ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT – FINAL

Permit Number: AK0053384

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

FULL CYCLE LLC

is authorized to discharge from the Ward Cove Wastewater Treatment Facility (WWTF) at 7559 North Tongass Highway, Ketchikan, Alaska at the following location(s):

Outfall	Receiving Waterbody	Latitude	Longitude
001A	Internal Compliance Point	55°24' 26" North	131°43' 45" West
001B	Ward Cove	55° 24' 15" North	131° 43' 45" West

In accordance with the discharge point(s) effluent limitations, monitoring requirements, and other conditions set forth herein:

This permit and authorization shall become effective June 1, 2020

This permit and the authorization to discharge shall expire at midnight, May 31, 2025

The permittee shall reapply for a permit reissuance on or before December 2, 2024, 180 days before the expiration of this permit if the permittee intends to continue operations and discharge(s) 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.

Signature	April 13, 2020 Date
Gene McCabe Printed Name	Program Manager Title

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SCHEDULE OF SUBMISSIONS

The 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 below.

Table 1: Schedule of Submissions

Permit Part	Submittal or Completion	Frequency	Due Date	Submit to[a]
Permit Part 2.4, Appendix A, 3.2	Discharge Monitoring Report (DMR)	Monthly	Must be submitted electronically through the NetDMR system, on or before the 15th day of the following month.	NetDMR
Permit Part 2.3	Industrial User Survey	1/permit cycle	180 days before expiration of the final permit	Permitting
Appendix A, 1.3	Application for Permit Reissuance	1/permit cycle	180 days before expiration of the final permit	Permitting
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
Appendix A, 3.4	Written notification of noncompliance	As necessary	Within 5 days after the permittee becomes aware of the circumstances	Compliance

Note:
a. See Appendix A, 1.1 for addresses

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 Outfall 001B specified herein to Ward Cove, within the limits and subject to conditions set forth herein. This permit authorizes discharge of only those pollutants resulting from facility processes, waste streams, and operations clearly identified in the permit application process.

1.2 Effluent Limits and Monitoring

1.2.1 The permittee must limit and monitor discharges from internal Outfall 001A as specified in Table 2 and end of pipe Outfall 001B as specified in Table 3. All values represent maximum effluent limits, unless otherwise indicated. The permittee must comply with effluent limitations in the table(s) at all times unless otherwise indicated, regardless of monitoring frequency or reporting required by other provisions of this permit.

1.2.2 Discharge shall not cause contamination of surface or ground waters, and shall not cause or contribute to a violation of the Alaska Water Quality Standards Title 18 (18 AAC 70), except if excursions are authorized in accordance with applicable provisions in 18 AAC 70.200 – 70.240 (e.g. variance, mixing zone).

1.2.3 The permittee must not discharge any floating solids, debris, sludge, deposits, foam, scum, or other residues that cause a film, sheen or discoloration on the surface of the receiving water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.

1.2.4 The permittee must collect influent samples prior to the waste stream flowing into the first treatment unit of the wastewater treatment facility.

1.2.5 The permittee must collect effluent samples from the effluent stream after the last treatment unit before discharge into receiving waters.

1.2.5.1 The limits and monitoring in Table 2 apply to internal Outfall 001A, domestic wastewater discharge, before any mixing occurs with water diverted from Connell Lake. The permittee must collect effluent samples from internal Outfall 001A's domestic wastewater effluent stream after the last treatment unit and prior to combining with the water diverted from Connell Lake.

1.2.5.2 The limits and monitoring in Table 3 apply to end of pipe Outfall 001B, after mixing occurs with water diverted from Connell Lake. The permittee must collect total discharge samples from Outfall 001B after the effluent from Outfall 001A is combined with the water diverted from Connell Lake and prior to discharge to Ward Cove.

1.2.6 For all effluent monitoring, the permittee must use a sufficiently sensitive Environmental Protection Agency (EPA) approved test method that quantifies the pollutants to a level lower than applicable limits or water quality standards or use the most sensitive test method available, per Title 40 Code of Federal Regulations (CFR) §136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), adopted by reference at 18 AAC 83.010(f).

1.2.7 Permittees have the option of taking more frequent samples than are required in the permit. These samples must be used for averaging if they are conducted using the Department-approved test methods (generally found in 18 AAC 70 and 40 CFR §136) and if the method detection limit (MDL) is less than the effluent limit.

