ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

INDIVIDUAL PERMIT – FINAL

Permit Number: **AK0028657**

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. Part 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.

UNISEA, INCORPORATED

is authorized to discharge from the Dutch Harbor facility at 88 Salmon Way, Dutch Harbor, Alaska at the following location(s):

Outfall	Receiving Waterbody	Latitude	Longitude
001A-D	South Unalaska Bay	53.879317 N	166.560433 W
001E	South Unalaska Bay	53.879788 N	166.560356 W
002A	Iliuliuk Harbor	53.879033 N	166.552217 W
003A	Iliuliuk Harbor	53.878617 N	166.551717 W

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

This permit shall become effective September 1, 2024

This permit and the authorization to discharge shall expire at midnight, August 31, 2029

The permittee shall reapply for a permit reissuance on or before March 4, 2029, 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. The responsible party in charge of permit compliance shall also maintain a copy of this permit.

Signature	July 10, 2024 Date
James Rypkema 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 submit to the Alaska Department of Environmental Conservation (DEC or the Department) Division of Water during the term of this permit. The permittee is responsible for all submissions and activities even if they are not summarized in the table below.

Table 1: Schedule of Submissions

Permit Part	Submittal or Completion	Frequency	Due Date	Submit to
1.2.5.1	Determination of Multi-Sector General Permit (MSGP) Coverage	1/permit cycle	Within 180 days of the effective date of this permit	Permitting
1.4.5.11 and Appendix A, 3.2	Discharge Monitoring Report (DMR)	Monthly	Must be submitted electronically through the NetDMR system, on or before the 20th day of the month following monitoring [a]	NetDMR
1.12	Annual Report	Yearly	March 15th of the calendar year following monitoring	Compliance
Appendix A, 1.3	Application for Permit Reissuance	1/permit cycle	180 days prior to the expiration date of the permit	Permitting
Appendix A, 3.4	Oral and Written Notification of Noncompliance	As Necessary	Orally within 24 hours from the time the permittee becomes aware of the circumstances of noncompliance, and written within 5 days after the permittee becomes aware of the circumstances of noncompliance	Compliance
Appendix A, 3.5	Summary Report of Noncompliance	As Necessary	At the time the permittee submits monitoring reports under Appendix A, Part 3.2, and with the Annual Report	Compliance

To submit **Permitting** documents, use:

(note, electronic reporting may be exclusively required during the permit cycle)

Online: Alaska DEC's Environmental Data Management System (EDMS)
By Email: dec.water.seafoodpermitting@alaska.gov
By Fax: 907-269-3487

If submitting by hard copy, please
MAIL COMPLETED PERMITTING SUBMISSIONS TO

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorizations Program
Seafood and Aquaculture Permitting
555 Cordova Street
Anchorage, AK 99501

To submit **Compliance** documents, use:

(note, electronic reporting may be exclusively required during the permit cycle)

Online: Alaska DEC's Environmental Data Management System (EDMS)
By Email: dec-wqreporting@alaska.gov
By Fax: 907-269-4604

If submitting by hard copy, please
MAIL COMPLETED COMPLIANCE SUBMISSIONS TO

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance Program
555 Cordova Street
Anchorage, AK 99501

Footnotes:

a. This due date and electronic submittal requirement per Part 1.4.5.11 supersedes the date shown in Appendix A, 3.2 on Page A-9.

1.0 LIMITATIONS AND REQUIREMENTS

1.1 Discharge Authorization

1.1.1 During the effective period of this permit, the permittee is authorized to discharge pollutants specified herein from Outfall 001A-E to South Unalaska Bay and from Outfall 002A and Outfall 003A to Iliuliuk Harbor, within the limits and subject to conditions set forth herein.

1.1.2 This permit authorizes discharge of only those pollutants resulting from facility processes, waste streams, and operations clearly identified in the permit application process, including:

1.1.2.1 Seafood processing wastewaters from butchering, washed and unwashed mince, washed paste, and seafood by-product commodity lines, including:

1.1.2.1.1 Catch transfer water (delivering vessel fish hold waste and wastewater, live tank water, refrigerated seawater, or brine) conveyed to the onshore facility.

1.1.2.1.2 Cleaning, disinfectant, and defoaming agents used for seafood processing where the permittee follows the manufacturer's use and disposal recommendations. This includes the use of disinfectants added to wash down water to meet applicable state and federal sanitation standards by facilitating waste removal while processing or sanitizing seafood processing areas.

1.1.2.2 Non-process wastewaters.

1.2 Discharges Not Covered

The discharge of any pollutant to waters of the U.S. that was not identified in the Alaska Pollutant Discharge Elimination System (APDES) application submitted to the Department, and expressly authorized by the permit, is not covered. Discharges not covered under the permit include, but are not limited to:

1.2.1 Discharge of domestic wastewaters.

1.2.2 Discharge of drinking water treatment wastewaters.

1.2.3 Discharge of pollutants covered by other general or individual APDES permits.

1.2.4 Discharge of commingled or non-commingled storm water associated with construction activity.

1.2.5 Discharge of industrial storm water:

1.2.5.1 If the facility discharges industrial storm water to waters of the U.S., alone or commingled with seafood processing waste and wastewaters, the permittee shall determine whether the facility requires coverage under the APDES Multi-Sector General Permit (MSGP) for Storm Water Discharges associated with Industrial Activity. The permittee shall identify the MSGP authorization number, or identify that the permittee has filed a MSGP No Exposure Certification, within 180 days of the effective date of the permit.

1.2.5.2 Discharge of commingled industrial storm water and seafood processing waste and wastewaters is allowed only if all commingled wastewaters are treated to 0.5 millimeter (mm) or less, per Part 1.4.2.4.

1.2.6 Discharge of petroleum hydrocarbons, including vessel bilge waters. No discharge of petroleum (e.g., diesel, kerosene, and gasoline) or hazardous substances is allowed into or upon the navigable waters of the U.S., on adjoining shorelines, or into or upon the waters of the contiguous zone which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the U.S. [33 U.S.C. §1321(b)(3)].

