Permit No.: AK-004320-6

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",

Kennecott Greens Creek Mining Company
P.O. Box 32199
Juneau, Alaska 99803

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

Outfall	Receiving Water	Latitude	Longitude
001	Hawk Inlet	58° 07' 30" N	134° 45' 15" W
002	Hawk Inlet	58° 07' 00" N	134° 44' 30" W
003	Hawk Inlet	58° 07' 30" N	134° 45' 15" W
004	wetlands	58° 08' 00" N	134° 44' 55" W
005.2	Zinc Creek	58° 05' 01" N	134° 44' 55" W
005.3	Greens Creek	58° 04' 00" N	134° 43' 00" W
005.4	Greens Creek	58° 04' 00" N	134° 43' 00" W
005.5	Greens Creek	58° 05' 01" N	134° 37' 00" W
006	Greens Creek	58° 05' 00" N	134° 37' 00" W
007	Greens Creek	58° 05' 00" N	134° 45' 13" W
008	Greens Creek	58° 05' 00" N	134° 45' 15" W
009	Greens Creek	58° 04' 09" N	134° 45' 14" W

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

This permit shall become effective July 1, 2005.

This permit and the authorization to discharge shall expire at midnight, July 1, 2010.

Signed this 20th day of May 2005.

/s/ Robert R. Robichard
Michael F. Gearheard
Director, Office of Water & Watersheds
Region 10

TABLE OF CONTENTS

I. LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the permittee is authorized to discharge pollutants from outfalls 001, 002, and 003 to Hawk Inlet, outfall 004 to wetlands, and outfalls 005.2, 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.

A. Effluent Limitations and Monitoring for Outfall 001

1. 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.

Table 1 - Outfall 001 Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limitations			Monitoring Requirements		
		Maximum Daily	Average Weekly	Average Monthly	Sample Location	Sample Frequency	Sample Type
outfall flow	gpd	--	--	--	Effluent	daily	recording
Biochemical Oxygen Demand (BOD_5)	mg/l	--	45	30	Influent and Effluent	weekly	grab
	lb/day	--	0.54	0.36			
Total Suspended Solids (TSS)	mg/l	--	45	30	Influent and Effluent	weekly	grab
	lb/day	--	0.54	0.36			
Chlorine, total residual	ug/l	13.0[1]	--	7.5[1]	Effluent	weekly	grab
	lb/day	0.0007	--	0.0004			
Fecal Coliform	#/100 ml	21500	--	7000	Effluent	weekly	grab
pH	s.u.	see Permit Part I.A.3.			Effluent	weekly	grab

Footnote:
1 - The effluent limits for chlorine are not quantifiable using EPA-approved analytical methods. EPA will use 0.1 mg/l (the Minimum Level) as the compliance evaluation level for this parameter.

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 6.0 standard units (s.u.) nor greater than 9.0 s.u.

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

5. Percent Removal Requirements for BOD_5 and TSS are as follows: For any month, the percent removal for BOD_5 and TSS, as measured in the influent and effluent, must equal 85% as measured by concentration.

   Percent removal of BOD_5 and TSS must be reported on the Discharge Monitoring Reports (DMRs) for each parameter. The monthly average percent removal must be calculated from the arithmetic mean of the influent values and the arithmetic mean of the effluent values for that month. Influent and effluent samples must be taken over approximately the same time period.

6. Method Detection Limits. For all effluent monitoring, the permittee must use methods that can achieve a method detection limit (MDL) less than the effluent limitation or for chlorine, the minimum level.

   For purposes of reporting on the DMR, if a value is greater than the MDL, the permittee must report the actual value. If a value is less than the MDL, the permittee must report "less than {numeric MDL}" on the DMR. For purposes of calculating monthly averages, zero may be used for values less than the MDL.

B. Effluent Limitations and Monitoring for Outfall 002

1. The permittee must limit and monitor discharges from outfall 002 as specified in Table 2, 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.

Table 2 - Outfall 002 Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limitations		Monitoring Requirements	
		Maximum Daily	Average Monthly	Sample Frequency	Sample Type
Outfall Flow	mgd	3.6	2.39	continuous	recording
Cadmium[1]	ug/L	100	50	weekly	24-hour composite

Table 2 - Outfall 002 Effluent Limitations and Monitoring Requirements

Parameter	Units	Effluent Limitations		Monitoring Requirements	
		Maximum Daily	Average Monthly	Sample Frequency	Sample Type
Copper[1]	ug/L	300	150	weekly	24-hour composite
Lead[1]	ug/L	600	300	weekly	24-hour composite
Mercury[2]	ug/L	2.0	1.0	weekly	24-hour composite
Zinc[1]	ug/L	1000	500	weekly	24-hour composite
TSS	mg/L	30	20	weekly	24-hour composite
pH	s.u.	see Permit Part I.B.3.		daily	grab
Cyanide[3]	ug/L	–	–	weekly	24-hour composite
Temperature	^{o}C	--	--	weekly	grab
BOD_5	mg/L	--	–	monthly	24-hour composite
Fecal coliform bacteria	#/ 100 ml	--	--	monthly	24-hour composite
Total Residual Chlorine (TRC)	ug/L	--	--	quarterly[4]	grab

1 - Metals shall be measured as total recoverable.
2 - Mercury shall be measured as total.
3 - Cyanide shall be measured as weak acid dissociable (WAD)
4 - Quarterly sampling may be discontinued after 2 years (8 quarters) if all samples have levels of TRC below the detection level of 100 ug/L. Otherwise, 8 consecutive quarters of TRC levels below 100 ug/L is necessary to discontinue monitoring.

