ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT – FINAL

AK0031429 – USCG Base Kodiak
Bulk Fuel Storage Facility

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

USCG BASE KODIAK

is authorized to discharge from the Bulk Fuel Storage Facility, at the U.S. Coast Guard (USCG) Base, Kodiak, Alaska at the following approximate locations:

USCG Designation (Outfall #)	Waterbody	Latitude	Longitude
NP-1 (Outfall 001)	Womens Bay	57°44'5"	152°30'20"
IA-3 (Outfall 002)	St. Paul Harbor	57°44'21"	152°29'37"
NP-18 (Outfall 003)	St. Paul Harbor	57°43'32"	152°30'31"
NP-6 (Outfall 004)	Womens Bay	57°43'35"	152°30'54"

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

February 27, 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) Permitting (P) or Compliance (C) Programs during the term of this Permit. The permittee is responsible for all submissions and activities specified in the Permit even if they are not summarized in Table 1.

Table 1: Schedule of Submissions

Permit Section	Submittal or Completion	Frequency	Due Date	Program [a]
1.6, Appendix A,	Discharge Monitoring Report (DMR)	Monthly	On or before the 28th of the following month.[b]	C
2.1.1	Written Certification the Quality Assurance Project Plan (QAPP)	1/permit cycle	Within 90 days after Permit effective date.	C
2.2.2	Written Notification that the Best Management Practices (BMP) Plan has been Developed and Implemented	1/permit cycle	Within 90 days after Permit effective date.	C
2.2.6.2	BMP Plan Certification	Annually	On or before January 31st of each year of operation.	C
Table 2, Note 3, or Table 3, Note 4	Notification of Spill, Sheen, or Contamination in Secondary Containment Area (SCA)	Per Event	Within 24 hours from the time the Permittee becomes aware.	P
Table 2, Note 3, or Table 3, Note 4	Written Request to Resume Monitoring Based on Triggers of Sheen or a Spill in SCA	Per Event	After Four Consecutive Sample Results Demonstrate the SCA is Uncontaminated.	P
Appendix A, 1.3	Application for Permit Reissuance	1/permit cycle	180 days prior to Permit Expiration.	P
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.	C
Appendix A, 3.4	Written Documentation of Noncompliance	As Necessary	Within 5 days after the permittee becomes aware of the circumstances.	C

a. See Appendix A for addresses

b. The monthly DMR due date supersedes the due date in Appendix A - Standard Conditions, Section 3.2.1

1.0 LIMITATIONS AND MONITORING REQUIREMENTS

1.1 Discharge Authorization

During the effective period of Individual Permit AK0031429 – United States Coast Guard (USCG), Base Kodiak Bulk Fuel Facility (Permit), the USCG (permittee) is authorized to discharge pollutants from Outfalls 001 – 004 as specified herein to Womens Bay (Outfalls 001 and 004) and St. Paul Harbor (Outfalls 002 and 003), Alaska within the limitations 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 and permit application process.

1.2 General Requirements

1.2.1 The discharge of any pollutant or waste stream that is not listed as an authorized discharge under this Permit is prohibited.

1.2.2 Discharges shall not cause contamination of surface waters and shall not cause or contribute to a violation of the Alaska Water Quality Standards (18 AAC 70), except if excursions are authorized therein.

1.2.3 Discharges may not alone or in combination with other substances or wastes, make the water unfit or unsafe for the use; cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or other 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 For purposes of reporting on the DMR for a single sample, if a value is less than the method detection limit, the permittee must report "less than [numeric value of method detection limit]" and if a value is less than a minimum level (ML), the permittee must report "less than [numeric value of ML]." This provision is not applicable to reporting total aromatic hydrocarbons (TAH) or total aqueous hydrocarbons (TAqH).

1.2.5 For purposes of calculating a monthly average for a single parameter, zero (0) may be assigned for a value less than the method detection limit, and the [numeric value of method detection limit] may be assigned for a value between the method detection limit and the ML. If the average value is less than the method detection limit, the permittee must report "less than [numeric value of method detection limit]" 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. The resulting average value must be compared to the limit in assessing compliance. This provision is not applicable to reporting TAH or total aqueous hydrocarbons TAqH.