1.3 Prohibited Discharges

1.3.1 The permit prohibits the following discharges:

1.3.1.1 Discharge of putrid, raw (non-processed) seafood.

1.3.1.2 Discharge of contaminated or unsold interim or finished seafood by-products (e.g., hydrolysate, fish meal, fish oil).

1.3.1.3 Discharge of food and raw food ingredients, additives (e.g., salts, sugars, colors, etc.), or seafood processing chemicals (e.g., sulfates, phosphates, acids, bases, etc.) that have not been used directly in the facility's seafood processing commodity lines.

1.3.1.4 Discharge of effluents that, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use; cause a film, sheen, foam, or discoloration on the water's surface or any shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the water surface, within the water column, on the seafloor, or upon any shorelines, unless authorized by a mixing zone or zone of deposit (ZOD).

1.3.1.5 Discharge of hazardous or toxic substances, or other chemicals, in toxic amounts that may impair designated uses or violate water quality standards (WQS) of the receiving water.

1.3.1.6 Discharge of seafood wastewater and residues that create attractive nuisance conditions whereby fish or wildlife are attracted to waste disposal or storage areas in a manner that creates a threat to fish or wildlife or to human health and safety.

1.3.1.7 Discharge of seafood wastewater and residues that create a nuisance condition to designated uses.

1.4 General Requirements

1.4.1 Flow Measurement

1.4.1.1 The permittee must install and maintain an effluent flow meter and totalizer on Outfall 001A-E by the effective date of this permit.

1.4.1.2 The permittee must install and maintain effluent flow meter(s) and totalizer(s) for all other existing outfalls within 24 months of the effective date of this permit, or sooner if modifications or installations of waste treatment systems occur.

1.4.1.3 Upon installation, the permittee shall continuously measure and record the effluent flow using a flow meter and totalizer.

1.4.1.4 The permittee shall record each outfall's estimated or measured flow daily and report the daily maximum and monthly average discharge flow.

1.4.1.4.1 Where flow meters are not yet installed, the permittee may estimate the daily and average monthly flow volumes for the first 24 months after the permit's effective date or until flow meter installation, whichever occurs first.

1.4.1.4.2 The permittee shall estimate flow volumes by use of professional methods.

1.4.1.4.3 When the permittee estimates instead of measures flow volumes, the permittee must submit the flow volume calculation methods as an attachment with the next month's required Discharge Monitoring Report (DMR).

1.4.1.4.4 The permittee must place flow volume estimation methods in the Quality Assurance Project Plan (QAPP) (Part 2.1) and must update the QAPP with revisions to the

procedure to derive the flow volume estimations prior to using the new procedure for reporting purposes.

1.4.2 Treatment and Limits

1.4.2.1 Discharge shall not cause or contribute to a violation of the Alaska WQS (18 AAC 70) in the receiving water, unless as authorized in this permit and in accordance with applicable provisions in 18 AAC 70.200 – 70.240 (e.g., mixing zone, ZOD).

1.4.2.2 The permittee shall route all incidental seafood processing waste in scuppers and floor drains through a conveyance system to the seafood waste treatment system prior to discharge.

1.4.2.3 The permittee shall not grind seafood processing waste solids prior to screening at the facility.

1.4.2.4 The permittee shall treat all seafood processing waste and wastewater, including catch transfer water and any other seafood contact water routed through the facility from vessels, to 0.5 mm or less via fine mesh screens or equivalent technology.

1.4.2.5 The permittee shall convey seafood processing waste solids collected by screening and other solids recovery methods to a by-product commodity line or dispose of them in another Department-approved manner.

1.4.2.6 Non-process wastewaters may, but are not required to, be discharged through the seafood waste treatment system. The permittee shall establish pollution reduction Best Management Practices (BMPs) for any effluents that have not been sent through the treatment system.

1.4.2.7 The permittee shall perform all permit-required effluent monitoring after the last treatment unit and after all commingling has occurred but prior to discharge to waters of the U.S., unless otherwise specified.

1.4.3 Seafood Waste System Inspection and Reporting Requirements

1.4.3.1 The facility must comply with the current regulatory engineering plan review and approval requirements of 18 AAC 72, as applicable.

1.4.3.2 The permittee shall not anchor any new outfall(s) in, or discharge waste or wastewater into or onto, “living substrates” such as submerged aquatic vegetation (e.g., kelp, eelgrass). A pre-biological survey is required in compliance with Appendix D when proposing an outfall relocation or new installation.

1.4.3.3 The permittee shall perform an outfall system inspection within twelve months of the effective date of the permit, then perform subsequent inspections biennially (i.e., every other year). Pressure testing, visual, remotely operated vehicle (ROV), dye testing, and diver are allowable inspection methods. The permittee must include the chosen inspection methods in the BMP Plan (Part 2.2). The Annual Report (Part 1.12) shall contain a summary of the inspection done in that reporting year.

1.4.3.3.1 The permittee shall ensure that the outfall system is operable and functioning as designed.

1.4.3.3.2 The permittee shall ensure that cathodic protection is functional and not at the end of its functional life.

1.4.3.3.3 The permittee shall document the outfall condition and estimate the remaining functional life.

1.4.3.3.4 The permittee shall keep a log of repairs (including date performed and a description of repairs performed) to the outfall system and include them in the Annual Report.

1.4.3.4 If the permittee identifies in a seafloor or other survey that the outfall has moved or broken, the permittee shall cease discharging from the damaged outfall system (severed, failed, or leaking) as soon as possible, but no more than ten days past discovering the damage. This allows enough time to process seafood already offloaded to the facility. The permittee shall cease discharging if they cannot repair the system within ten days. The permittee shall report any outfall system failure to DEC verbally within 24 hours of discovery and in writing within five days of discovery (Appendix A, Part 3.4).

1.4.3.5 The permittee shall visually inspect the seafood waste screening and conveyance system daily, documenting system functionality. The permit prohibits the discharge of inadvertently entrained gloves, earplugs, rubber bands, or other equipment used during seafood processing. The permittee shall maintain a written log of these daily inspections, including corrective actions taken on the solids recovery system, wastewater overflow occurrences, bypass incidents, and other operational problems, and shall make this log available to DEC upon request.