1.2.8 For purposes of reporting on the discharge monitoring report (DMR) for a single sample, if a value is less than the method detection limit (MDL), the permittee must report "less than (<) {numeric value of MDL}" and if a value is less than the minimum level (ML), also called a reporting limit (RL), practical quantification limit (PQL), or limit of quantitation (LOQ)], the permittee must report "less than (<) {numeric value of ML}."

1.2.9 For purposes of calculating monthly averages, 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. If the average value is less than the MDL, the permittee must report "less than (<) {numeric value of MDL}" and if the average value is less than the ML, the permittee must report "less than (<) {numeric value of ML}." If a value is equal to or greater than the ML, the permittee must report and use the actual value.

Table 2: Internal Outfall 001A: Effluent Limits and Monitoring Requirements

Parameter	Effluent Limits					Monitoring Requirements		
	Units [a]	Daily Minimum	Monthly Average	Weekly Average	Daily Maximum	Sample Location	Sample Frequency	Sample Type
Total Discharge Flow	mgd	N/A	Report	N/A	0.025	Effluent	Continuous	Metered
Biochemical Oxygen Demand (BOD_5)	mg/L	N/A	30	45	60	Influent and Effluent [b]	1/Month	24-hour Composite [c]
	lbs/day [d]		6.3	9.4	12.5			Calculated
Total Suspended Solids (TSS)	mg/L	N/A	30	45	60	Influent and Effluent	1/Month	24-hour Composite
	lbs/day		6.3	9.4	12.5			Calculated
BOD_5 & TSS Minimum Percent (%) Removal	%	N/A	85 [e]	N/A	N/A	Influent and Effluent	1/Month	Calculated
pH	S.U.	6.0	N/A	N/A	9.0	Effluent	3/Week	Grab
Temperature	° C	N/A	N/A	N/A	Report	Effluent	3/Week	Grab
Dissolved Oxygen (DO)	mg/L	2.0	N/A	N/A	N/A	Effluent	1/Month	Grab
Total Residual Chlorine (TRC)	mg/L	N/A	0.5	0.75	1.0	Effluent	3/Week	Grab
	lbs/day	N/A	0.1	0.16	0.21			
Fecal coliform Bacteria (FC)	FC/ 100 mL	N/A	200 [f]	400 [f]	800	Effluent	1/Month	Grab
Enterococci Bacteria	cfu/ 100 mL	N/A	N/A	N/A	Report	Effluent	1/Month [g]	Grab
Total Ammonia, as Nitrogen	mg/L	N/A	N/A	N/A	Report	Effluent	1/Quarter [h]	Grab
Copper, total recoverable	µg/L	N/A	N/A	N/A	Report	Effluent	1/Month	24-hour Composite

Footnotes:

a. Units: mgd = million gallons per day, mg/L = milligrams per liter, lbs/day = pounds per day, S.U.= standard units, °C= degrees Celsius, FC/100 mL = Fecal Coliform per 100 milliliters, cfu/100 mL = colony forming units per 100 milliliters, µg/L = micrograms per liter.

b. Limits apply to effluent. Report average monthly influent concentration. Influent and effluent composite samples shall be collected during the same 24-hour period.

c. See Appendix C for definition.

d. lbs/day = concentration (mg/L) x flow (mgd) x 8.34 (conversion factor)

e. Minimum % Removal = [(monthly average influent concentration in mg/L – monthly average effluent concentration in mg/L) / (monthly average influent concentration in mg/L)] x 100. The monthly average percent removal must be calculated using the arithmetic mean of the influent value and the arithmetic mean of the effluent value for that month.

f. If more than one FC bacteria sample is collected within the reporting period, the average result must be reported as the geometric mean. When calculating the geometric mean, replace all results of zero, 0, with a one, 1. The geometric mean of "n" quantities is the "nth" root of the product of the quantities. For example, the geometric mean of 100, 200, and 300 is $(100 \times 200 \times 300)^{1/3} = 181.7$.

g. One sample shall be collected each month, May through September, on the same day as a fecal coliform bacteria sample is collected.

h. Once per quarter means once every three months based on the calendar year beginning with January: Jan–March, April–June, July–Sept, and Oct–Dec.