1.2.6 For purposes of reporting on the Discharge Monitoring Report (DMR) for a single sample for TAH or TAqH where the parameter is a summation of results of individual analytes, estimated (e.g., "J" estimates) are considered as nondetectable. When all individual analytes are nondetectable, or estimates, the permittee must report the categorical summation of the common method detection limits with a "less than [categorical summation of method detection limits]." If any of the analytes are detectable, the permittee must report the summation of only the detected analytes on the DMR without a less than symbol. See Permit Appendix C for Definition of Categorical Sum.

1.2.7 For all effluent compliance monitoring outlined in Section 1.3 the permittee must use an analytical test method approved under Code of Federal Regulations (CFR) Title 40 Part 136 (40 CFR 136) and adopted by reference at 18 AAC 83.010, that can achieve a reporting limit less than the effluent limit. The permittee must use the method with a sufficiently sensitive method detection limit (See APPENDIX C– Definitions).

1.2.8 For any permit condition that requires onsite records be maintained and made available upon request, the permittee may use readily accessible electronic documents in lieu of hardcopy information to comply with these requirements.

1.3 Limitations and Monitoring Requirements

1.3.1 In addition to the requirements in Section 1.2, the permittee must limit and monitor discharges from Outfall 001, 003, and 004 as specified in Table 2.

Table 2: Effluent Limits and Monitoring Requirements: Outfalls 001 (NP-1), 003 (NP-18), and 004 (NP-6)

Parameter (Units)	Effluent Limits	Monitoring Requirements	
		Frequency	Sample Type
Flow Volume (million gallons per day (mgd)) [1]	Report	Daily	Measure or Estimate
Oil and Grease (Sheen)	No visible sheen	Daily	Visual
pH (standard units (su))	$6.5 \leq pH \leq 8.5$	Monthly	Grab
TAH (micrograms per liter (µg/L)) [2]	Report	Per Event [3]	Grab
TAqH (µg/L) [2]	Report	Per Event [3]	Grab

Notes:

1. Flow volumes and visual observations for sheen must be measured daily when discharges occur and recorded in a daily log. Report total monthly flow volumes in million gallons (mg) and average monthly flow volumes determined by dividing the total monthly volume by the number of discharge events for the month.
2. See Section 1.2.6 details for reporting TAH and TAqH results below detection.
3. Monitoring for TAH and TAqH is triggered based on an observation of a sheen on the water surface or a spill in the SCA. The permittee must contact DEC within 24 hours upon detection of sheen or spill and conduct monthly monitoring for TAH and TAqH until four consecutive sample events demonstrate the SCA water is not contaminated (See Permit Appendix C for definition of contaminated SCA). The permittee must submit a written request for DEC written approval to reestablish the TAH and TAqH monitoring based on triggers of sheen or a spill.

1.3.2 In addition to the requirements in Section 1.2, the permittee must limit and monitor discharges from Outfall 002 (IA-3) as specified in Table 3.

Table 3: Effluent Limits and Monitoring Requirements for Outfall 002 (IA-3)

Parameter (Units)	Effluent Limits	Monitoring Requirements	
		Frequency	Sample Type
Flow Volume (mgd) [1]	Report	Daily	Measure or Estimate
Oil and Grease (Sheen)	No visible sheen	Daily	Visual
pH (su)	$6.5 \leq pH \leq 8.5$	Monthly	Grab
TOC (mg/L) [2]	110	Monthly	Grab
TAH (µg/L) [3]	Report	Per Event [4]	Grab
TAqH (µg/L)[3]	Report	Per Event [4]	Grab

Notes:

1. Flow volumes and visual observations for sheen must be measured daily when discharges occur and recorded in a daily log. Report total monthly flow volumes and average monthly flow volumes determined by dividing the total monthly volume by the number of discharge events for the month.
2. The permittee must develop and implement specific BMPs per Section 2.2.5 to identify and reduce or eliminate pollutant sources contributing to exceedances of TOC.
3. See Section 1.2.6 details for reporting TAH and TAqH results below detection.
4. Monitoring for TAH and TAqH is triggered based on an observation of a sheen on the water surface or a spill in the SCA. The permittee must contact DEC within 24 hours upon detection of sheen or spill and conduct monthly monitoring for TAH and TAqH until four consecutive sample events demonstrate the SCA water is not contaminated (See Permit Appendix C for definition of contaminated SCA). The permittee must submit a written request for DEC written approval to reestablish the TAH and TAqH monitoring based on triggers of sheen or a spill.