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 6.0 standard units (s.u.) nor greater than 9.0 s.u.

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

C. Effluent Limitations and Monitoring for Storm Water Outfalls

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, below.

2. Discharges from outfalls 003, 004, 005.2, 005.3, 005.4, 005.5, 006, 007, 008, and 009 must not cause or contribute to a State water quality standards violation.

Table 3 - Storm Water Outfall Monitoring Requirements

Outfall	Location	Parameters[1]	Sample Frequency[2]	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 (active rock quarry) off of A-road at mile 1.8	flow, oil & grease, lead, zinc, TSS, pH, hardness	twice per year	grab
005.2	Zinc Creek Bridge (west side) 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 4.5	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 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

Footnotes:
1 - Flow will be measured in gpm, lead and zinc will be measured in ug/l, oil & grease and TSS will be measured in mg/l, and pH in s.u.
2 - The samples must be collected once with the first spring storm or snow-melt event and once during the fall peak rainfall. In the event of a dry fall with low storm water flows, no sample will be required until the next spring.

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

4. Method Detection Limits. For the storm water monitoring, the permittee must use methods that can achieve an MDL less than 0.5

ug/l for lead and 20 ug/l for zinc.

For purposes of reporting on the DMR, if a value is greater than the MDL, the permittee must report the actual value. If a value is less than the MDL, the permittee must report "less than {numeric MDL}" on the DMR.

5. 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 sampled.

D. Hawk Inlet Monitoring Program

1. Water Column Monitoring. The permittee must conduct surface water monitoring four times per year at established monitoring stations 106, 107, and 108.

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

   b. All ambient samples must be grab samples.

   c. All samples must be analyzed for the parameters listed in Table 4 to achieve MDLs that are equivalent to or less than those listed in Table 4. The permittee may request different MDLs. Such a request must be in writing and must be approved by EPA.

Table 4: Receiving Water Monitoring Parameters and MDLs

Parameter	Units	Method Detection Limit (MDL)
Cadmium, dissolved	ug/l	0.1
Copper, dissolved	ug/l	0.03
Lead, dissolved	ug/l	0.05
Mercury, dissolved	ug/l	0.2
Zinc, dissolved	ug/l	0.2
TSS	mg/l	--
pH	s.u.	--
Cyanide, WAD	ug/l	1

Table 4: Receiving Water Monitoring Parameters and MDLs		
Parameter	Units	Method Detection Limit (MDL)
Temperature	^{o}C	--
Turbidity	NTU	--
Conductivity	umhos	--

2. Sediment Monitoring. The permittee must conduct sediment monitoring twice per year at established monitoring stations S-1, S-2, S-4, and S-5.

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

   b. The permittee must collect sufficient sediment from each sediment monitoring station to conduct all chemical tests identified herein.

   c. The samples must be analyzed for the parameters in Table 5, using the listed analytical protocols (or equivalent) for each sediment sample.

Table 5: Sediment Monitoring Parameters and Methods			
Parameter	Preparation Method	Analysis Method	MDL[1] (mg/kg)
Cadmium	PSEP[2]	GFAA[3]	0.3
Copper	PSEP[2]	ICP[4]	15.0
Lead	PSEP[2]	ICP[4]	0.5
Mercury	7471[5]	7471[5]	0.02
Zinc	PSEP[2]	ICP[4]	15.0

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

3. In-situ Bioassays. The permittee must conduct analysis of organism tissues twice per year at established monitoring stations S-1, S-2, S-4, Stn 1, Stn 2, Stn, 3, and ESL.

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

   b. The tissue samples must be collected from the organisms listed in Table 6 and analyzed for the parameters listed in Table 6.

Table 6: In-situ Bioassay Monitoring Organisms and Parameters

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

Footnotes:
1 - The organisms must be collected from each of the locations identified.
2 - *Nereis sp.* may be replaced with other local species if *Nereis sp.* is not available.

   c. The tissue samples must be prepared following EPA Method 200.2, where 0.3 grams of dry tissue and 5 ml. of nitric acid are heated to 85^{o} 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 (ICP-MS).

4. Quality assurance/quality control plans for all the Hawk Inlet monitoring must be documented in the Quality Assurance Plan required under Permit Part I.F. Reporting.

5. Reporting. All monitoring results must be included in an annual report and submitted to EPA and ADEC by January 31st of the next year. 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 the data showing averages, variations, and changes over time. The report must include relevant quality assurance/quality control information. The data must be submitted in both electronic and hard copy form.

E. Storm Water Receiving Water Monitoring Program. 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. The permittee must establish monitoring stations in the receiving water directly downstream of where each storm water outfall enters the receiving water. The storm water outfalls are shown in Table 3.

