in Table 7 and at least six analyses conducted per year and site for the parameters listed in Table 7.

Table 7: In-situ Bioassay Monitoring Organisms and Parameters

Sample Location	In-situ Test Organism [a]	Parameters (total in mg/kg)
S-1 S-2 S-4	*Nephthys procera* (polychaete) and *Nereis sp.* (polychaete) [b]	Cadmium, Copper, Lead, Mercury, Zinc
ESL Stn 1 Stn 2 Stn 3	*Mytilus edulis* (blue mussel)	

Notes:
a. The organisms must be collected from each of the locations identified.
b. *Nereis sp*. may be replaced with other local species if *Nereis sp.* is not available.

1.6.1.3.3 The tissue samples must be prepared following EPA Method 200.2, where 0.3 grams of dry tissue and 5 milliliters (mL) of nitric acid are heated to 85 °C for four hours, cooled, and diluted to a volume of 22 mL. Levels of the elements must be determined by inductively-coupled plasma mass spectrometer.

1.6.1.4 Quality assurance/quality control (QA/QC) plans for all the Hawk Inlet monitoring must be covered in the Quality Assurance Project Plan (QAPP) required under Permit Part 2.1.

1.6.1.5 Reporting. All monitoring results must be included in the Annual Report and submitted to DEC by March 1st of the next year. See Permit Part 1.8. The report must include a presentation of the analytical results and an evaluation of the results. The Annual Report must include a statistical evaluation of data showing averages, variations, and changes over time including a comparison of the past year's data to annual averages from the pre-production period and the production period. The report must include relevant QA/QC information. The report must be submitted electronically and a hard copy provided upon request.

1.6.2 Storm Water - Receiving Waterbody Monitoring Program

1.6.2.1 The Permittee must develop a program for monitoring the receiving waters potentially affected by the storm water discharges. The program must include the following components.

1.6.2.2 The Permittee must establish monitoring stations in the receiving water directly upstream and downstream of where each storm water outfall enters the receiving water. The storm water outfalls and parameters which must be monitored are shown in Table 3.

1.6.2.3 Receiving water monitoring upstream and downstream of the discharge points for the storm water outfalls listed in Table 3 shall be conducted semiannually and at the same time (within three hours) as each associated outfall sample. However, if adverse conditions preclude sampling for safety reasons, a justification for not sampling must be submitted with the Annual Report according to Permit Part 1.8.

1.6.2.4 For any discharges that routinely reach waters of the United States, in addition to those listed in Table 3, receiving water monitoring downstream of the discharge point shall be conducted semiannually in the spring and fall.

1.6.2.5 For discharges that do not routinely enter waters of the United States, receiving water monitoring shall be conducted downstream of the discharge point when a rainfall event is of such magnitude to cause the discharge to enter waters of the United States. This sampling is required no more than once per year. However, if adverse conditions preclude sampling for safety reasons, a justification for not sampling must be submitted with the Annual Report according to Permit Part 1.8.

1.6.2.6 All ambient samples must be grab samples.

1.6.2.7 Method Detection Limits. When performing storm water receiving water monitoring, the Permittee must use methods that can achieve an MDL of at least 0.5 µg/L for lead, with the exception of Hawk Inlet outfall 003 receiving water, where the MDL for lead is 1.0 µg/L, and 20 µg/L for zinc.

1.6.2.8 Reporting. All storm water monitoring results including both discharge and receiving water data must be included in the Annual Report and submitted to DEC by March 1 of the next year. See Permit Part 1.8. The Permittee must include a map showing receiving water sample sites in relation to storm water outfall locations, analytical results, and an evaluation of the results. The Annual Report must be submitted electronically and a hard copy provided upon request.

1.6.3 Site 108 Monitoring

1.6.3.1 The Permittee must conduct monitoring in Hawk Inlet at DEC-approved monitoring site 108. See Figure 2.

1.6.3.2 To the extent practicable, quarterly receiving water sample collection must occur on the same day as effluent sample collection.

1.6.3.3 All site 108 samples must be grab samples, taken at least quarterly, and from a depth of five feet below the surface.

1.6.3.4 Samples must be analyzed for the parameters listed in Table 5 and must achieve MDLs that are equivalent to or less than those listed in Table 5. The Permittee may request different MDLs. The request must be in writing and must be approved by DEC.

1.6.3.5 QA/QC plans for all the monitoring must be documented in the QAPP required under Permit Part 2.1.

1.6.3.6 Site 108 monitoring results must be submitted to DEC with the Annual Report required by Permit Part 1.8. At a minimum, the Annual Report must include:

1.6.3.6.1 Dates of sample collection and analyses,

1.6.3.6.2 Results of sample analyses, and

1.6.3.6.3 Relevant QA/QC information, and

1.6.3.6.4 Comparison between effluent and site 108 data.

1.6.4 For purposes of reporting 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 calculations using data from the receiving waterbody, zero may be assigned for values less than the MDL, and the {numeric value of the MDL} may be assigned for values between the MDL and the ML.

1.7 Non-Routine Discharge Monitoring

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 listed in Permit Parts 1.2 or 1.3 that are likely to be contained in 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 according to Permit Appendix A, Part 3. The Permittee must report all additional monitoring according to Permit Appendix A, Part 3.3.

1.8 Annual Water Quality Monitoring Summary

Annual discharge and receiving water quality monitoring results must be summarized in an Annual Water Quality Monitoring Summary (Annual Report) and submitted by March 1 of the next 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 historical data, a graphical presentation of the data at each monitoring station versus time, and a comparison of upstream and downstream monitoring results. The Annual Report must be certified and signed in accordance with Permit Appendix A, Part 1.12 and contain information required by Permit Parts 1.2.6, 1.6.1.5, 1.6.2.8, 1.6.3.6, and 2.2.6.

2.0 SPECIAL CONDITIONS

2.1 QAPP

The Permittee must develop a QAPP for all monitoring required by this permit. Within 60 days of the effective date of this permit, the Permittee must update the QAPP and submit written notification to DEC that the updated QAPP is being implemented. An existing QAPP may be modified for submittal under this section provided that Permit Parts 2.1.1 through 2.1.4 are satisfied.

2.1.1 The QAPP 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.

2.1.2 Throughout all sample collection and analysis activities, the Permittee must use the EPA-approved QA/QC and chain-of-custody procedures described in the most recent versions of Requirements for Quality Assurance Project Plans (EPA/QA/R-5) and Guidance for Quality Assurance Project Plans (EPA/QA/G-5). The QAPP must be prepared in the format which is specified in these documents.

2.1.3 The Permittee must amend the QAPP whenever there is a modification in sample collection, sample analysis, or other procedure addressed by the QAPP.

2.1.4 Copies of the QAPP must be kept on site and made available to DEC upon request.

2.2 Best Management Practices Plan

2.2.1 Purpose. Through implementation of the best management practices plan (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. The BMP Plan must apply to all the components and facilities associated with the Greens Creek Mine.