1.4 Additional Monitoring

1.4.1 Additional Monitoring Upon DEC Request

DEC may require additional monitoring of effluent or receiving water for facility or site-specific purposes, including, but not limited to: obtaining data to support NOI or applications, demonstrating of water quality protection, obtaining data to evaluate ambient water quality, evaluating causes for elevated parameters in the effluent, and conducting chronic WET toxicity identification and reduction evaluations. If additional monitoring is required, DEC will provide the permittee or applicant the request in writing.

1.4.2 Additional Monitoring by Permittee

The permittee also has the option of taking more frequent samples than required under the Permit. These additional 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 [adopted by reference in 18 AAC 83.010]). The results of any additional monitoring must be included in the calculation and reporting of the averaged data on DMRs as required by the Permit and Standard Conditions Part 3.2 and 3.3 (Appendix A). All individual sample data collected during the permit term must be submitted with the next application for reissuance.

1.5 Sufficiently Sensitive Methods

Monitoring for effluent must use methods with method detection limits that are less than the effluent limitations or are sufficiently sensitive per Section 1.2.7. Monitoring effluent or receiving water for the purpose of comparing to water quality criteria must use methods that are less than the applicable criteria or are sufficiently sensitive. See Appendix C for definition of sufficiently sensitive.

The determination of sufficiently sensitive methods discussed above for a single analyte is not applicable as it cannot be applied directly to TAH and TAqH due to the summation of list of multiple analytes. Hence, the determination of sufficiently sensitive is derived for single parameters and not a summation of numerous analytes. Therefore, for TAH and TAqH, DEC will apply a typical multiplier of 3.2 to the categorical sum of the method detection limits to "estimate" an ML for comparison with water quality criteria for TAH and TAqH. If the "estimated ML" is greater than the criteria, 10 µg/L and 15 µg/L respectively, DEC may request submittal of the analytical report to conduct a comprehensive review of those particular results.

1.6 Electronic Discharge Monitoring Reports

1.6.1 E-Reporting Rule - Phase I (DMRs)

The permittee must submit a DMR for each month by the 28th day of the following month. DMRs shall be submitted electronically through NetDMR per Phase I of the E-Reporting Rule (40 CFR 127). For access to the NetDMR Portal, go to https://cdxnodengn.epa.gov/oeca-netdmr-web/action/login. DMRs must be submitted even for months when discharges do not occur. The Permittee must submit a DMR with the box checked indicating no discharge has occurred. 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 http://dec.alaska.gov/water/compliance/electronic-reporting-rule/ which contains general information about this new reporting format. Training modules and webinars for NetDMR can be found at https://netdmr.zendesk.com/home.

1.6.2 E-Reporting Rule - Phase II (Other Reporting)

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 during the permit cycle. Permittees should monitor the DEC E-Reporting website at http://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.

2.0 SPECIAL CONDITIONS

2.1 Quality Assurance Project Plan

2.1.1 The permittee must develop a facility-specific QAPP for all monitoring required by this Permit. The permittee must submit written notice to DEC affirming that the QAPP is up to date and is being implemented within 90 days of the effective date of this Permit. An existing QAPP may be modified under this Section.

2.1.2 All procedures in the previous QAPP must be followed until the new QAPP has been implemented.

2.1.3 The QAPP must be designed to assist in planning for the collection and analysis of effluent and other water samples in support of the Permit and to help explain data anomalies whenever they occur.

2.1.4 The permittee may use the generic *DEC Wastewater Treatment Facility Quality Assurance Project Plan* (*DEC QAPP*) as a template to develop a facility-specific QAPP required per Section 2.1. If using the generic DEC template, the developed QAPP must be specific for the facility.

2.1.5 Throughout all sample collection and analysis activities, the permittee must use DEC-approved QA/QC and chain-of-custody procedures, as described in the *Requirements for Quality Assurance Project Plans* (EPA/QA/R-5) and *Guidance for Quality Assurance Project Plans* (EPA/QA/G-5). The QAPP must be prepared in the format specified in these documents.

2.1.6 At a minimum, a QAPP must include:

2.1.6.1 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;

2.1.6.2 Maps indicating the location of each sampling point;

2.1.6.3 Qualification and training of personnel; and

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

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

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

2.2 Best Management Practices Plan

2.2.1 Purpose

Through implementation of the BMP Plan the permittee must prevent or minimize the generation and the potential for release of pollutants from the facility to the waters of the U.S. through normal and ancillary activities.