1.4.3.6 The permittee shall include a section in the Annual Report (Part 1.12) that summarizes the noncompliance issues and violations found during outfall system inspections and other information gathering during the calendar year.

1.4.4 Nuisance Conditions

1.4.4.1 The permittee shall ensure seafood processing waste and wastewater and residues do not create attractive nuisance conditions whereby fish or wildlife are attracted to seafood waste or wastewater, or to storage areas, in a manner that creates a threat to fish or wildlife or to human health and safety.

1.4.4.2 The permittee shall ensure seafood processing waste and wastewater and residues do not create a nuisance condition to designated uses.

1.4.4.3 DEC will use the following criteria to determine whether a nuisance or an objectionable condition exists, including whether seafood waste or wastewaters are or have been:

1.4.4.3.1 Attracting undesirable or nuisance species;

1.4.4.3.2 Creating an objectionable odor or taste;

1.4.4.3.3 Resulting in complaints or observations from existing users; or

1.4.4.3.4 Inconsistent with the intended use of the area as designated in a land use or other resource management plan adopted by a federal, state, or local government.

1.4.5 Monitoring and Reporting Requirements

1.4.5.1 All permit limit values represent maximum effluent limits unless otherwise indicated. The permittee must comply with effluent limitations at all times unless otherwise indicated, regardless of monitoring frequency or reporting required by other provisions of this permit.

1.4.5.2 All monitoring and effluent limitations as set out in the permit are required to begin upon the effective date of this permit and shall continue until the next permit reissuance establishes new monitoring requirements.

1.4.5.3 All monitoring must be representative of the waste stream flow and shall be conducted while the applicable discharge is occurring.

1.4.5.4 For all effluent monitoring, the permittee must use a sufficiently sensitive Environmental Protection Agency (EPA)-approved test method that quantifies the level of pollutants to a level lower than applicable limits or WQS, or use the most sensitive test method available, per 40 CFR Part 136 (Guidelines Establishing Test Procedures for the Analysis of

Pollutants), adopted by reference at 18 AAC 83.010(f), or methods found in 18 AAC 70, as applicable. Upon request by the Department, the permittee must submit the results of any other monitoring regardless of the test method used.

1.4.5.4.1 Methods which a vendor has designated as EPA-equivalent, but which EPA has not approved for use in compliance monitoring, are not acceptable methods for the monitoring required in this permit.

1.4.5.5 For purposes of reporting on the 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 a minimum level (ML) (also called a minimum reporting level (MRL), practical quantitation limit (PQL), or limit of quantitation (LOQ)), the permittee must report "less than (<) {numeric value of ML}."

1.4.5.6 The permittee has the option of taking more frequent samples than are required under the permit. The permittee shall use these samples for averaging if they are conducted using the Department approved test methods (generally found in 18 AAC 70 and 40 CFR Part 136 [adopted by reference in 18 AAC 83.010]). The permittee shall include the results of any additional monitoring in the calculation and the reporting of the data submitted in the DMR (per Appendix A, Part 3.2 and 3.3). Monitoring more frequently for pollutant parameters found in Table 2 or Table 3 must also comply with requirements in Part 1.5.2.3. The maximum daily discharge limitation shall not be applied to an average of multiple results. The permittee must report the highest test result from the reporting period as the Daily Maximum value.

1.4.5.7 The permittee must calculate all limitations that require averaging of measurements using an arithmetic mean unless the Department specifies another method in the permit.

1.4.5.8 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.

1.4.5.9 For purposes of calculating the reported daily maximum pounds per day, the permittee must use the total daily effluent flow rate measured on the date the effluent sample was collected. For purposes of calculating the reported weekly or monthly pounds per day, the permittee may use the appropriate average flow, weekly or monthly.

1.4.5.10 DEC may require additional effluent or receiving water monitoring for site-specific purposes related to, but not limited to: protection of state WQS, gathering data to support Total Maximum Daily Load (TMDL) development, evaluation of receiving water impairments, or evaluation of effects on threatened or endangered species. DEC will notify the permittee of any additional or site-specific monitoring in writing.

1.4.5.11 Electronic Reporting

1.4.5.11.1 E-Reporting Rule - Phase I (DMRs). The permittee must submit a DMR for each month by the 20th day of the following month. DMRs shall be submitted electronically through NetDMR, per Phase I of the E-Reporting Rule (40 CFR Part 127). For access to the NetDMR Portal, go to https://npdes-ereporting.epa.gov/net-netdmr. 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 data required by the permit that cannot be reported in a NetDMR field (e.g., 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, which contains general information about this reporting format. Training modules and webinars for NetDMR can be found at https://usepa.servicenowservices.com/oeca_icis.

1.4.5.11.2 E-Reporting Rule - Phase II (Other Reports). 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. The permittee should monitor DEC's E-Reporting website at 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 shall be submitted in accordance with Appendix A – Standard Conditions.

1.4.5.11.3 The permittee is required to mark "no discharge" on their NetDMR submittal for the months where monitoring is required but the facility is not discharging.

1.5 Effluent Limits and Monitoring Requirements

1.5.1 Applicability. The permittee shall conduct monitoring in accordance with the requirements and frequencies established herein.

1.5.2 Outfall 001A-E (Seafood Processing and Meal Plant Wastewaters) Limits and Monitoring Requirements

1.5.2.1 Wastewaters originating from seafood processing operations shall meet the limits found in this Part as well as requirements of Part 1.4. The permittee shall perform effluent monitoring after the last treatment unit, and after commingling with washed and unwashed mince, washed paste, and/or by-product recovery waste streams, but prior to discharge to the receiving water.

1.5.2.2 Sample Labeling. The permittee shall label effluent samples required under this Part as: Outfall 001A-E (Seafood Processing and Meal Plant Wastewaters).