2.2.2 Development and Implementation Schedule. The Permittee currently has an approved BMP Plan which achieves the objectives and the specific requirements listed in Permit Parts 2.2.3 through 2.2.6. The existing BMP plan may be modified under this section. The Permittee must implement the provisions of the plan as conditions of this permit and submit a notification to DEC within 60 days of the permit effective date.

2.2.3 Objectives. The Permittee must develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.

2.2.3.1 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.

2.2.3.2 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, storm water management, and wastewater treatment systems. BMP Plan elements must be developed in accordance with good engineering practices.

2.2.3.3 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.

2.2.4 Elements of the BMP Plan. The BMP Plan must be consistent with the objectives of Permit Part 2.2.3 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:

2.2.4.1 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.

2.2.4.2 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.

2.2.4.3 Description of Activities. The BMP Plan must provide a description of the activities taking place at the site which affect or may affect storm water runoff or which may result in the discharge of pollutants to waters of the United States during dry weather.

2.2.4.4 Description of Potential Pollutant Sources. The BMP Plan must identify all activities and significant materials which may potentially be significant storm water pollutant sources or may result in the discharge of pollutants during dry weather. The BMP Plan must include at a minimum:

2.2.4.4.1 Drainage:

2.2.4.4.1.1 A site topographic map that indicates site boundaries, access and haul roads; location of storm water outfalls and outlines of drainage areas; storage and maintenance areas for equipment, fuel, chemicals, and explosives; materials handling areas; areas used for storage of overburden, materials, soils, tailings, or wastes; location and points of permitted discharges; and, springs, streams, wetlands and other waters of the United States.

2.2.4.4.1.2 For each area of the site that generates storm water discharges or may result in the discharge of pollutants during dry weather (e.g., a tank overflow or leakage), the Permittee must provide a prediction of the direction of flow and an identification of the types of pollutants which are likely to be present in discharges.

2.2.4.4.2 Inventory of Exposed Materials. The BMP Plan must include an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. The inventory must include a description of the exposed materials; method and location of onsite storage and disposal; and materials management practices employed to minimize contact with storm water runoff and reduce pollutants in storm water runoff.

2.2.4.4.3 Spills and Leaks. The BMP Plan must include a list of significant spills and leaks of toxic or hazardous pollutants that discharged through a permitted outfall, a storm water conveyance, or otherwise entered waters of the United States. The list must include significant spills or leaks occurring three years prior to the effective date of this permit and must be updated as appropriate during the term of the permit.

2.2.4.4.4 Risk Identification and Summary of Potential Pollutant Sources. The BMP Plan must identify all activities, sites, and significant materials which may potentially be pollutant sources. The description must specifically list any potential source of pollutants at the site, and for each pollutant source, pollutant(s) or pollutant parameter(s) of concern must be identified.

2.2.4.5 Measures and Controls. The Permittee must develop a description of pollution prevention controls, BMPs, and other measures appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in the BMP Plan must reflect identified potential sources of pollutants at the facility. The description of management controls must address the following minimum components:

2.2.4.5.1 Good Housekeeping. Good housekeeping requires the maintenance of areas which may contribute pollutants to surface waters.

2.2.4.5.2 Preventative Maintenance. A preventative maintenance program must be developed that includes inspection and maintenance of wastewater and storm water management devices, inspection and testing of facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment systems

2.2.4.5.3 Spill Prevention and Response Procedures. Areas where spills could result in the discharge of pollutants must be identified clearly in the BMP Plan. The description of each area must include procedures for spill prevention and procedures for cleaning up spills.

2.2.4.5.4 Sediment and Erosion Control. The BMP Plan must identify areas that have a high potential for significant erosion of soil and/or other materials and identify BMPs and other measures to be used to limit erosion and/or remove sediment from storm water runoff.

2.2.4.5.5 Management of Runoff. The BMP Plan must address the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The BMP Plan must include provisions for implementation and maintenance of such measures that the Permittee determines to be reasonable and appropriate.

2.2.4.5.6 Capping. Where capping of a contaminant source is necessary, the BMP Plan must identify the source being capped and procedures and materials used to cap the contaminant source.

2.2.4.5.7 Treatment. The BMP Plan must provide a description of how wastewater and storm water will be treated prior to discharging to waters of the United States, if treatment is necessary.

2.2.4.5.8 Inspections and Comprehensive Site Compliance Evaluations. The BMP Plan must include provisions for qualified personnel to inspect BMPs and designated equipment and facility areas at least on a monthly basis, however, inspections are not required when adverse weather conditions make a location inaccessible. Inspections must include, at a minimum, all material handling and storage areas, wastewater and storm water control and containment structures, and erosion control systems. Records of inspections must be maintained. The BMP Plan must also include provisions for conducting comprehensive site compliance evaluations. See Permit Part 2.2.5.

2.2.4.5.9 Employee Training. The BMP Plan must outline employee training programs related to implementation of the BMP Plan and specify how often training will take place.

2.2.4.5.10 Recordkeeping and Internal Reporting Procedures. The following must be documented and incorporated into the BMP Plan: a description of incidents (such as spills, or other discharges), description of the quantity and quality of storm water discharges, inspections, maintenance activities, and training sessions.

2.2.4.6 Specific Best Management Practices. The BMP Plan must establish specific BMPs or other measures that ensure the following specific requirements are met:

2.2.4.6.1 Specific BMPs must be established for each of the storm water outfalls in Permit Part 1.3, Table 3. The BMPs must be sufficient to ensure that the storm water discharges from outfalls 003, 0004, 005.2, 005.3, 005.4, 005.5, 006, 007, 008, and 009 will not cause an exceedance of a water quality criterion resulting in a statistically significant reduction in receiving water quality for the same criterion.

2.2.4.6.2 Solids, sludge, or other pollutants removed in the course of treatment or control of water and wastewaters must be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

2.2.4.6.3 Ensure that material tracked from haul equipment onto bridges does not enter waters of the United States.

2.2.5 Comprehensive Site Compliance Evaluation. Qualified personnel must conduct comprehensive site compliance evaluations at appropriate intervals specified in the BMP Plan, but in no case less than once per year. Such evaluations must include:

2.2.5.1 Site Evaluation. Areas contributing to wastewater and storm water discharges and areas susceptible to leaks or spills must be visually inspected for evidence of, or the potential for, pollutants entering the permitted outfalls, storm water drainage system, or waters of the United States. Structural and non-structural BMPs and other measures to reduce pollutant loadings must be evaluated to determine whether they are adequate and properly implemented. Inspection of equipment needed to implement the BMP Plan, such as spill response equipment, must be made.

2.2.5.2 Updates and Revisions. Based on results of the site evaluation and inspection, the BMP Plan must be revised, as appropriate, within 30 days of such inspection and must provide for implementation of any changes to the BMP Plan in a timely manner, but in no case more than 90 days after the inspection.

2.2.6 BMP Plan Annual Report and Certification.

2.2.6.1 BMP Plan Annual Report. The Permittee must prepare a report annually summarizing the comprehensive site evaluations and inspections performed during the year. The report must include the scope and dates of the inspections/evaluations, major observations related to implementation of the BMP Plan, corrective actions taken as a result of the inspections/evaluations/monitoring, description of the quantity and quality of storm water discharged, and BMP Plan modifications made during the year. The report must also identify any incidents of non-compliance. The report must be retained as part of the BMP Plan and submitted to DEC by March 1 of the next year with the Annual Report. See Permit Part 1.8.