2.2.2 Development and Implementation Schedule

The permittee must develop and implement a BMP Plan which achieves the objectives and the specific requirements listed below. The permittee must submit written notice to DEC that the Plan has been developed and implemented within 90 days of the effective date of the Permit. An existing BMP Plan may be modified for compliance with this Section.

2.2.3 Objectives

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

2.2.3.1 The number and quantity of pollutants and the toxicity of effluent generated, discharged, or potentially discharged at the facility must be minimized by the permittee to the extent feasible by managing each waste stream in the most appropriate manner.

2.2.3.2 Under the BMP Plan and especially within any standard operating procedures in the BMP Plan, the permittee must ensure proper operation and maintenance of water management and wastewater treatment systems. BMP Plan elements must be developed in accordance with good engineering practices.

2.2.3.3 Each facility component or system must be examined for its waste minimization opportunities and its potential for causing a release of significant amounts of pollutants to waters of the U.S. due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc. The examination must include all normal operations and ancillary activities including material storage areas, storm water, in-plant transfer, material handling and process handling areas, loading or unloading operations, spillage or leaks, sludge and waste disposal, or drainage from raw material storage.

2.2.4 Elements of the BMP Plan

The BMP Plan must be consistent with the objectives above and the general guidance contained in *Guidance Manual for Developing Best Management Practices* (EPA 833-B-93-004, October 1993), *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.

2.2.4.1 Plan Components

The BMP Plan must include, at a minimum, the following items:

2.2.4.1.1 Statement of BMP Policy. The BMP Plan must include a statement of management commitment to provide the necessary financial, staff, equipment, and training resources to develop and implement the BMP Plan on a continuing basis.

2.2.4.1.2 The BMP Plan must establish a BMP Committee responsible for developing, implementing, and maintaining the BMP Plan. Specify the structure, functions, and procedures of the BMP Committee.

2.2.4.1.3 Description of potential pollutant sources.

2.2.4.1.4 Risk identification and assessment.

2.2.4.1.5 Standard operating procedures to achieve the above objectives and specific best management practices (See Section 2.2.5).

2.2.4.1.6 Reporting of BMP incidents. The reports must include a description of the circumstances leading to the incident, corrective actions taken and recommended changes to operating and maintenance practices to prevent recurrence.

2.2.4.1.7 Materials compatibility.

2.2.4.1.8 Good housekeeping.

2.2.4.1.9 Inspections.

2.2.4.1.10 Preventative maintenance and repair.

2.2.4.1.11 Security.

2.2.4.1.12 Employee training on the BMP Plan.

2.2.4.1.13 Record keeping and reporting.

2.2.4.1.14 Prior evaluation of any planned modifications to the facility to ensure that the requirements of the BMP plan are considered as part of the modifications.

2.2.4.1.15 Final constructed site plans, drawings, and maps (including detailed storm water outfall/culvert configurations).

2.2.5 Specific BMP Requirements

2.2.5.1 Outfall 002 (IA-3) Specific TOC Reduction BMP

For Outfall 002 (IA-3), the permittee must identify pollutant sources generated by activities taking place in Hanger 1, the Air Station refueling pit, and tarmac drainage surrounding the immediate area that may contribute to elevated concentrations of TOC and pH. Upon successfully identifying and reducing, or eliminating, the source(s) of TOC, the permittee may submit a written request to DEC to reduce the

monitoring frequency for TOC from monthly to quarterly on Outfall 002. DEC will provide written approval to reduce the monitoring frequency upon successfully demonstrating 1) identification of the sources and 2) reduction or elimination of the source. Success in reducing TOC will be based on the average of the preceding 12 months being less than 5 mg/L.

2.2.5.2 Specific BMPs for Reducing Discharge of Aqueous Fire Fighting Foam

The permittee must maintain BMPs to limit, manage, and control discharges from fire foam system testing and hydrant maintenance and testing. The uncontrolled release of Aqueous Fire-fighting Foam (AFFF) containing perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) to the environment is not permitted unless such action is warranted by an emergency. Any non-emergency action associated with AFFF must be performed with appropriate controls to prevent releases to the environment, including storage, training, and maintenance of the firefighting system. If an environmentally suitable substitute becomes available and approved for use by other agencies having jurisdiction, USCG must evaluate the substitute foam and if appropriate, remove, dispose, and replace the legacy AFFF.