2. For discharges that routinely reach waters of the United States, ambient monitoring downstream of the discharge point shall be conducted on an annual basis with sampling conducted in either the Spring or the Fall and then alternating the timing for subsequent years.

   For discharges that do not routinely enter waters of the United States, ambient 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 will be submitted with the DMR due according to Permit Part I.E.5, below.

   Sampling shall be conducted for the same parameters and as soon as practicable after the outfall sampling for each storm water outfall to be sampled. See Permit Part I.C., Table 3, for the parameters.

3. All ambient samples must be grab samples.

4. Method Detection Limits. For the storm water receiving water monitoring, the permittee must use methods that can achieve an MDL less than 0.5 ug/l for lead and 20 ug/l for zinc.

5. The permittee must submit results of receiving water monitoring with the DMR for the storm water monitoring. The permittee must include a map showing the receiving water sample locations and the storm water outfall locations with the first DMR submitted that reports results of the storm water and receiving water monitoring.

F. Quality Assurance Plan (QAP). The permittee must develop a quality assurance plan (QAP) for all monitoring required by this permit. The plan must be submitted to EPA and ADEC for review 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 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 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. The BMP Plan must apply to all the components and facilities associated with the Greens Creek Mine.

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 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 discharges 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, storm 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 must 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. 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. 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.

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 surface waters during dry weather.

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:

   a. Drainage:

i) 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 surface waters.

ii) 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.

b. 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.

c. Spills and Leaks. The BMP Plan must include a list of significant spills and leaks of toxic or hazardous pollutants that drain to a permitted outfall, a storm water conveyance, or otherwise drain to surface waters. 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.

d. 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.

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:

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

b. 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

c. 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.

d. 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.

e. 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.

f. 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.

g. 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.

h. 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 (Permit Part II.E., below).

i. 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.

j. Recordkeeeping 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.

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

a. Specific BMPs must be established for each of the storm water outfalls in Permit Part I.C., Table 3. The BMPs must be sufficient to ensure that the storm water discharges will not cause or contribute to a State water quality standards violation.

b. Solids, sludges, 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.

c. Ensure proper management of solid and hazardous waste in accordance with regulations promulgated under the Resource Conservation and Recovery Act (RCRA). Management practices required under RCRA regulations must be referenced in the BMP Plan.

d. Ensure proper management of materials in accordance with Spill Prevention, Control, and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 112. The BMP Plan may incorporate any part of such plans into

the BMP Plan by reference.

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

E. 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:

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 surface waters. 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. Corrective Action. 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.

F. Annual Report and Certification.

1. Annual Report. The permittee must prepare an annual report 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, 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 contain the certification under paragraph F.2., below. The annual report must be retained as part of the BMP Plan and be made available to EPA and ADEC upon request.

2. Annual Certification. The permittee must prepare a certified statement that the above reviews (inspections and evaluations) have been completed and that the BMP Plan fulfills the requirements set forth in the permit. This statement must be signed in accordance with Permit Part V.E. (Signatory Requirements) of this permit. This statement must be submitted to EPA on or before

January 31st of each year of operation under this permit after the initial BMP submittal (the initial statement must be submitted to EPA six months after submittal of the BMP Plan).

G. Documentation. The permittee must maintain a copy of the BMP Plan at the facility and make it available to EPA or an authorized representative upon request.

H. BMP Plan Modification.

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. 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 in the Annual Report required under Permit Part II.F., 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. 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 Permit Part III.C (“Monitoring Procedures”). The permittee must report all additional monitoring in accordance with Permit Part 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 10th 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. ("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:

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OCE-133
Seattle, Washington 98101

Alaska Department of Environmental Conservation
Division of Water
410 Willoughby Avenue, 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.

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

E. Records Contents. Records of monitoring information must include:

1. the date, exact place, and time of sampling or measurements;
2. the name(s) of the individual(s) who performed the sampling or measurements;
3. the date(s) analyses were performed;
4. the name(s) of 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 listed in the permit.

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 (“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).

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 Penalties. Pursuant to 40 CFR 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 $27,500 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 $137,500).

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 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 or ADEC 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 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 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 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 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 the 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. “Average weekly discharge limitation” means the highest allowable average of “daily discharges” over a calender week, calculated as the sum of all “daily discharges” measured during a calender week divided by the number of “daily discharges” measured during that week.

6. “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.

7. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

8. “Composite” - see “24-hour composite”.

9. “CWA” means the Clean Water Act.

10. “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.

11. “Director” means the Director of the Office of Water, EPA, or an authorized representative.

12. “DMR” means discharge monitoring report.

13. “EPA” means the United States Environmental Protection Agency

14. “Grab" sample is an individual sample collected over a period of time not exceeding 15 minutes.

15. "Maximum daily discharge limitation" means the highest allowable "daily discharge."

16. “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.

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.

21. “24-hour composite" sample means a combination of at least 8 discrete sample aliquots of at least 100 milliliters, collected over periodic intervals from the same location, during the operating hours of the facility over a 24 hour period. The composite must be flow proportional. The sample aliquots must be collected and stored in accordance in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

Appendix A