2.2.6.2 BMP Plan Annual Certification. The Permittee must prepare a certified statement that reviews (inspections and evaluations) required by Permit Part 2.2 have been completed and that the BMP Plan fulfills the requirements set forth in the permit. This statement must be signed in accordance with Appendix A, Part 1.12 and submitted to DEC by March 1 of the next year with the Annual Report. See Permit Part 1.8.

2.2.7 Documentation. The Permittee must maintain a copy of the BMP Plan at the facility and make it available to DEC upon request.

2.2.8 BMP Plan Modification.

2.2.8.1 The Permittee must amend the BMP Plan whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to surface waters.

2.2.8.2 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 of Permit Part 2.2.

2.2.8.3 Any changes to the BMP Plan must be consistent with the objectives and specific requirements of Permit Part 2.2. All changes in the BMP Plan must be contained in the BMP Plan Annual Report required under Permit Parts 1.8 and 2.2.6.1.

Figure 1: Facility Map

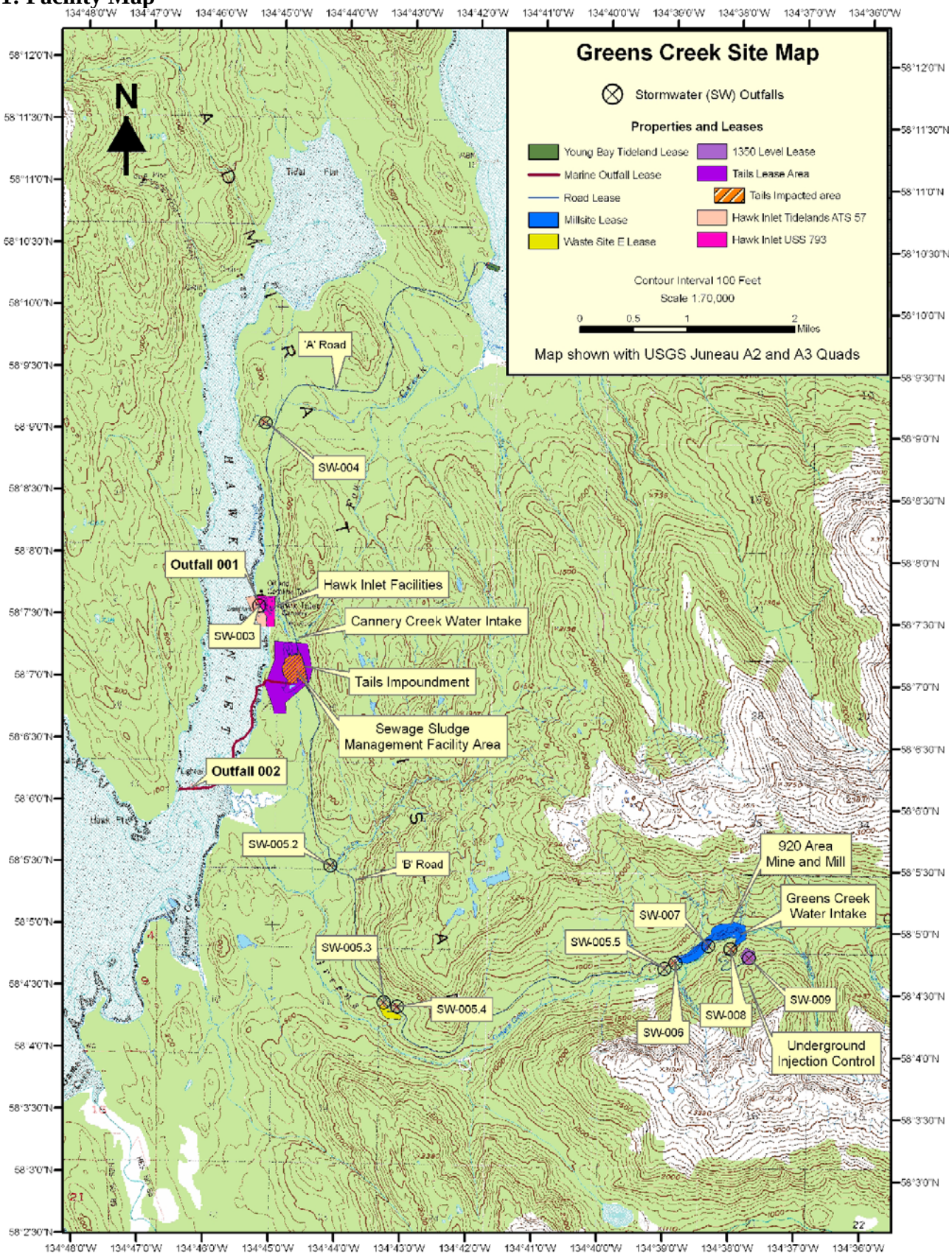


Figure 2: Hawk Inlet Monitoring Sites

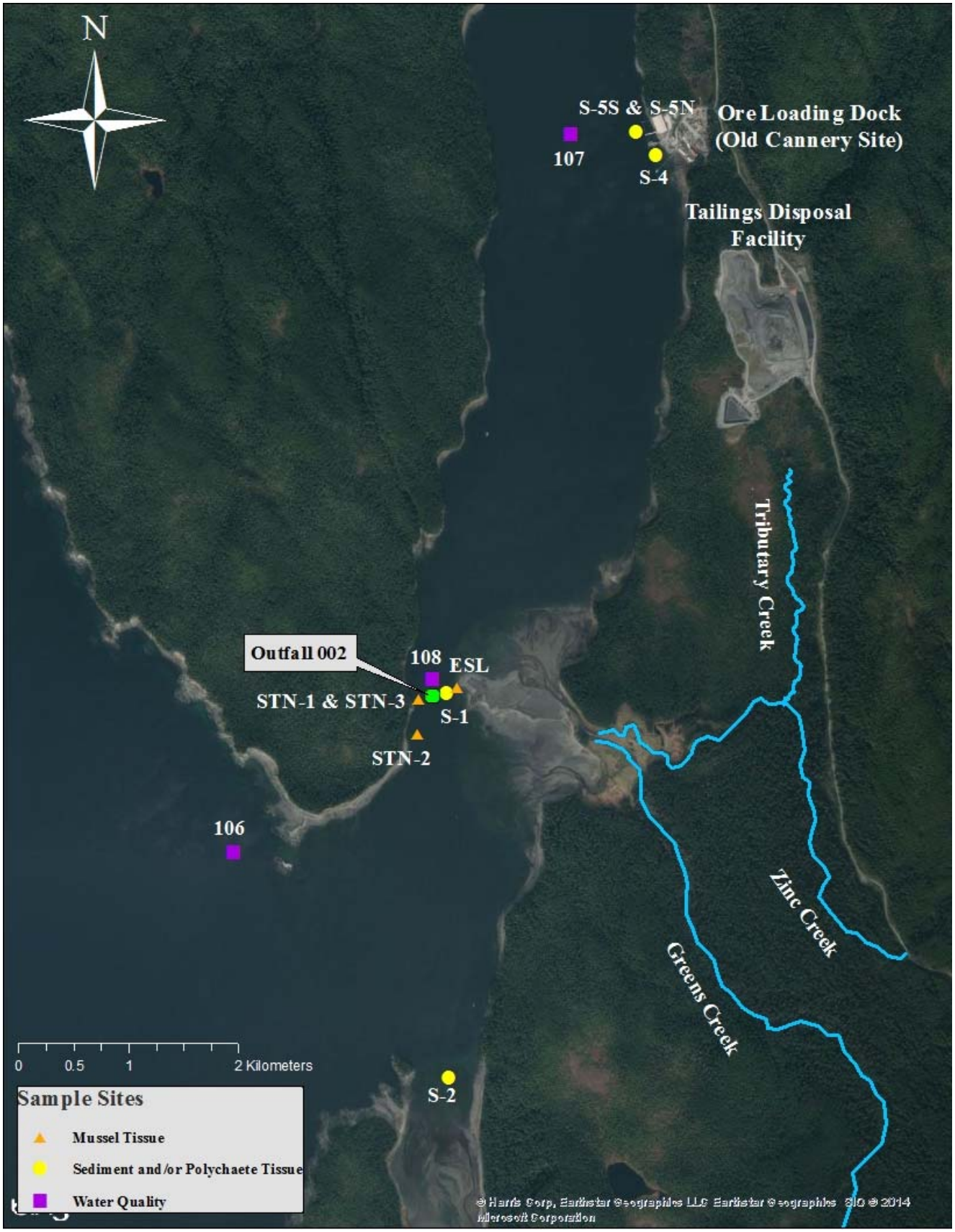
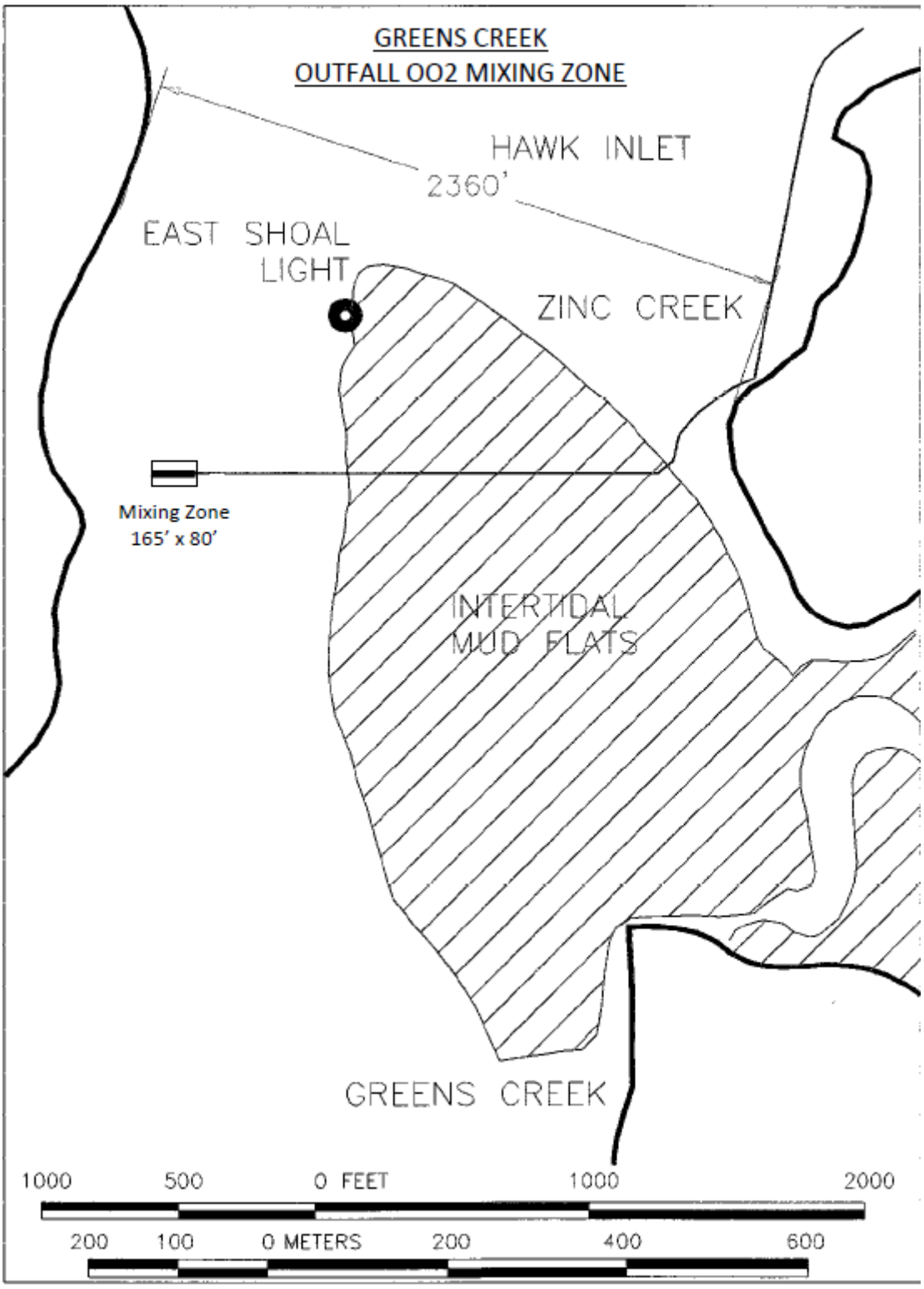


Figure 3: Mixing Zone Diagram



Appendix A

STANDARD CONDITIONS

APDES PERMIT

NONDOMESTIC DISCHARGES

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Appendix A of the permit contains standard regulatory language that must be included in all APDES permits. These requirements are based on the regulations and cannot be challenged in the context of an individual APDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements. Appendix A, Standard Conditions is an integral and enforceable part of the permit. Failure to comply with a Standard Condition in this Appendix constitutes a violation of the permit and is subject to enforcement.

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

Documents, reports, and plans required under the permit and Appendix A are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-7508
Email: DEC.Water.WQPermit@alaska.gov

1.1.2 Compliance and Enforcement Program

Documents and reports required under the permit and Appendix A relating to compliance are to be sent to the following address:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

1.2 Duty to Comply

A permittee shall comply with all conditions of the permittee's APDES permit. Any permit noncompliance constitutes a violation of 33 U.S.C 1251-1387 (Clean Water Act) and state law and is grounds for enforcement action including termination, revocation and reissuance, or modification of a permit, or denial of a permit renewal application. A permittee shall comply with effluent standards or prohibitions established under 33 U.S.C. 1317(a) for toxic pollutants within the time provided in the regulations that establish those effluent standards or prohibitions even if the permit has not yet been modified to incorporate the requirement.