1.5.2.3 The permittee must limit and monitor discharges from Outfall 001A-E as specified in Table 2 and Table 3. The permittee shall record the date and time of all monitoring performed.

1.5.2.3.1 If the permittee discharges washed mince and/or washed paste wastewater, the weekly monitoring in Table 2 and Table 3 must occur while that discharge is occurring.

1.5.2.3.2 If the permittee discharges Fish Meal and/or Fish Oil (stickwater) effluent, the weekly monitoring in Table 2 and Table 3 must occur during that effluent's discharge. If the permittee discharges stickwater concurrently with washed mince and/or washed paste wastewater and has performed sampling under Part 1.5.2.3.1 during the monitoring month, then monitoring under this Part is satisfied.

1.5.2.4 Within 12 months from the permit's effective date, the permittee shall determine an Outfall 001A-E facility-specific settleable solids (SS) conversion factor (g/mL) for the effluent. The permittee shall use this facility-specific SS conversion factor to calculate the pounds per day SS discharged. The permittee must submit for Department approval the method(s) proposed to determine the Outfall 001A-E facility-specific conversion factor within 180 days of the effective date of the permit and receive approval prior to using the facility-specific conversion factor in the SS discharge calculations.

Table 2: Outfall 001A-E Effluent Limits and Monitoring Requirements

Parameter	Effluent Limits				Monitoring Requirements	
	Units [a]	Daily Minimum	Daily Maximum	Monthly Average	Sample Frequency	Sample Type
Flow [b]	mgd	N/A	7.3	Report	Daily	Measured
Biochemical Oxygen Demand (BOD_5)	mg/L	N/A	Report	Report	1/Week [d]	Composite [e]
	lbs/day [c]	N/A	297,000 [d]	185,000 [d]		
Total Suspended Solids (TSS)	mg/L	N/A	Report	Report	1/Week	Composite [e]
	lbs/day [c]	N/A	Report	Report		
Oil and Grease (O&G)	mg/L	N/A	Report	Report	1/Week	Grab
	lbs/day [c]	N/A	Report	Report		
pH	SU	6.5	8.5	N/A	1/Week	Grab
Total Residual Chlorine (TRC) [f]	mg/L	N/A	0.013 [g]	0.0075 [g]	1/Week	Grab
Temperature	°C	N/A	Report	Report	1/Week	Grab
Turbidity	NTU	N/A	Report	Report	1/Week	Grab
Density	kg/m^3	N/A	Report on Attachment A Only	N/A	1/Week	Grab
Total Ammonia, as N	mg/L	N/A	Report	Report	1/Month	Grab
Arsenic, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [e]
Copper, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [e]
Zinc, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [e]
Silver, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [e]
Fecal Coliform (FC)	FC/100 mL	N/A	Report	Report [h]	1/Quarter	Grab

Footnotes:

a. Units: mgd = million gallons per day, mg/L = milligrams per liter, lbs/day = pounds per day, SU = standard units, °C = degrees Celsius, NTU = Nephelometric Turbidity unit, kg/m^3 = kilograms per cubic meter, µg/L = micrograms per liter, FC/100 mL = colony forming units per 100 mL.

b. Daily flow recorded shall be the totalized 24-hour flow meter reading.

c. Loading in lbs/day = concentration (mg/L) x flow (mgd) x 8.34 (conversation factor). The permittee must use the calculations in Appendix E and the daily flow (mgd) from the day sample collection occurred.

d. The BOD_5 limits and monitoring are applicable from May 1 – October 31.

e. The compositing period shall be for 24 hours or for the total amount of time on the sampling day during which there is flow from the outfall. The composite sample shall consist of at least one equal volume aliquot per every full three hours in the compositing period.

f. Monitoring for chlorine is not required if the permittee does not use chlorine as a disinfectant nor introduce it elsewhere in the seafood processing area.

g. Effluent limits for TRC are not quantifiable using EPA-approved analytical methods. The permittee will be in compliance with the effluent limits provided the TRC levels are below the compliance evaluation level of 0.1 mg/L.

h. When more than one sample is collected in a month, the FC average results 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 quantities. For example, the geometric mean of 100, 200, and 300 is (100 x 200 x 300)^(1/3)= 181.7.

Table 3: Outfall 001A-E Settleable Solids (SS) Monitoring Requirements

Parameter	Effluent Limits				Monitoring Requirements	
	Units [a]	Daily	Monthly	Yearly	Sample Frequency	Sample Type
Imhoff Cone Result [b]	mL/L	Report Maximum	Report Average	N/A	1/Week	Grab
Daily Discharge	lbs/day	Report Maximum	Report Average	N/A		Calculate [c]
Monthly Total Discharge	lbs/ month	N/A	Report Total	N/A	N/A	Calculate [c]
Yearly Total Discharge	lbs/yr	N/A	N/A	Report Year-to-Date Total	N/A	Calculate [c]
1.13 g/mL or Facility-Specific Conversion Factor [d]	g/mL	N/A	Report on Attachment A Only	N/A	N/A	N/A

Footnotes:

a. Units: mL/L = milliliters per liter, lbs/day = pounds per day, lbs/yr = pounds per year, g/mL = grams per milliliter.
b. The permittee shall determine SS (mL/L) as the volume of solids settled in an Imhoff cone (Standard Methods 2540-F).
c. The permittee shall use the mass balance calculations/formulas found in Appendix E.
d. The permittee shall use 1.13 g/mL for calculation for the first 12 months or until facility-specific conversion factor development, then report conversion factor used monthly.

1.5.3 Outfall 002A (Seafood Non-contact Water: Heat and Power Generation, Refrigeration, Vehicle Maintenance) and Outfall 003A (Meal Plant Scrubber, Condenser, and Evaporator Water).

1.5.3.1 Limits and Monitoring Requirements

1.5.3.1.1 The permittee must limit and monitor effluent from Outfall 002A as specified in Table 4 and from Outfall 003A as specified in Table 5.

1.5.3.1.2 Effluent collection for Outfall 003A may be done by flow-weighted composite of all effluent sources instead of after all commingling has occurred.