Table 3: End of Pipe Outfall 001B: Effluent Limits and Monitoring Requirements

Parameter	Effluent Limits					Monitoring Requirements	
	Units [a]	Daily Minimum	Monthly Average	Daily Maximum	Sample Location	Sample Frequency	Sample Type
Total Discharge Flow	mgd	Report	N/A	Report	Effluent	Continuous	Metered
pH	S.U.	6.5	N/A	8.5	Effluent	1/Quarter [e]	Grab
Temperature	° C	N/A	N/A	Report	Effluent	1/Quarter	Grab
Dissolved Oxygen (DO)	mg/L	6.0	N/A	17	Effluent	1/Quarter	Grab
Total Residual Chlorine (TRC) [b]	mg/L	N/A	0.0075	0.013	Effluent	1/Month	Grab
Fecal Coliform Bacteria (FC)	FC/ 100 mL	N/A	14 [c]	43 [d]	Effluent	1/Month	Grab
Enterococci Bacteria	cfu/ 100mL	N/A	35 [c]	130 [d]	Effluent	1/Month [f]	Grab
Total Ammonia, as Nitrogen	mg/L	N/A	N/A	Report	Effluent	1/Quarter	Grab
Copper, total recoverable	µg/L	N/A	N/A	Report	Effluent	1/Month	Grab

Footnotes:

a. Units: mgd = million gallons per day, S.U.= standard units, °C= degrees Celsius, mg/L = milligrams per liter, FC/100 mL = Fecal Coliform per 100 milliliters, cfu/100 mL = colony forming units per 100 milliliters, µg/L = micrograms per liter.

b. The TRC effluent limits are not quantifiable using EPA-approved analytical methods. DEC will use the minimum level (ML) of 0.1 mg/L as the compliance evaluation level for this parameter.

c. If more than one FC bacteria or Enterococci bacteria sample is collected within the reporting period, the average result must be reported as the geometric mean. When calculating the geometric mean, replace all results of zero, 0, with a one, 1. The geometric mean of "n" quantities is the "nth" root of the product of the quantities. For example, the geometric mean of 100, 200, and 300 is $(100 \times 200 \times 300)^{1/3} = 181.7$

d. If less than ten samples are collected in a 30-day period, the effluent limit cannot be exceeded. If ten or more samples are collected in a 30-day period, not more than 10% of the samples may exceed the effluent limit.

e. Once per quarter means once every three months based on the calendar year beginning with January: Jan–March, April–June, July–Sept, and Oct–Dec.

f. One sample shall be collected each month, May through September, on the same day as a fecal coliform bacteria sample is collected.

1.3 Mixing Zone

1.3.1 In accordance with state regulations at 18 AAC 70.240, no mixing zone is authorized for the discharge from the Ward Cove WWTF. The total discharge at Outfall 001B must meet all State of Alaska water quality standards (WQS) prior to discharge into Ward Cove.

1.4 Additional Monitoring

1.4.1 Connell Lake Raw Water

1.4.1.1 The permittee must conduct water quality monitoring of the Connell Lake water upstream of where the treated effluent is discharged to the wooden stave pipeline.

1.4.1.2 Monitoring must start within 60 days of the effective date of the permit and continue for the duration of the permit.

1.4.1.3 Monitoring must be conducted at the same time as the sample collection and monitoring of end of pipe Outfall 001B.

1.4.1.4 Monitoring samples must be analyzed for the parameters listed in Table 4.

Table 4: Connell Lake Additional Monitoring Requirements

Parameter	Units [a]	Sample Frequency	Sample Type
FC Bacteria	FC/100mL	1/Month	Grab
Enterococci Bacteria	cfu/100mL	1/Month [b]	
Copper, total recoverable	µg/L	1/Quarter [c]	

Footnotes:

a. FC/100 mL = Fecal Coliform per 100 milliliters, cfu/100 mL = colony forming units per 100 milliliters, µg/L = micrograms per liter.
b. One sample shall be collected each month, May through September, on the same day as a fecal coliform bacteria sample is collected.
c. Once per quarter means once every three months based on the calendar year beginning with January: Jan–March, April–June, July–Sept, and Oct–Dec.

1.4.1.5 Monitoring results must be submitted to DEC as an attachment with the DMR for the month following sample collection. At a minimum, the report must include:

1.4.1.5.1 Sample location;

1.4.1.5.2 Dates of sample collection and analyses;

1.4.1.5.3 Results of sample analyses;

1.4.1.5.4 Relevant quality assurance/quality control (QA/QC) information; and

1.4.1.5.5 Must be signed and certified in accordance with Appendix A, Subsection 1.12 of the permit.

1.4.2 The permittee is responsible for all submissions and activities required on application Form 2A, even if not summarized here.