1.3 Duty to Reapply

If a permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. In accordance with 18 AAC 83.105(b), a permittee with a currently effective permit shall reapply by submitting a new application at least 180 days before the existing permit expires, unless the Department has granted the permittee permission to submit an application on a later date. However, the Department will not grant permission for an application to be submitted after the expiration date of the existing permit.

1.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, a permittee may not assert as a defense that compliance with the conditions of the permit would have made it necessary for the permittee to halt or reduce the permitted activity.

1.5 Duty to Mitigate

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

1.6 Proper Operation and Maintenance

1.6.1 A permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances that the permittee installs or uses to achieve compliance with the conditions of the permit. The permittee's duty to operate and maintain properly includes using adequate laboratory controls and appropriate quality assurance procedures. However, a permittee is not required to operate back-up or auxiliary facilities or similar systems that a permittee installs unless operation of those facilities is necessary to achieve compliance with the conditions of the permit.

1.6.2 Operation and maintenance records shall be retained and made available at the site.

1.7 Permit Actions

A permit may be modified, revoked and reissued, or terminated for cause as provided in 18 AAC 83.130. If a permittee files a request to modify, revoke and reissue, or terminate a permit, or gives notice of planned changes or anticipated noncompliance, the filing or notice does not stay any permit condition.

1.8 Property Rights

A permit does not convey any property rights or exclusive privilege.

1.9 Duty to Provide Information

A permittee shall, within a reasonable time, provide to the Department any information that the Department requests to determine whether a permittee is in compliance with the permit, or whether cause exists to modify, revoke and reissue, or terminate the permit. A permittee shall also provide to the Department, upon request, copies of any records the permittee is required to keep under the permit.

1.10 Inspection and Entry

A permittee shall allow the Department, or an authorized representative, including a contractor acting as a representative of the Department, at reasonable times and on presentation of credentials establishing authority and any other documents required by law, to:

1.10.1 Enter the premises where a permittee's regulated facility or activity is located or conducted, or where permit conditions require records to be kept;

1.10.2 Have access to and copy any records that permit conditions require the permittee to keep;

1.10.3 Inspect any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under a permit; and

1.10.4 Sample or monitor any substances or parameters at any location for the purpose of assuring permit compliance or as otherwise authorized by 33 U.S.C. 1251-1387 (Clean Water Act).

1.11 Monitoring and Records

A permittee must comply with the following monitoring and recordkeeping conditions:

1.11.1 Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

1.11.2 The permittee shall retain records in Alaska of all monitoring information for at least five years, or longer at the Department's request at any time, from the date of the sample, measurement, report, or application. Monitoring records required to be kept include:

1.11.2.1 All calibration and maintenance records,

1.11.2.2 All original strip chart recordings or other forms of data approved by the Department for continuous monitoring instrumentation,

1.11.2.3 All reports required by a permit,

1.11.2.4 Records of all data used to complete the application for a permit,

1.11.2.5 Field logbooks or visual monitoring logbooks,

1.11.2.6 Quality assurance chain of custody forms,

1.11.2.7 Copies of discharge monitoring reports, and

1.11.2.8 A copy of this APDES permit.

1.11.3 Records of monitoring information must include:

1.11.3.1 The date, exact place, and time of any sampling or measurement;

1.11.3.2 The name(s) of any individual(s) who performed the sampling or measurement(s);

1.11.3.3 The date(s) and time any analysis was performed;

1.11.3.4 The name(s) of any individual(s) who performed any analysis;

1.11.3.5 Any analytical technique or method used; and

1.11.3.6 The results of the analysis.

1.11.4 Monitoring Procedures

Analyses of pollutants must be conducted using test procedures approved under 40 CFR Part 136, adopted by reference at 18 AAC 83.010, for pollutants with approved test procedures, and using test procedures specified in the permit for pollutants without approved methods.

1.12 Signature Requirement and Penalties

1.12.1 Any application, report, or information submitted to the Department in compliance with a permit requirement must be signed and certified in accordance with 18 AAC 83.385. Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under a permit, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be subject to penalties under 33 U.S.C. 1319(c)(4), AS 12.55.035(c)(1)(B), (c)(2), and (c)(3) and AS 46.03.790(g).

1.12.2 In accordance with 18 AAC 83.385, an APDES permit application must be signed as follows:

1.12.2.1 For a corporation, a responsible corporate officer shall sign the application; in this subsection, a responsible corporate officer means:

1.12.2.1.1 A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

1.12.2.1.2 The manager of one of more manufacturing, production, or operating facilities, if

1.12.2.1.2.1 The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;

1.12.2.1.2.2 The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and

1.12.2.1.2.3 Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

1.12.2.2 For a partnership or sole proprietorship, by the general partner or the proprietor, respectively, shall sign the application.

1.12.2.3 For a municipality, state, federal, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means:

1.12.2.3.1 The chief executive officer of the agency; or

1.12.2.3.2 A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

1.12.3 Any report required by an APDES permit, and a submittal with any other information requested by the Department, must be signed by a person described in Appendix A, Part 1.12.2, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

1.12.3.1 The authorization is made in writing by a person described in Appendix A, Part 1.12.2;

1.12.3.2 The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility; or an individual or position having overall responsibility for environmental matters for the company; and

1.12.3.3 The written authorization is submitted to the Department to the Permitting Program address in Appendix A, Part 1.1.1.

1.12.4 If an authorization under Appendix A, Part 1.12.3 is no longer effective because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Appendix A, Part 1.12.3 must be submitted to the Department before or together with any report, information, or application to be signed by an authorized representative.

1.12.5 Any person signing a document under Appendix A, Part 1.12.2 or Part 1.12.3 shall certify as follows:

"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."

1.13 Proprietary or Confidential Information

1.13.1 A permit applicant or permittee may assert a claim of confidentiality for proprietary or confidential business information by stamping the words “confidential business information” on each page of a submission containing proprietary or confidential business information. The Department will treat the stamped submissions as confidential if the information satisfies the test in 40 CFR §2.208, adopted by reference at 18 AAC 83.010, and is not otherwise required to be made public by state law.

1.13.2 A claim of confidentiality under Appendix A, Part 1.13.1 may not be asserted for the name and address of any permit applicant or permittee, a permit application, a permit, effluent data, sewage sludge data, and information required by APDES or NPDES application forms provided by the Department, whether submitted on the forms themselves or in any attachments used to supply information required by the forms.

1.13.3 A permittee’s claim of confidentiality authorized under Appendix A, Part 1.13.1 is not waived if the Department provides the proprietary or confidential business information to the EPA or to other agencies participating in the permitting process. The Department will supply any information obtained or used in the administration of the state APDES program to the EPA upon request under 40 CFR §123.41, as revised as of July 1, 2005. When providing information submitted to the Department with a claim of confidentiality to the EPA, the Department will notify the EPA of the confidentiality claim. If the Department provides the EPA information that is not claimed to be confidential, the EPA may make the information available to the public without further notice.

1.14 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any action or relieve a permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under

state laws addressing oil and hazardous substances.