1.5.3.1.3 Monitoring in Table 4 and Table 5 must occur while the authorized discharges are occurring.

1.5.3.1.4 Sample Labeling. The permittee shall label samples required under this Part to correspond to the following:

1.5.3.1.4.1 Outfall 002A (Seafood Non-contact Water: Heat and Power Generation, Refrigeration, Vehicle Maintenance)

1.5.3.1.4.2 Outfall 003A (Meal Plant Scrubber, Condenser, and Evaporator Water)

Table 4: Outfall 002A Effluent Limits and Monitoring Requirements

Parameter	Effluent Limits				Monitoring Requirements	
	Units [a]	Daily Minimum	Daily Maximum	Monthly Average	Sample Frequency	Sample Type
Flow [b]	mgd	N/A	3.5	Report	Daily	Measured/ estimated
Temperature	˚C	N/A	20	Report	1/Week	Grab
pH	SU	6.5	8.5	N/A	1/Week	Grab
Total Ammonia, as N	mg/L	N/A	Report	Report	1/Month [c]	Grab
Arsenic, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter [c]	Composite [d]
Copper, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [d]
Zinc, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [d]
Total Residual Chlorine (TRC)	mg/L	N/A	0.013 [e]	0.0075 [e]	1/Quarter	Grab
Total Aqueous Hydrocarbons (TAqH)	µg/L	N/A	15	Report	1/Quarter [f]	Grab
Total Aromatic Hydrocarbons (TAH)	µg/L	N/A	10	Report	1/Quarter [f]	Grab
Oil and Grease (O&G)	mg/L	N/A	Report	Report	1/Quarter [c]	Grab
Total Suspended Solids (TSS)	mg/L	N/A	Report	Report	1/Quarter [c]	Composite [d]
Chemical Oxygen Demand (COD)	mg/L	N/A	Report	Report	1/Quarter [c]	Composite [d]

Footnotes:

a. Units: mgd = million gallons per day, °C = degrees Celsius, SU = standard units, mg/L = milligrams per liter, µg/L = micrograms per liter.

b. Daily flow recorded shall be the totalized 24-hour flow meter reading.

c. The permittee may request in writing that monitoring frequencies be reduced or eliminated for the parameters after two years of monitoring and reporting if results indicate no detections outside of applicable water quality criteria. Monitoring reductions can only occur if prior written approval from the Department is received.

d. The compositing period shall be for 24 hours or for the total amount of time on the sampling day during which there is flow from the outfall. The composite sample shall consist of at least one equal volume aliquot per every full three hours in the compositing period.

e. Effluent limits for TRC are not quantifiable using EPA-approved analytical methods. The permittee will be in compliance with the effluent limits provided the TRC levels are below the compliance evaluation level of 0.1 mg/L.

f. TAH/TAqH sampling must occur as effluent is discharged directly after the sump exits recirculation mode after an oily water alarm.

Table 5: Outfall 003A Effluent Limits and Monitoring Requirements

Parameter	Effluent Limits				Monitoring Requirements	
	Units [a]	Daily Minimum	Daily Maximum	Monthly Average	Sample Frequency	Sample Type
Flow [b]	mgd	N/A	4.9	Report	Daily	Measured/ estimated
Temperature	˚C	N/A	20	Report	1/Week	Grab
pH	SU	6.5	8.5	N/A	1/Week	Grab
Total Ammonia, as N	mg/L	N/A	Report	N/A	1/Month [c]	Grab
Copper, Total Recoverable	µg/L	N/A	Report	Report	1/Quarter	Composite [d]
Fecal Coliform (FC)	FC/100 mL	N/A	Report	Report [e]	1/Quarter	Grab
Total Residual Chlorine (TRC) [f]	mg/L	N/A	0.013 [g]	0.0075 [g]	1/Quarter	Grab

Footnotes:

a. Units: mgd = million gallons per day, °C = degrees Celsius, SU = standard units, mg/L = milligrams per liter, µg/L = micrograms per liter, FC/100 mL = colony forming units per 100 mL.
b. Daily flow recorded shall be the totalized 24-hour flow meter reading.
c. The permittee may request in writing that monitoring frequencies be reduced or eliminated for the parameters after two years of monitoring and reporting if results indicate no detections outside of applicable water quality criteria. Monitoring reductions can only occur if prior written approval from the Department is received.
d. The compositing period shall be for 24 hours or for the total amount of time on the sampling day during which there is flow from the outfall. The composite sample shall consist of at least one equal volume aliquot per every full three hours in the compositing period.
e. When more than one sample is collected in a month, the FC average results 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 quantities. For example, the geometric mean of 100, 200, and 300 is (100 x 200 x 300)^(1/3) = 181.7.
f. Monitoring for chlorine is not required if the permittee does not use chlorine as a disinfectant nor introduce it elsewhere in the seafood processing area.
g. Effluent limits for TRC are not quantifiable using EPA-approved analytical methods. The permittee will be in compliance with the effluent limits provided the TRC levels are below the compliance evaluation level of 0.1 mg/L.

1.6 Mixing Zones

1.6.1 In accordance with state regulations at 18 AAC 70.240, DEC may authorize a mixing zone. The point of compliance with applicable WQS is set at the boundary of the authorized mixing zones as listed below.

1.6.2 Outfall 001A-E – Mixing zones are authorized as follows:

1.6.2.1 The mixing zone for Outfall 001A-D for color, turbidity, residues, non-petroleum oil and grease, dissolved oxygen, and sediment extends 100 feet distance around each discharge pipe terminus, from the seafloor to the sea surface.

1.6.2.2 The mixing zone for Outfall 001E for color, turbidity, residues, non-petroleum oil and grease, dissolved oxygen, and sediment extends 100 feet distance around the outfall terminus, from the seafloor to the sea surface.

1.6.3 Outfall 002A - A chronic mixing zone for temperature is authorized for Outfall 002A. The mixing zone is defined as a semicircular cylinder around the point of discharge bounded by the

shoreline, with length 1 meter (parallel to the shoreline) and width 4 meters (perpendicular to the shoreline) extending vertically up to the sea surface and vertically down to the seabed.