2.0 SPECIAL CONDITIONS

2.1 Quality Assurance Project Plan

2.1.1 The permittee must develop, implement and maintain a quality assurance project plan (QAPP) for all monitoring required by this permit. The QAPP must be developed and implemented within 120 days of the effective date of this permit. Any existing QAPP for the facility may be reviewed and modified under this section.

2.1.2 The QAPP must be designed to assist in planning for the collection and analysis of all samples in support of the permit and to help explain data anomalies whenever they occur.

2.1.3 The permittee may use either the generic DEC *Wastewater Treatment Facility Quality Assurance Project Plan* (DEC QAPP) or must develop a facility-specific QAPP. Some facility specific information is required to complete the QAPP when using the generic DEC QAPP.

2.1.4 Throughout all sample collection and analysis activities, the permittee must use DEC-approved Quality Assurance/Quality Control and chain-of-custody procedures, as described in the *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5, March 2001) at https://www.epa.gov/sites/production/files/2016-06/documents/r5-final_0.pdf and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5, December 2002) at https://www.epa.gov/sites/production/files/2015-06/documents/g5-final.pdf. The QAPP must be prepared in the format specified in these documents.

2.1.5 At a minimum, a QAPP must include:

2.1.5.1 Details on number of samples, type of sample containers, preservation of samples, holding times, analytical methods, analytical detection and quantitation limits for each target compound, type and number of quality assurance field samples, precision and accuracy requirements, sample preparation requirements, sample shipping methods, and laboratory data delivery requirements;

2.1.5.2 Maps indicating the location of all permit required sampling points;

2.1.5.3 Qualification and training of personnel; and

2.1.5.4 Name, address, and telephone number of all laboratories used by or proposed to be used by the permittee.

2.1.6 The permittee must amend the facility specific QAPP whenever sample collection, sample analysis, or other procedure addressed by the QAPP is modified.

2.1.7 An electronic or physical copy of the QAPP must be kept on site and made available to DEC upon request.

2.2 Operation and Maintenance Plan

2.2.1 In addition to requirements specified in Appendix A, Part 1.6 of this permit (Proper Operation and Maintenance), the permittee shall develop and implement an Operation and Maintenance (O&M) Plan for the wastewater treatment facility. The O&M Plan must be developed and implemented within 120 days of the effective date of this permit. Any existing O&M Plan may be modified under this section.

2.2.2 The O&M Plan shall be retained electronically or physically onsite and made available to DEC upon request.

2.2.3 The O&M Plan must be reviewed annually. Documentation of annual plan review by the permittee shall be retained onsite and made available to DEC upon request.

2.2.4 The permittee shall ensure that the O&M Plan includes appropriate best management practices (BMPs). BMPs include measures that prevent or minimize the generation and potential for the release of pollutants to Ward Cove.

2.2.5 All procedures and requirements in the previous Best Management Practices Plan must be incorporated into the O&M Plan and must be followed until the new O&M Plan has been implemented.

2.2.6 The permittee shall develop or update a description of pollution prevention measures and controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in the O&M Plan shall reflect identified potential sources of pollutants at the facility. The description of BMPs shall address to the extent practicable, the following minimum components:

2.2.6.1 Spill prevention and control;

2.2.6.2 Optimization of chemical usage;

2.2.6.3 Preventative maintenance program;

2.2.6.4 Minimization of pollutant inputs from industrial users;

2.2.6.5 Research, development and implementation of a public information and education program to control the introduction of household hazardous materials to the sewer system; and

2.2.6.6 Water conservation.

2.3 Industrial User Survey

2.3.1 A list of those industries or businesses that discharge and/or have the potential to discharge (i.e. a spill to the collection system) non-domestic wastewater to Ward Cove WWTF''s collection system must be submitted with Form 2A when applying for permit reissuance. The list must include non-domestic industries or businesses from which the facility accepts sludge and septage.

2.3.2 The industries or businesses should be categorized as significant industrial user (SIU) or minor industrial user (MIU). See Appendix C for definitions of these categories.