1.15 Cultural and Paleontological Resources

If cultural or paleontological resources are discovered because of this disposal activity, work that would disturb such resources is to be stopped, and the Office of History and Archaeology, a Division of Parks and Outdoor Recreation of the Alaska Department of Natural Resources (http://www.dnr.state.ak.us/parks/oha/), is to be notified immediately at (907) 269-8721.

1.16 Fee

A permittee must pay the appropriate permit fee described in 18 AAC 72.

1.17 Other Legal Obligations

This permit does not relieve the permittee from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted and all plan approvals implemented by the permittee pursuant to the terms of this permit shall comply with all applicable local, state, and federal laws and regulations.

2.0 Special Reporting Obligations

2.1 Planned Changes

2.1.1 The permittee shall give notice to the Department as soon as possible of any planned physical alteration or addition to the permitted facility if:

2.1.1.1 The alteration or addition may make the facility a “new source” under one or more of the criteria in 18 AAC 83.990(44); or

2.1.1.2 The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged if those pollutants are not subject to effluent limitations in the permit or to notification requirements under 18 AAC 83.610.

2.1.2 If the proposed changes are subject to plan review, then the plans must be submitted at least 30 days before implementation of changes (see 18 AAC 15.020 and 18 AAC 72 for plan review requirements). Written approval is not required for an emergency repair or routine maintenance.

2.1.3 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.2 Anticipated Noncompliance

2.2.1 A permittee shall give seven days’ notice to the Department before commencing any planned change in the permitted facility or activity that may result in noncompliance with permit requirements.

2.2.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.3 Transfers

2.3.1 A permittee may not transfer a permit for a facility or activity to any person except after notice to the Department in accordance with 18 AAC 83.150. The Department may modify or revoke and reissue the permit to change the name of the permittee and incorporate such other requirements under 33 U.S.C. 1251-1387 (Clean Water Act) or state law.

2.3.2 Written notice must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.4 Compliance Schedules

2.4.1 A permittee must submit progress or compliance reports on interim and final requirements in any compliance schedule of a permit no later than 14 days following the scheduled date of each requirement.

2.4.2 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.5 Corrective Information

2.5.1 If a permittee becomes aware that it failed to submit a relevant fact in a permit application or submitted incorrect information in a permit application or in any report to the Department, the permittee shall promptly submit the relevant fact or the correct information.

2.5.2 Information must be sent to the Permitting Program address in Appendix A, Part 1.1.1.

2.6 Bypass of Treatment Facilities

2.6.1 Prohibition of Bypass

Bypass is prohibited. The Department may take enforcement action against a permittee for any bypass, unless:

2.6.1.1 The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2.6.1.2 There were no feasible alternatives to the bypass, including use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. However, this condition is not satisfied if the permittee, in the exercise of reasonable engineering judgment, should have installed adequate back-up equipment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

2.6.1.3 The permittee provides notice to the Department of a bypass event in the manner, as appropriate, under Appendix A, Part 2.6.2.

2.6.2 Notice of bypass

2.6.2.1 For an anticipated bypass, the permittee submits notice at least 10 days before the date of the bypass. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the conditions of Appendix A, Parts 2.6.1.1 and 2.6.1.2.

2.6.2.2 For an unanticipated bypass, the permittee submits 24-hour notice, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting.

2.6.2.3 Written notice must be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

2.6.3 Notwithstanding Appendix A, Part 2.6.1, a permittee may allow a bypass that:

2.6.3.1 Does not cause an effluent limitation to be exceeded, and

2.6.3.2 Is for essential maintenance to assure efficient operation.

2.7 Upset Conditions

2.7.1 In any enforcement action for noncompliance with technology-based permit effluent limitations, a permittee may claim upset as an affirmative defense. A permittee seeking to establish the occurrence of an upset has the burden of proof to show that the requirements of Appendix A, Part 2.7.2 are met.

2.7.2 To establish the affirmative defense of upset, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

2.7.2.1 An upset occurred and the permittee can identify the cause or causes of the upset;

2.7.2.2 The permitted facility was at the time being properly operated;

2.7.2.3 The permittee submitted 24-hour notice of the upset, as required in 18 AAC 83.410(f) and Appendix A, Part 3.4, Twenty-four Hour Reporting; and

2.7.2.4 The permittee complied with any mitigation measures required under 18 AAC 83.405(e) and Appendix A, Part 1.5, Duty to Mitigate.

2.7.3 Any determination made in administrative review of a claim that noncompliance was caused by upset, before an action for noncompliance is commenced, is not final administrative action subject to judicial review.

2.8 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

2.8.1 In addition to the reporting requirements under 18 AAC 83.410, an existing manufacturing, commercial, mining, and silvicultural discharger shall notify the Department as soon as that discharger knows or has reason to believe that any activity has occurred or will occur that would result in:

2.8.1.1 The discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.1.1 One hundred micrograms per liter (100 µg/L);

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

2.8.1.1.3 Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.1.4 The level established by the Department in accordance with 18 AAC 83.445.

2.8.1.2 Any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

2.8.1.2.1 Five hundred micrograms per liter (500 µg/L);

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

2.8.1.2.3 Ten times the maximum concentration value reported for that pollutant in the permit application in accordance with 18 AAC 83.310(c)-(g); or

2.8.1.2.4 The level established by the Department in accordance with 18 AAC 83.445.

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

A permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into the receiving waters. Samples and measurements must be representative of the volume and nature of the monitored activity or discharge.

3.2 Reporting of Monitoring Results

At intervals specified in the permit, monitoring results must be reported on the EPA discharge monitoring report (DMR) form, as revised as of March 1999, adopted by reference.

3.2.1 Monitoring results shall be summarized each month on the DMR or an approved equivalent report. The permittee must submit reports monthly postmarked by the 15th day of the following month.

3.2.2 The permittee must sign and certify all DMRs and all other reports in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. All signed and certified legible original DMRs and all other documents and reports must be submitted to the Department at the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

3.2.3 If, during the period when this permit is effective, the Department makes available electronic reporting, the permittee may, as an alternative to the requirements of Appendix A, Part 3.2.2, submit monthly DMRs electronically by the 15th day of the following month in accordance with guidance provided by the Department. The permittee must certify all DMRs and other reports, in accordance with the requirements of Appendix A, Part 1.12, Signatory Requirements and Penalties. The permittee must retain the legible originals of these documents and make them available to the Department upon request.

3.3 Additional Monitoring by Permittee

If the permittee monitors any pollutant more frequently than the permit requires using test procedures approved in 40 CFR Part 136, adopted by reference at 18 AAC 83.010, or as specified in this permit, the results of that additional monitoring must be included in the calculation and reporting of the data submitted in the DMR required by Appendix A, Part 3.2. All limitations that require averaging of measurements must be calculated using an arithmetic means unless the Department specifies another method in the permit. Upon request by the Department, the permittee must submit the results of any other sampling and monitoring regardless of the test method used.