2.2.6 Review and Certification

The BMP must be reviewed and certified as follows:

2.2.6.1 Annual review by the plant manager and BMP Committee.

2.2.6.2 Certified statement that the above reviews were completed and the BMP Plan fulfills the requirements set forth in this Permit. The statement must be certified by the dated signatures of each BMP Committee member. The statement must be submitted to DEC on or before January 31st of each year of operation.

2.2.7 Documentation

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

2.2.8 BMP Plan Modification.

2.2.8.1 The permittee must amend the BMP Plan whenever a change in the facility or in the operation of the facility materially increases the generation of pollutants or their release or potential release to receiving waters.

2.2.8.2 The permittee must amend the BMP Plan whenever the plan 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 waters of the U.S.

2.2.8.3 Any changes to the BMP Plan must be consistent with the objectives and specific requirements listed above. All changes in the BMP Plan must be reported to DEC with the annual certification required under Section 2.2.6.2.

APPENDIX A

STANDARD CONDITIONS

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 60	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 60: Solid Waste Management
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://law.alaska.gov/doclibrary/doclib.html

40 CFR	Code of Federal Regulations Title 40: Protection of Environment
AAC	Alaska Administrative Code
Amb	Ambient Concentration
AFFF	Aqueous Fire-fighting Foam
AML	Average Monthly Limit
AWC	Applicable Water Quality Criteria
APDES	Alaska Pollutant Discharge Elimination System
AS	Air Station
AS	Alaska Statute(s)
AS 46.03	Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at http://www.legis.state.ak.us/basis/folio.asp
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BOD_5	Biochemical Oxygen Demand, 5-day
BMP	Best Management Practice
BPJ	Best Professional Judgment
BPT	Best Practicable Control Technology Currently Available
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CFR	Code of Federal Regulations
CWA	Clean Water Act
CV	Coefficient of Variation
DEC	Alaska Department of Environmental Conservation
DF&G	Alaska Department of Fish and Game

DF	Dilution Factor
DMR	Discharge Monitoring Report
DNR	Alaska Department of Natural Resources
EC_{25}	Effect Concentration 25%
EFH	Essential Fish Habitat
ELG	Effluent Limit Guidelines
EMP	Environmental Monitoring Program
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FWS	Fish and Wildlife Service
g/Kg	Grams Per Kilogram
GPD or gpd	Gallons Per Day
GPM or gpm	Gallons Per Minute
IC_{25}	Inhibition Concentration 25%
IP	Individual Permit
Kg/m^3	Kilograms per Cubic Meter
LC_{50}	Lethal Concentration 50%
LOQ	Limit of Quantitation
LPD	Liters Per Day
LTA	Long Term Average
m	meters
MDL	Maximum Daily Limit
MEC	Maximum Expected Concentration
mg/L	Milligrams Per Liter
MGD or mgd	Million gallons per day
µg/L	Micrograms Per Liter
ml	Milliliter
ML	Minimum Level
MLLW	Mean Lower Low Water
m/s	Meters Per Second
mg	Million gallons
mgd	Million gallons per day
mg/L	Milligram per Liter
N/A	Not Applicable
NetDMR	EPA Electronic DMR Submittal Portal
NMFS	National Marine Fisheries Service

NOAA	National Oceanic and Atmospheric Administration
NOEC	No Observed Effect Concentration
NPDES	National Pollutant Discharge Elimination System
O&G	Oil & Grease
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
POC	Parameter of Concern
PPT	Parts Per Thousand
PQL	Practical Quantification Limit
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RPA	Reasonable Potential Analysis
RWC	Receiving Water Concentration
SCA	Secondary Containment Area
SOP	Standard Operating Procedures
SU or su	Standard Units
SWPPP	Storm Water Pollution Prevention Plan
TAH	Total Aromatic Hydrocarbons
TAqH	Total Aqueous Hydrocarbons
TBEL	Technology-based Effluent Limit
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRC	Total Residual Chlorine
TRE	Toxicity Reduction Evaluation
TS	Truck Stand
TSS	Total Suspended Solids
TUa	Toxic Unit, Acute
TUc	Toxic Unit, Chronic
U.S.	United States
USC	United States Code
USCG	United States Coast Guard
WET	Whole Effluent Toxicity
WLA	Wasteload Allocation
WWTP	Wastewater Treatment Plant
WQBEL	Water Quality-based Effluent Limit

WQC	Water Quality Criteria
WQS	Water Quality Standards

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.