2.3.3 The list must include the following:

2.3.3.1 The business name and address

2.3.3.2 A description of the non-domestic process including products manufactured or services performed and potential pollutants

2.3.3.3 The Standard Industrial Classification (SIC) http://siccode.com/en/siccode/list/directory or North American Industry Classification System (NAICS) http://www.naics.com/complete-naics-business-resource-list/ code(s) for each activity type

2.3.3.4 Estimate of non-domestic wastewater discharged into the facility's wastewater treatment collection system in gallons per day and whether the discharge is continuous or intermittent

2.3.4 Those industries or businesses that are not connected to the collection system or that solely discharge domestic equivalent wastewater are not considered sources of non-domestic wastewater and may be excluded from the list that is submitted to DEC. The list of the domestic equivalent industries or businesses should be maintained by Ward Cove WWTF. The list must include domestic equivalent industries or businesses from which the facility accepts sludge and septage. The list must be kept onsite and made available to DEC upon request.

2.3.5 For domestic equivalents, the list should include the following:

2.3.5.1 The business name and address

2.3.5.2 A description of products manufactured, or services performed and potential pollutants

2.3.6 DEC may request additional information regarding wastewater contributions from specific industries or businesses in order to verify categorization as an SIU, MIU, or domestic equivalent, and to determine whether a pretreatment program should be developed and/or or if pretreatment requirements should be included in Ward Cove WWTF's wastewater discharge permit.

2.4 Electronic Reporting (E-Reporting) Rule

2.4.1 E-Reporting Rule for DMRs (Phase I).

2.4.1.1 The permittee must submit DMR data electronically through NetDMR per Phase I of the E-Reporting Rule (40 CFR 127) upon the effective date of the Permit. Authorized persons may access permit information by logging into the NetDMR Portal (https://cdxnodengn.epa.gov/oeca-netdmr-web/action/login). DMRs submitted in compliance with the E-Reporting Rule are not required to be submitted as described in Appendix A – Standard Conditions unless requested or approved by the Department. Any DMR data required by the Permit that cannot be reported in a NetDMR field (e.g. mixing zone receiving water data, etc.), shall be included as an attachment to the NetDMR submittal. DEC has established an e-Reporting Information website at https://dec.alaska.gov/water/compliance/electronic-reporting-rule that contains general information about this new reporting format. Training materials and webinars for NetDMR can be found at https://netdmr.zendesk.com/home.

2.4.2 E-Reporting Rule for Other Reports (Phase II).

2.4.2.1 Phase II of the E-Reporting rule will integrate electronic reporting for all other reports required by the Permit (e.g., Annual Reports and Certifications) and implementation is expected to begin December 2020. Permittees should monitor DEC's E-Reporting Information website (https://dec.alaska.gov/water/compliance/electronic-reporting-rule) for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports required by the Permit may be submitted in accordance with Appendix A – Standard Conditions.

2.5 Identification Sign(s)

2.5.1 The permittee shall continue to post a sign or signs on the shoreline near the end of pipe Outfall 001B discharge point. Signs must include the name and contact telephone number for the facility, identify the permit number, the type of discharge (secondary treated domestic wastewater), warn users of the area to exercise caution and that certain activities, such as harvesting of aquatic life for raw consumption, should not take place in the vicinity of the discharge.

2.6 Removed Substances

2.6.1 Collected screenings, grit, solids, scum, and other facility residuals, or other pollutants removed in the course of treatment or control of water and wastewaters shall be disposed of in a Department approved manner and method in accordance with 18 AAC 60, such as to prevent any pollution from such materials from entering navigable waters.

APPENDIX A

STANDARD CONDITIONS

APDES INDIVIDUAL PERMIT

PUBLICLY OWNED TREATMENT WORKS

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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) 269-3487
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.

1.6.3 In accordance with 18 AAC 72.065, the owner of operator of a domestic system that has 100 or more service connections or that is used, or intended for use, by 500 or more people per day shall ensure that the system is operated by a person certified under 18 AAC 74.

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 three 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 Notice of New Introduction of Pollutants

2.8.1 Any POTW shall provide adequate notice to the Department, including information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW as soon as the POTW has knowledge of a change, but no later than seven days in advance of any:

2.8.1.1 New introduction of pollutants into the POTW from an indirect discharger if that introduction of pollutants would be subject to 33 U.S.C 1311 or 33 U.S.C 1316 if the POTW directly discharged those pollutants, and

2.8.1.2 Substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

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

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 3.4.1.2 by submitting the written report via email, 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 email; 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 email and PDF written report will satisfy the written report submission requirements of this permit provided the email is received by the Department within five days after the time the permittee becomes aware of the noncompliance event, and the email and written report satisfy the criteria of Part 3.4.5. The email 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. The permittee 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)(B), (c)(2), and (c)(3)).