3.4 Twenty-four Hour Reporting

A permittee shall report any noncompliance event that may endanger health or the environment as follows:

3.4.1 A report must be made:

3.4.1.1 Orally within 24 hours after the permittee becomes aware of the circumstances, and

3.4.1.2 In writing within five days after the permittee becomes aware of the circumstances.

3.4.2 A report must include the following information:

3.4.2.1 A description of the noncompliance and its causes, including the estimated volume or weight and specific details of the noncompliance;

3.4.2.2 The period of noncompliance, including exact dates and times;

3.4.2.3 If the noncompliance has not been corrected, a statement regarding the anticipated time the noncompliance is expected to continue; and

3.4.2.4 Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3.4.3 An event that must be reported within 24 hours includes:

3.4.3.1 An unanticipated bypass that exceeds any effluent limitation in the permit (see Appendix A, Part 2.6, Bypass of Treatment Facilities).

3.4.3.2 An upset that exceeds any effluent limitation in the permit (see Appendix A, Part 2.7, Upset Conditions).

3.4.3.3 A violation of a maximum daily discharge limitation for any of the pollutants listed in the permit as requiring 24-hour reporting.

3.4.4 The Department may waive the written report on a case-by-case basis for reports under Appendix A, Part 3.4 if the oral report has been received within 24 hours of the permittee becoming aware of the noncompliance event.

3.4.5 The permittee may satisfy the written reporting submission requirements of Appendix A, Part 3.4 by submitting the written report via e-mail, if the following conditions are met:

3.4.5.1 The Noncompliance Notification Form or equivalent form is used to report the noncompliance;

3.4.5.2 The written report includes all the information required under Appendix A, Part 3.4.2;

3.4.5.3 The written report is properly certified and signed in accordance with Appendix A, Parts 1.12.3 and 1.12.5.;

3.4.5.4 The written report is scanned as a PDF (portable document format) document and transmitted to the Department as an attachment to the e-mail; and

3.4.5.5 The permittee retains in the facility file the original signed and certified written report and a printed copy of the conveying email.

3.4.6 The e-mail and PDF written report will satisfy the written report submission requirements of this permit provided the e-mail is received by the Department within five days after the time the permittee becomes aware of the noncompliance event and the e-mail and written report satisfy the criteria of Part 3.4.5. The e-mail address to report noncompliance is: dec-wqreporting@alaska.gov

3.5 Other Noncompliance Reporting

A permittee shall report all instances of noncompliance not required to be reported under Appendix A, Parts 2.4 (Compliance Schedules), 3.3 (Additional Monitoring by Permittee), and 3.4 (Twenty-four Hour Reporting) at the time the permittee submits monitoring reports under Appendix A, Part 3.2 (Reporting of Monitoring Results). A report of noncompliance under this part must contain the information listed in Appendix A, Part 3.4.2 and be sent to the Compliance and Enforcement Program address in Appendix A, Part 1.1.2.

4.0 Penalties for Violations of Permit Conditions

Alaska laws allow the State to pursue both civil and criminal actions concurrently. The following is a summary of Alaska law. Permittees should read the applicable statutes for further substantive and procedural details.

4.1 Civil Action

Under AS 46.03.760(e), a person who violates or causes or permits to be violated a regulation, a lawful order of the Department, or a permit, approval, or acceptance, or term or condition of a permit, approval or acceptance issued under the program authorized by AS 46.03.020 (12) is liable, in a civil action, to the State for a sum to be assessed by the court of not less than $500 nor more than $100,000 for the initial violation, nor more than $10,000 for each day after that on which the violation continues, and that shall reflect, when applicable:

4.1.1 Reasonable compensation in the nature of liquated damages for any adverse environmental effects caused by the violation, that shall be determined by the court according to the toxicity, degradability, and dispersal characteristics of the substance discharged, the sensitivity of the receiving environment, and the degree to which the discharge degrades existing environmental quality;

4.1.2 Reasonable costs incurred by the State in detection, investigation, and attempted correction of the violation;

4.1.3 The economic savings realized by the person in not complying with the requirements for which a violation is charged; and

4.1.4 The need for an enhanced civil penalty to deter future noncompliance.

4.2 Injunctive Relief

4.2.1 Under AS 46.03.820, the Department can order an activity presenting an imminent or present danger to public health or that would be likely to result in irreversible damage to the environment be discontinued. Upon receipt of such an order, the activity must be immediately discontinued.

4.2.2 Under AS 46.03.765, the Department can bring an action in Alaska Superior Court seeking to enjoin ongoing or threatened violations for Department-issued permits and Department statutes and regulations.

4.3 Criminal Action

Under AS 46.03.790(h), a person is guilty of a Class A misdemeanor if the person negligently:

4.3.1 Violates a regulation adopted by the Department under AS 46.03.020(12);

4.3.2 Violates a permit issued under the program authorized by AS 46.03.020(12);

4.3.3 Fails to provide information or provides false information required by a regulation adopted under AS 46.03.020(12);

4.3.4 Makes a false statement, representation, or certification in an application, notice, record, report, permit, or other document filed, maintained, or used for purposes of compliance with a permit issued under or a regulation adopted under AS 46.03.020(12); or

4.3.5 Renders inaccurate a monitoring device or method required to be maintained by a permit issued or under a regulation adopted under AS 46.03.020(12).

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not

an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,000; (2) three times the pecuniary gain realized by the defendant as a result of the offense; or (3) three times the pecuniary damage or loss caused by the defendant to another, or the property of another, as a result of the offense (AS 12.55.035(c)(1), (c)(2), and (c)(3)).

Appendix B

ACRONYMS

APPENDIX B

The following acronyms are terms found in the Alaska Pollutant Discharge Elimination System (APDES) permit.

18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database http://www.legis.state.ak.us/cgi-bin/folioisa.dll/aac
40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
APDES	Alaska Pollutant Discharge Elimination System
AS	Alaska Statutes
BOD_5	Biochemical Oxygen Demand, 5-day
BMP	Best Management Practices
CFR	Code of Federal Regulations
CWA	Clean Water Act
CVAA	Cold Vapor Atomic Absorption
°C	Degrees Celsius
DEC	Department of Environmental Conservation
DMR	Discharge Monitoring Report
EPA	U.S. Environmental Protection Agency
GFAA	Graphite Furnace Atomic Absorption
ICP	Inductively Coupled Plasma
MDL	Method Detection Limit
mg/kg	Milligrams per Kilogram

mg/L	Milligrams per Liter
mL	Milliliter
mgd	Million gallons per day
ML	Minimum Level of Quantification
NTU	Nephelometric Turbidity Units
PSEP	Puget Sound Estuary Program
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
s.u.	Standard Units
TSS	Total Suspended Solids
µg/L	Micrograms per Liter
µS/cm	Microsiemens per Centimeter
U.S.C.	United States Code
WAD	Weak Acid Dissociable

Appendix C

DEFINITIONS

APPENDIX C

The following are definitions of relevant terms associated with the APDES permit. Consult the footnote references for an expanded list of terms and definitions.