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.
Aquaculture [b]	Means the cultivation of aquatic plants or animals for human use or consumption.
Average	Means an 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.
Backwash	Means wash water resulting from the backwashing of a water filter.
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.
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.
Categorical Sum	The term categorical sum refers to the summation of methodology MDLs that are unique within a suite of analytes, i.e. no duplications of methodologies.
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) [a]	Means the federal law codified at 33 U.S.C. 1251-1387, also referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972.
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.
Contaminated SCA	Means a secondary containment area (SCA) where a sheen, discoloration, or odor has been observed, or a spill has occurred.
Cooling Water	Means once-through non-contact cooling water.
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.
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.
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.

Ecosystem [b]	Means a system made up of a community of animals, plants, and bacteria and the system's interrelated physical and chemical environment.
Effect Concentration	A point estimate of the toxicant concentration that would cause an observable adverse effect on a quantal, "all or nothing," response (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated by point estimation techniques.
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.
Environmental Monitoring Program (EMP)	An environmental monitoring program focusing on the collection of sediment and receiving water samples aimed at investigating the environmental effects of a discharge on the surrounding environment.
EPA	Environmental Protection Agency
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 N^{th} 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: $\sqrt[4]{12x23x34x990} = 55$.
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.
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 nonquantal 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.

Mean Lower Low Water [b]	Means the tidal datum plane of the average of the lower of the two low waters of each day, as would be established by the National Geodetic Survey, at any place subject to tidal influence.
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 [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.
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.
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. For this Permit, other terms to be taken as synomonous with ML include, but may not be limited to, "quantification limit" or "level of quantification", "reporting limit", and "level of detection."
Mixing Zone [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.
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.
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.
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.
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.
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.
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. 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 Containment Area (SCA)	In general, an area constructed to contain any spilled or leaked hazardous liquids from oil filled equipment, fuel storage tanks, truck washing areas, or other structures capable of leaking hazardous liquids. For this Permit, SCA mean containment areas that are typically constructed of steel, synthetic liners or synthetic liners with a layer of gravel on top to protect the liner and are required by 40 CFR 112 – Oil Pollution Prevention or 18 AAC 75 – Oil and Other Hazardous Substances Pollution Control, Article 1.
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.
Shellfish [b]	Means a species of crustacean, mollusk, or other aquatic invertebrate with a shell or shell-like exoskeleton in any stage of its life cycle.
Significant Industrial User (SIU) [g]	Means an indirect discharger that is the focus of control efforts under the national pretreatment program; includes all indirect dischargers subject to national categorical pretreatment standards, and all other indirect dischargers that contribute 25,000 gpd or more of process wastewater, or which make up five percent or more of the hydraulic or organic loading to the municipal treatment plant, subject to certain exceptions [40 CFR 403.3(t)].
Sufficiently Sensitive Method	Per 40 CFR 122.21(a)(3), a method approved under 40 CFR 136 is sufficiently sensitive when: (A) The method minimum level (ML) is at or below the level of the applicable water quality criterion for the measured parameter, or (B) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge, or (C) The method has the lowest ML of the analytical methods approved under 40 CFR 136 for the measured pollutant or pollutant parameter.
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.
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.
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).
Uncontaminated SCA	Means a secondary containment area (SCA) where a spill has not occurred and a sheen, odor, or discoloration has not been observed. A contaminated SCA may be deemed uncontaminated after a certain time period without a spill, observation of a sheen, discoloration, or odor, or an exceedance of TAH and TAqH as specified in the Permit.
Untreated Waterflood	Untreated waterflood is water from the same source as normal waterflood without the concomitant contamination from chemicals or compounds used to treat normal waterflood prior to its injection into an oil formation. Typical chemicals or compounds usually consist of de-scalers, biocides, and oxygen scavengers.

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.
Water Depth	Means the depth of the water between the surface and the seafloor as measured at MLLW.
Waterflood	Waterflooding or water injection is where water is injected into an oil field, usually to increase pressure and thereby stimulate production.
Waters of the United States or Waters of the U.S.	Has the meaning given in 18 AAC 83.990(77).
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, aquacultural, 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.
Zone of Deposit	Means the total area of the bottom in marine or estuarine waters in which DEC has authorized the deposit of substances in exceedance of the water quality criteria in 18 AAC 70.020(b) and the antidegradation requirement in 18 AAC 70.010(c).

Notes:

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