Appendix B Acronyms

The following acronyms are common terms that may be found in an Alaska Pollutant Discharge Elimination System (APDES) permit.

18 AAC 15	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 15: Administrative Procedures
18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards
18 AAC 72	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal
18 AAC 83	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System.

All chapters of Alaska Administrative Code, Title 18 are available at the Alaska Administrative Code database http://dec.alaska.gov/commish/regulations/

40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
APDES	Alaska Pollutant Discharge Elimination System
AS	Alaska Statutes
AS 46.03	Alaska Statues Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/default.htm
BOD_5	Biochemical Oxygen Demand, 5-day
BMP	Best Management Practice
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
Cu	Copper
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPA	U.S. Environmental Protection Agency
FC	Fecal coliform Bacteria
GPD or gpd	Gallons per day
GPY or gpy	Gallons per year
Hg	Mercury
IC_{25}	Inhibition Concentration 25%
I/I	Infiltration and Inflow

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR 403.3(v))

LC_{50}	Lethal Concentration 50%
MDL	Method Detection Limit
mg/L	Milligrams per Liter
MGD or mgd	Million gallons per day
MIU	Minor Industrial User
ML	Minimum Level
MLLW	Mean Lower Low Water
MZ	Mixing Zone
N/A	Not Applicable
Ni	Nickel
NOEC	No Observed Effect Concentration
Pb	Lead
POTW	Publicly Owned Treatment Works
PQL	Practical Quantification Limit
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QC	Quality Control
RL	Reporting Limit
RWC	Receiving Water Concentration
Se	Selenium
SIU	Significant Industrial User
SU	Standard Units
TIE	Toxicity Identification Evaluation
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TUc	Toxic Unit, Chronic
µg/L	Micrograms per Liter
U.S.C.	United States Code
WQS	Water Quality Standards
WWTF	Wastewater Treatment Facility
Zn	Zinc

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR 403.3(v))

Appendix C Definitions

The following are common definitions of terms associated with APDES permits. Not all the terms listed may appear in a permit. Consult the footnote references for a complete list of terms and definitions.

Acute[b]	Means of, relating to, or resulting from a level of toxicity of a substance, a substance combination, or an effluent sufficient to produce observable lethal or sublethal effects in aquatic organisms exposed for short periods of time, typically 96 hours or less
Administrator [a]	Means the Administrator of the EPA or an authorized representative.
Alaska Pollutant Discharge Elimination System (APDES) [a]	Means 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	Means once per calendar year
Average	Means the arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities
Average Monthly Discharge Limitation [a]	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 for that month
Average Weekly Discharge Limitation[g]	The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number
Best Management Practices (BMPs) [a]	Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.
Biochemical Oxygen Demand (BOD) [c]	Means the amount, in milligrams per liter, of oxygen used in the biochemical oxidation of organic matter in five days at 20º C
Black Water	Means water that contains animal, human, or food waste
Boundary [b]	Means line or landmark that serves to clarify, outline, or mark a limit, border, or interface
Bypass [a]	Means the intentional diversion of waste streams from any portion of a treatment facility
Chronic [b]	Means of, relating to, or resulting from a level of toxicity of a substance, a substance combination, or an effluent sufficient to produce observable lethal or sublethal effects, including effects on growth, development, behavior, reproduction, or survival, in aquatic organisms exposed for a period of time that generally is one-tenth or more of their life span

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR Part 403

Chemical Oxygen Demand (COD) [f]	Is used as a measure of the oxygen equivalent of the organic matter content of a sample that is susceptible to oxidation by a strong chemical oxidant
Clean Water Act (CWA)	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
Color [b]	Means the condition that results in the visual sensations of hue and intensity as measured after turbidity is removed
Commissioner [a]	Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee
Composite Samples	Composite samples must consist of at least eight equal volume grab samples. 24-hour composite sample means a combination of at least eight discrete samples of equal volume collected at equal time intervals over a 24-hour period at the same location. A "flow proportional composite" sample means a combination of at least eight discrete samples collected at equal time intervals over a 24-hour period with each sample volume proportioned according to the flow volume. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.
Contact Recreation [b]	Means activities in which there is direct and intimate contact with water. Contact recreation includes swimming, diving, and water skiing. Contact recreation does not include wading.
Continuous Monitoring	Means monitoring that occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.
Criterion [b]	Means a set concentration or limit of a water quality parameter 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. A criterion might be a narrative statement instead of a numerical concentration or limit.
Daily Discharge [a]	Means 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.
Datum	A datum defines the position of the spheroid, a mathematical representation of the earth, relative to the center of the earth. It provides a frame of reference for measuring locations on the surface of the earth by defining the origin and orientation of latitude and longitude lines.
Department [a]	Means the Alaska Department of Environmental Conservation