Alaska Pollutant Discharge Elimination System (APDES) [a]	The state's program, approved by EPA under 33 U.S.C. 1342(b), for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and imposing and enforcing pretreatment requirements under 33 U.S.C. 1317, 1328, 1342, and 1345
Annual	Annual shall be once per calendar year
Average	An arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities
Average Monthly Discharge Limitation [a]	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 for that month
Best Management Practices (BMPs) [a]	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.
Biochemical Oxygen Demand (BOD_5) [c]	The amount, in milligrams per liter, of oxygen used in the biochemical oxidation of organic matter in five days at 20º C
Bypass [a]	The intentional diversion of waste streams from any portion of a treatment facility
Clean Water Act (CWA) [a]	Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972
Criteria [b]	Set concentrations or limits of water quality parameters that, when not exceeded, will protect an organism, a population of organisms, a community of organisms, or a prescribed water use with a reasonable degree of safety. Additionally, criteria may be narrative statements instead of a numerical concentrations or limits.
Daily Discharge [a]	The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with a limitation expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
Department [a]	The Alaska Department of Environmental Conservation
Discharge [a]	When used without qualification, discharge means the discharge of a pollutant.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See EPA Permit Writers Manual

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Discharge of a Pollutant [a]	Any addition of any pollutant or combination of pollutants to waters of the United States from any point source or to waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. Discharge includes any addition of pollutants into waters of the United States from surface runoff that is collected or channeled by humans; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person that do not lead to a treatment works; discharges through pipes, sewers, or other conveyances leading into privately owned treatment works; and does not include an addition of pollutants by any indirect discharger.
Domestic Wastewater [c]	Waterborne human wastes or graywater derived from dwellings, commercial buildings, institutions, or similar structures. "Domestic wastewater" includes the contents of individual removable containers used to collect and temporarily store human wastes.
Effluent [b]	The segment of a wastewater stream that follows the final step in a treatment process and precedes discharge of the wastewater stream to the receiving environment.
Estimated	A way to estimate the discharge volume. Approvable estimations include, but are not limited to, the number of persons per day at the facility, volume of potable water produced per day, lift station run time, etc.
Fecal Coliform Bacteria (FC) [b]	Bacteria that can ferment lactose at 44.5° + 0.2°C to produce gas in a multiple tube procedure. Fecal coliform bacteria also means all bacteria that produce blue colonies in a membrane filtration procedure within 24 ± 2 hours of incubation at 44.5° + 0.2°C in an M-FC broth.
Grab Sample	A single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place.
Maximum Daily Discharge Limitation [a]	The highest allowable “daily discharge”.
Measured	The actual volume of wastewater discharged using appropriate mechanical or electronic equipment to provide a totalized reading. Measure does not provide a recorded measurement of instantaneous rates.
Method Detection Limit (MDL) [d]	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.
Micrograms per Liter (μg/L) [b]	The concentration at which one millionth of a gram (10^{-6} g) is found in a volume of one liter.
Milligrams per Liter (mg/L) [b]	The concentration at which one thousandth of a gram (10^{-3} g) is found in a volume of one liter. It is approximately equal to the unit “parts per million (ppm),” formerly of common use.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See EPA Permit Writers Manual

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Minimum Level of Quantification (ML) [e]	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. This level is used as the compliance level if the effluent limit is below it.
Mixing Zone [b]	A volume of water adjacent to a discharge in which wastes discharged mix with the receiving water
Month	Month shall be the time period from the 1st of a calendar month to the last day in the month
Monthly Average	The average of daily discharges over a monitoring month calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month
Permittee	A company, organization, association, entity, or person who is issued a wastewater permit and is responsible for ensuring compliance, monitoring, and reporting as required by the permit
pH [f]	A measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in moles per liter. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.
Principal Executive Officer [a]	The chief executive officer of the agency or a senior executive officer having responsibility for the overall operations of a principal geographic unit of division of the agency
Pollutant [a]	Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under 42 U.S.C. 2011), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, or agricultural waste discharged into water
Quality Assurance Project Plan (QAPP)	A system of procedures, checks, audits, and corrective actions to ensure that all research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality
Quarter	The time period of three months based on the calendar year beginning with January
Receiving Waterbody	Lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state. (See "Waters of the United States" at 18 AAC 83.990(77))
Report	Report results of analysis

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See EPA Permit Writers Manual

APPENDIX C

Responsible Corporate Officer [a]	A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation The Responsible Corporate Officer can also be the manager of one or more manufacturing, production, or operating facilities if the requirements of 18 AAC 83.385(a)(1)(B)(i)-(iii) are met.
Severe Property Damage [a]	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.
Sheen [b]	An iridescent appearance on the water surface
Statistically Significant	A) The permittee shall specify in the operating record one of the following statistical methods to be used in evaluating water monitoring data for each constituent. The statistical method selected must be conducted separately for each constituent. The methods to be selected from and used are: (1) a parametric analysis of variance, followed by multiple-comparisons procedures to identify statistically significant evidence of contamination; the method must include estimation and testing of the contrasts between each outfall's mean and the background mean levels for each constituent; (2) an analysis of variance based on ranks, followed by multiple-comparisons procedures to identify statistically significant evidence of contamination; this method must include estimation and testing of the contrasts between each outfall's median and the background median levels for each constituent; (3) a tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each outfall is compared to the upper tolerance or prediction limit; (4) a control chart approach that gives control limits for each constituent; or (5) another approved statistical test method that meets the performance standards of (B) of this definition. (B) A statistical method selected under (A) of this section must comply with the following performance standards, as appropriate: (1) the statistical method used to evaluate water monitoring data must be appropriate for the distribution of chemical parameters or constituents; if the distribution of the chemical parameters or constituents is shown by the permittee to be inappropriate for a normal theory test, then the data must be transformed, or a distribution-free theory test must be used; if the distributions for the constituents differ, more than one statistical method might be needed; (2) if an individual outfall comparison procedure is used to compare an individual outfall's constituent concentration with background constituent concentrations or a water protection standard, the test must be done at a Type I error level no less than 0.01 for each testing period; if a multiple-comparisons procedure is used, the Type I experiment-wise error rate for each testing period must be no less than 0.05; however,

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See EPA Permit Writers Manual

	the Type I error of no less than 0.01 for individual outfall comparisons must be maintained; this performance standard does not apply to tolerance intervals, prediction intervals, or control charts; (3) if a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values must protect public health and the environment; the parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent being analyzed; (4) if a tolerance interval or a prediction interval is used to evaluate water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain must protect public health and the environment; these parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent being analyzed; (5) the statistical method must account for data below the limit of detection with one or more statistical procedures that protect public health and the environment; a minimum level of quantification that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility; and (6) if necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
Total Suspended Solids (TSS) [f]	A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136
Upset [a]	An exceptional incident in which there is unintentional and temporary noncompliance with technology-based 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.
Wastewater Treatment	Any process to which wastewater is subjected in order to remove or alter its objectionable constituents and make it suitable for subsequent use or acceptable for discharge to the environment
Waters of the United States	Has the meaning given in 18 AAC 83.990(77)
Weekly	During the time period of Sunday through Saturday

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
e) See EPA Technical Support Document
f) See EPA Permit Writers Manual