1.6.4 Outfall 003A - A chronic mixing zone for temperature is authorized for Outfall 003A. The mixing zone is defined as a semicircular cylinder around the point of discharge bounded by the shoreline, with length 26 meters (parallel to the shoreline) and width 6 meters (perpendicular to the shoreline) extending vertically up to the sea surface and vertically down to the seabed.

1.7 Receiving Water Quality Monitoring

1.7.1 The permittee shall conduct water quality measurements every two weeks at the stations in Table 6 during July – October of each year. The permittee shall conduct the measurements on days when processing and discharge is occurring.

Table 6: Receiving Water Monitoring Locations

Station Name	Station Coordinates
Near Field #1	53°52’45.0” N, 166°33’39.0” W
Near Field #2	53°52’48.0” N, 166°33’42.0” W
Near Field #3	53°52’49.8” N, 166°33’39.0” W
Far Field #4	53°52’33.6” N, 166°34’01.8” W
Far Field #5	53°52’40.2” N, 166°34’12.0” W
Far Field #7	53°52’43.2” N, 166°33’48.0” W
Far Field #8	53°52’49.8” N, 166°34’07.2” W
Far Field #11	53°53’00.0” N, 166°33’34.8” W
Far Field #12	53°53’03.0” N, 166°33’40.8” W
Far Field #14	53°53’12.0” N, 166°33’25.2” W
Background #17	53°54’25.2” N, 166°34’48.0” W

1.7.2 The permittee shall measure DO concentration, temperature, salinity, density, and depth at one-meter intervals throughout the water column from a point approximately one meter below the sea surface to approximately one meter above the seafloor for each station on each day of monitoring. The permittee shall also measure the same parameters at a depth less than one meter below the sea surface to characterize the surface layer for each station on each day of monitoring.

1.7.2.1 In the summary of receiving water monitoring results submitted with the Annual Report (Part 1.12), the permittee shall include the following for data collected under Part 1.7.2:

1.7.2.1.1 Survey dates and corresponding tables of all required data collected.

1.7.2.1.2 Separate table(s) listing only the dissolved oxygen values below 6 mg/L in the one meter depth surface layer or below 4 mg/L in the water column below one meter depth, along with the corresponding survey date, monitoring station, and sample point depth.

1.7.2.2 If dissolved oxygen values at any near field station meet the criteria in Part 1.7.2.1.2 and are lower than the dissolved oxygen values at corresponding depth on that date at the Background #17 station, the permittee must note that in the summary of incidences of noncompliance in the Annual Report (Part 1.12).

1.8 Project Area Zone of Deposit (Project Area ZOD)

1.8.1 In accordance with state regulations at 18 AAC 70.210, DEC may authorize a ZOD in marine waters. The point of compliance with all applicable WQS is set at every point outside of the authorized ZOD.

1.8.2 Subject to the Compliance Schedule set forth in Part 1.9, seafood processing waste deposits on the seafloor are limited to a cumulative total of 1.0 acre of coverage within the project area ZOD, as mapped in Appendix F.

1.8.2.1 The total area(s) of continuous coverage (95-100%) summed with those areas of 50% or greater discontinuous coverage of seafood waste deposits within the authorized project area ZOD shall not exceed 1.0 acre (43,560 square feet) based on the following criteria:

1.8.2.1.1 Areas with continuous seafood waste coverage (95-100% coverage) are required to be summed with areas of 50% or greater discontinuous coverage to determine compliance with the 1.0-acre limitation.

1.8.2.1.2 Areas with 10-49% discontinuous coverage and "Trace" coverage must be reported but are not applied toward the 1.0-acre limitation.

1.8.2.1.3 Appendix F provides the survey protocol that must be used to measure and map coverage and to determine compliance with the 1.0-acre limitation. See Appendix F-Part I and II (4)(c) for reporting percent coverage.

1.8.2.2 The size of the permittee's project area ZOD may be modified by DEC if:

1.8.2.2.1 The Department determines that the authorized project area ZOD is not appropriate to maintain and protect existing uses of the waterbody outside of the project area ZOD; or

1.8.2.2.2 The permittee submits a seafloor survey meeting the requirements of Appendix F and the Department authorizes a modified project area ZOD based on the information submitted.

1.8.3 Seafloor Survey Monitoring Requirements. The purpose of a seafloor survey is to determine compliance with the permit limit for seafood processing waste deposits, identifying the total seafood waste coverage areas on the seafloor.

1.8.3.1 The permittee must conduct and report results of seafloor surveys following the protocols established in Appendix F and per the schedule established in Table 7. Seafloor surveys shall result in mapping any seafood processing waste deposits within, or directly adjacent to, all discharge location(s).

1.8.3.2 The Department may require additional or expanded seafloor surveys if the Department determines that deposits are forming on the seafloor outside of the project area ZOD.

1.8.3.3 The permittee shall develop a seafloor survey QAPP that includes a description of the methods and monitoring plan for the project area ZOD (Part 2.1.11).

1.8.3.4 A seafloor survey report shall be submitted with the Annual Report (Part 1.12) and include a statement that the QAPP has been implemented and a description of any problems encountered or deviations from the QAPP.

1.8.3.5 Monitoring Schedule

1.8.3.5.1 The Part I Seafloor Survey (see Appendix F) shall be conducted during the first full year of permit coverage in the second quarter of the year (April – June). If the survey cannot be conducted within this timeframe due to weather, availability of surveyor services (provided there is documented evidence that survey services were requested greater than

three months in advance of when the survey is due to be performed), or other reasons, the rationale shall be documented in the seafloor survey report.

1.8.3.5.2 The initial Part II Seafloor Survey shall be conducted during the second full year of permit coverage, during the same time period as described in Part 1.8.3.5.1. The summed seafood processing waste coverage area applicable to the 1.0-acre limit, as defined in Part 1.8.2.1, determines the required subsequent seafloor survey frequency, which is as follows:

1.8.3.5.2.1 Every year, if the previous seafloor survey report finds greater than or equal to 0.75 acres seafood waste deposit coverage.