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR Part 403

Design Flow [a]	Means the wastewater flow rate that the plant was designed to handle
Director [a]	Means the commissioner or the commissioner's designee assigned to administer the APDES program or a portion of it, unless the context identifies an EPA director
Discharge [a]	When used without qualification, discharge means the discharge of a pollutant
Discharge of a Pollutant [a]	Means 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.
Disinfect [c]	Means to treat by means of a chemical, physical, or other process, such as chlorination, ozonation, application of ultraviolet light, or sterilization, designed to eliminate pathogenic organisms, and producing an effluent with the following characteristics: (A) an arithmetic mean of the values for a minimum of five effluent samples collected in 30 consecutive days that does not exceed 200 fecal coliform per100 milliliters; and (B) an arithmetic mean of the values for effluent samples collected in seven consecutive days that does not exceed 400 fecal coliform per 100 milliliters.
Dissolved Oxygen (DO) [b]	Means the concentration of oxygen in water as determined either by the Winkler (iodometric) method and its modifications or by the membrane electrode method. The oxygen dissolved in water or wastewater and usually expressed in milligrams per liter or percent saturation
Domestic Equivalent	Businesses that only discharge pollutants similar in nature to domestic wastewater that is discharged from residential dwellings, and that do not otherwise qualify as a SIU or an MIU as defined in this glossary.
Domestic Wastewater [c]	Means 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.
Ecosystem [b]	Means a system made up of a community of animals, plants, and bacteria and the system's interrelated physical and chemical environment
Effluent Limit Guideline [a]	Means a regulation published by the administrator under 33 U.S.C. 1314(b) to adopt or revise effluent limitations, and adopted by reference in 18 AAC 83.010;

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR Part 403

Effluent [b]	Means 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	Means 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.
Excluded area	Means an area not authorized as a receiving water under a permit
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.
Final Approval to Operate	Means the approval that the Department issues after it has reviewed and approved the construction and operation of the engineered wastewater treatment works plans submitted to the Department in accordance with 18 AAC 72.215 through 18 AAC 72.280 or as amended.
Geometric Mean	The geometric mean is the Nth root of the product of N. All sample results of zero will use a value of 1 for calculation of the geometric mean. Example geometric mean calculation: $\sqrt[4]{12 \times 23 \times 34 \times 990} = 55$
Grab Sample	Means a single instantaneous sample collected at a particular place and time that represents the composition of wastewater only at that time and place
Gray Water [b]	Means wastewater from a laundry, kitchen, sink, shower, bath, or other domestic source that does not contain excrement, urine, or combined stormwater
Influent	Means untreated wastewater before it enters the first treatment process of a wastewater treatment works
Inhibition Concentration 25% (IC_{25}) [e]	Means the point estimate of the toxicant concentration that would cause 25% reduction in a nonlethal biological measurement of the test organisms, such as reproduction or growth
Lethal Concentration 50% (LC_{50}) [e]	Mean the point estimate of the toxicant that would be lethal to 50% of the test organisms during a specific period
Maximum Daily Discharge Limitation [a]	Means the highest allowable "daily discharge"
Mean [b]	Means the average of values obtained over a specified period and, for fecal coliform analysis, is computed as a geometric mean
Measured	Means 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]	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

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR Part 403

Micrograms per Liter (µg/L) [b]	Means 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]	Means 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.
Minor Industrial User (MIU) *	These are businesses that do not qualify as SIUs according to the SIU definition, but who still either: • Have some discharges of wastewater containing pollutants not typical of domestic wastewater, and potentially of concern to the POTW; or • Have a potential to discharge or spill chemicals to the POTW which could impair the normal operation of the POTW, adversely affect worker health or safety, or violate Alaska Water Quality Standards (18 AAC 70). *This definition is intended for use when categorizing industries and businesses, and not intended to be used as a general APDES definition.
Minimum Level (ML) [e]	Means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed. This level is used as the compliance level if the effluent limit is below it.
Mixing Zone (MZ) [b]	Means a volume of water adjacent to a discharge in which wastes discharged mix with the receiving water
Month	Means the time period from the 1st of a calendar month to the last day in the month
Monthly Average	Means the average of daily discharges over a monitoring month calculated as the sum of all daily discharges measured during a monitoring month divided by the number of daily discharges measured during that month
N/A	Means Not Applicable
No Observed Effect Concentration (NOEC) [e]	Means the highest concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. NOEC is determined using hypothesis testing.
Pass Through[h]	Means a discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation
Permittee	Means 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

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
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pH [g]	Means a measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration in mg/L. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.
Pollutant [a]	Means 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
Practical Quantification Limit (PQL) [g]	Means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions.
Primary Contact Recreation	See Contact Recreation
Principal Executive Officer [a]	Means 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
Publicly Owned Treatment Works[a]	Means a treatment works as defined by 33 U.S.C. 1292 that is owned by a municipality or state; in this subparagraph "municipality" includes a municipality that has jurisdiction over the indirect discharges to and the discharges from such a treatment works
Quality Assurance Project Plan (QAPP)	Means 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	Means the time period of three months based on the calendar year beginning with January
Receiving Water Body	Means 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 U.S." at 18 AAC 83.990(77))
Recorded	Means a permanent record using mechanical or electronic equipment to provide a totalized reading, as well as a record of instantaneous readings
Report	Report results of analysis
Residual Chlorine	Means chlorine remaining in water or wastewater at the end of a specified contact period as combined or free chlorine
Responsible Corporate Officer [a]	Means 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

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
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	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.
Secondary Recreation [b]	Means activities in which incidental water use can occur. Secondary recreation includes boating, camping, hunting, hiking, wading, and recreational fishing. Secondary contact recreation does not include fish consumption.
Settleable Solids [b]	Means solid material of organic or mineral origin that is transported by and deposited from water, as measured by the volumetric Imhoff cone method and at the method detection limits specified in method 2540(F), *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), adopted by reference in 18 AAC 70.020(c)(1)
Severe Property Damage [a]	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.
Sheen [b]	Means an iridescent appearance on the water surface
Significant Industrial User (SIU) [h]	(i) Means All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, subchapter N; and (ii) Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW Treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement (in accordance with §40 CFR 403.8(f)(6)).
Suspended Solids	Means insoluble solids that either float on the surface of, or are in suspension in, water, wastewater, or other liquids. The quantity of material removed from wastewater in a laboratory test, as prescribed in *Standard Methods for the Examination of Water and Wastewater* and referred to as nonfilterable.
Technology Based Effluent Limit[g]	An effluent limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration or mass loading level. TBELs for POTWs are derived from the secondary treatment regulations in Part 133 or state treatment standards. TBELs for non-POTWs are derived from effluent guidelines, state treatment standards, or by the permit writer on a case-by-case basis using best professional judgment.
Total Suspended Solids (TSS) [g]	Means a measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136

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 Standard Methods for the Examination of Water and Wastewater 18th Edition
g) See EPA Permit Writers Manual
h) See 40 CFR Part 403

Toxic Unit, Chronic (TUc) [e]	Means the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of the chronic exposure period (i.e., 100/NOEC)
Twice per year	Means two time periods during the calendar year: October through April and May through September
Upset [a]	Means 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	Means 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 or Waters of the U.S. (WOTUS)	Has the meaning given in 18 AAC 83.990(77)
Water Quality Based Effluent Limit [g]	An effluent limitation determined by selecting the most stringent of the effluent limits calculated using all applicable water quality criteria (e.g., aquatic life, human health, wildlife, translation of narrative criteria) for a specific point source to a specific receiving water.
Water Quality Criteria [e]	Are comprised of numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or States for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.
Water Quality Standard [e]	Means a law or regulation that consists of the beneficial designated use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.
Water Recreation [b]	See contact recreation or secondary recreation
Water Supply [b]	Means any of the waters of the United States that are designated in 18 AAC 70 to be protected for fresh water or marine water uses. Water supply includes waters used for drinking, culinary, food processing, agricultural, aquaculture, seafood processing, and industrial purposes. Water supply does not necessarily mean that water in a waterbody that is protected as a supply for the uses listed in this paragraph is safe to drink in its natural state.
Week	Means the time period of Sunday through Saturday
Whole Effluent Toxicity [a]	Means the aggregate toxic effect of an effluent measured directly by a toxicity test.

a) See 18 AAC 83
b) See 18 AAC 70.990
c) See 18 AAC 72.990
d) See 40 CFR Part 136
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