1.8.3.5.2.2 Every two years, if the previous seafloor survey report finds less than 0.75 acres seafood waste deposit coverage.

1.8.3.6 A benthic assessment shall be conducted during the third full year of permit coverage during the same time period as described in Part 1.8.3.5.1.

1.8.3.6.1 Not later than 90 days prior to planned commencement of fieldwork, UniSea shall submit for DEC approval a work plan(s) for the benthic assessment.

1.8.3.6.2 If the benthic assessment meets the data gathering and reporting objectives in Appendix F, DEC may approve counting the assessment as the annual Part II Seafloor Survey.

1.8.3.6.3 The benthic assessment shall characterize the spatial extent of the seafood waste pile(s) and the associated benthic community impacts in South Unalaska Bay. In addition, the assessment shall make comparisons to benthic communities present on the ambient seafloor beyond the influence of the seafood waste piles. The assessment shall be consistent with the work plan submitted by UniSea and approved by DEC.

1.8.3.6.4 The benthic assessment shall be conducted using sediment profile imaging and plan-view underwater camera imaging.

1.8.3.6.5 At a minimum, sampling transects shall be arranged in a radial pattern, starting inside the coverage area applicable to the 1.0-acre limit in the previous seafloor survey and continuing at 100-foot sampling intervals until no influence of seafood waste is detectable on the sediment surface and no apparent impacts from organic enrichment are observed in the benthic community.

1.8.3.6.6 A draft report shall be submitted to DEC for review within 3 months of the completion of the benthic assessment.

1.8.3.6.7 A final report shall be submitted to DEC with the Annual Report.

Table 7: Seafloor Monitoring Schedule

Survey Type	Sample Location	Survey Result Triggers	Frequency
Part I Seafloor Survey	Project Area ZOD	Report as required in Appendix F	The first full year of permit coverage
Part II Seafloor Survey	Project Area ZOD	Report as required in Appendix F	The second full year of permit coverage
Additional Part II Seafloor Surveys	Project Area ZOD	Previous Part II Seafloor Survey reporting ≥ **0.75 acres** of deposits	Required every year, See Part 1.8.3.5.2.1
	Project Area ZOD	Previous Part II Seafloor Survey reporting < **0.75 acres** of deposits	Required every two years, See Part 1.8.3.5.2.2
Benthic Assessment Survey	Project Area ZOD	N/A	The third full year of permit coverage

1.9 Compliance Schedule – Zone of Deposit

1.9.1 The permittee must achieve compliance with the 1.0-acre project area ZOD coverage limit in Part 1.8.2 as soon as possible, but no later than five years after the effective date of the final permit.

1.9.2 As soon as possible but no later than one year after the effective date of the final permit and annually thereafter, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that outlines the progress made towards achieving compliance with the 1.0-acre project area ZOD coverage limit in Part 1.8.2. At a minimum, the report must include:

1.9.2.1 An assessment of the previous year's seafloor survey results and comparison to the 1.0-acre limit;

1.9.2.2 The cause of any reported noncompliance with the 1.0-acre limit, any remedial actions taken, and a discussion of the likelihood of meeting the next scheduled requirements;

1.9.2.3 Detailed discussion on the progress made toward meeting the 1.0-acre limit;

1.9.2.4 Detailed discussion on progress made toward completing remaining interim requirements of this compliance schedule; and

1.9.2.5 Further actions and milestones targeted for the upcoming year.

1.9.3 As soon as possible but no later than one year after the effective date of the final permit, if the permittee has not obtained compliance with the 1.0-acre limit, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that includes, at a minimum, a summary of the following items. This information may be incorporated into the report required by Part 1.9.2.

1.9.3.1 A description of potential upgrades to plant operations that would be required to meet the 1.0-acre limit; and

1.9.3.2 Cost estimates for the identified upgrades.

1.9.4 As soon as possible but no later than two years after the effective date of the final permit, if the permittee has not obtained compliance with the 1.0-acre limit, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that includes, at a minimum, a summary of the following:

1.9.4.1 A proposed construction schedule with dates for commencement and completion of construction milestones that would lead to compliance with the 1.0-acre limit.

1.9.5 As soon as possible, but no later than three years after the effective date of the final permit, if treatment plant or outfall upgrades are required to meet the 1.0-acre limit, the permittee must submit engineered wastewater treatment facility and/or outfall upgrade plans to the Department's Permitting (APDES) and Engineering Support and Plan Review (ESPR) programs.

1.9.6 As soon as possible, but no later than four years after the effective date of the final permit, if upgrades are required to meet the 1.0-acre limit, the permittee must commence construction of any necessary facility upgrades.

1.9.7 As soon as possible, but no later than five years after the effective date of the final permit, if upgrades are required to meet the 1.0-acre limit, the permittee must have completed construction of any necessary facility upgrades and completed startup and optimization of facility upgrade operations. The permittee must submit a request for Final Approval to Operate as required by the Department's ESPR Program.

1.9.8 The permittee must achieve compliance with the 1.0-acre limit as soon as possible but no later than August 31, 2029.

1.9.9 While the compliance schedule is in effect, the permittee must comply with an interim compliance limit, 1.61 acres of ZOD coverage. The permittee shall submit noncompliance notification reports for each year the seafloor survey report finds deposits greater than 1.61 acres.

1.10 Compliance Schedule – Metals, Fecal Coliform, Turbidity, and Ammonia

1.10.1 The permittee must achieve compliance with the WQS (at 18 AAC 70.020 or 18 AAC 70.240) for arsenic, copper, zinc, silver, FC, turbidity, and ammonia as soon as possible, but no later than five years after the effective date of the final permit.

1.10.2 As soon as possible but no later than one year after the effective date of the final permit and annually thereafter, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that outlines the progress made towards achieving compliance with the WQS. At a minimum, the report must include:

1.10.2.1 An assessment of the previous year's monitoring results and comparison to the WQS;

1.10.2.2 The cause of any reported noncompliance with the WQS, any remedial actions taken, and a discussion of the likelihood of meeting the next scheduled requirements;

1.10.2.3 Detailed discussion on the progress made toward meeting the WQS;

1.10.2.4 Detailed discussion on progress made toward completing remaining interim requirements of this compliance schedule; and

1.10.2.5 Further actions and milestones targeted for the upcoming year.

1.10.3 As soon as possible but no later than one year after the effective date of the final permit, if the permittee has not obtained compliance with the WQS, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that includes, at a minimum, a summary of the following items. This information may be incorporated into the report required by Part 1.10.2.

1.10.3.1 A description of potential upgrades to plant operations that would be required to meet the WQS; and

1.10.3.2 Cost estimates for the identified upgrades.

1.10.4 As soon as possible but no later than two years after the effective date of the final permit, if the permittee has not obtained compliance with the WQS, the permittee shall provide a report to the Department, submitted with the Annual Report (Part 1.12), that includes, at a minimum, a summary of the following:

1.10.4.1 A proposed construction schedule with dates for commencement and completion of construction milestones that would lead to compliance with the WQS.

1.10.5 As soon as possible, but no later than three years after the effective date of the final permit, if treatment plant or outfall upgrades are required to meet the WQS, the permittee must submit engineered wastewater treatment facility and/or outfall upgrade plans to the Department's Permitting (APDES) and Engineering Support and Plan Review (ESPR) programs.

1.10.6 As soon as possible, but no later than four years after the effective date of the final permit, if upgrades are required to meet the WQS, the permittee must commence construction of any necessary facility upgrades.

1.10.7 As soon as possible, but no later than five years after the effective date of the final permit, if upgrades are required to meet the WQS, the permittee must have completed construction of any

necessary facility upgrades and completed startup and optimization of facility upgrade operations. The permittee must submit a request for Final Approval to Operate as required by the Department's ESPR Program.

1.10.8 The permittee must achieve compliance with the WQS as soon as possible but no later than August 31, 2029.

1.11 Sea Surface and Shoreline Monitoring

1.11.1 During each day seafood processing effluent discharge occurs, the permittee shall visually inspect the shoreline and receiving water immediately surrounding the facility and outfalls and record observations on a daily log. These logs may be kept electronically instead of hard copy and must be made available to DEC upon request.

1.11.1.1 The daily visual inspection shall include the shoreline (the intersection of the water's surface with land or manmade structures on any given tide cycle) and the readily-visible receiving water area. The area above the point of discharge (outfall terminus) shall be included in the daily visual survey if it is within the readily-visible receiving water area.

1.11.1.2 The readily-visible receiving water is defined as the receiving water area that a shore-based observer can see, and it varies with weather (e.g., fog) and sea conditions (waves). As a result, the extent of the readily-visible receiving water area shall be noted as part of each daily monitoring event.

1.11.2 The permittee's selected observation sites shall allow the permittee's personnel to visually observe the receiving water and the surface of the water directly above each outfall terminus. If sea surface and shoreline observations cannot be accomplished by the permittee due to poor weather or rough sea conditions, the permittee shall note why observations could not be made. Visual inspections shall include:

1.11.2.1 Shoreline Observations – Inspect the facility's readily-visible shoreline areas and waters surrounding these areas, including harbors, boats, docks, and piers. Shoreline observations shall include any observations of seafood waste or residues depositing on the surfaces, encompassing a minimum of 100 feet to either side of the parcel lines along the shore. If the permittee does not own waterfront areas, shoreline monitoring observations shall be made from where the permittee can observe the area of the shoreline where the facility's discharge may typically reach the shoreline.

1.11.2.2 Sea Surface and Water Column Observations - Inspect the readily-visible receiving water surrounding all outfall terminuses and docks, documenting all areas and sizes of sheens, films, foam, discoloration, and scum observed. The observation spot(s) chosen shall allow the personnel to see the water surfaces surrounding the different outfalls and the dock area(s). Observations noted shall include any suspended residues or discolorations within the water column, not just those on the water surface.

1.11.2.3 Endangered and Threatened Species - The permittee shall have trained personnel record the occurrence and numbers of animals identified as Western Steller sea lions (*Eumetopias jubatus*), Steller's eiders (*Polysticta stelleri*), Southwest Alaska Distinct Population northern sea otters (*Enhydra lutris kenyoni*), and short-tailed albatross (*Phoebastria albatrus*) within the survey area and within a 300-foot radius of the refueling station. The permittee shall ensure that there are personnel at the facility capable of identifying the listed endangered and threatened species.

1.11.2.3.1 Monitoring the survey area for the listed species shall include recording the number of injured and dead birds. The permittee shall report within 24 hours any instances of dead spectacled and Steller's eiders found onsite to the U.S. Fish and Wildlife Service

(USFWS) Anchorage Field Office (1-800-272-4174). The permittee shall follow the latest USFWS protocol on recording dead birds. Handling dead or injured birds is not recommended (Appendix G).

1.11.3 During each day seafood processing effluent discharge occurs, the permittee shall record the results of the daily residues visual inspections and observations, including the occurrence and estimated surface size and extent of any films, sheens, discolorations, or mats of foam in the readily-visible receiving water area. The permittee's record must attempt to note where the film, sheen, discoloration, or mats of foam are originating from (e.g., the facility's own outfall(s), a vessel currently at the facility, or a vessel no longer at the facility). If no films, sheens, discolorations, or mats of foam are observed, a note of "none" shall be recorded on the daily log. Logs must be maintained onsite and made available to DEC upon request.

1.11.4 The permittee shall record observations at various phases of the tide cycle during each calendar month.

1.11.5 The permittee shall capture representative digital photographs of the sea surface monthly while seafood wastewater discharge is occurring. Photographs shall be of sufficient clarity and detail to support the observations, shall represent what was observed, and must document positive residues or discolorations observed if there were any that month. Photographs shall include a digital date and time stamp. A photograph log with the name of the person taking the photograph and a photograph description shall be made. Photographs and the photograph log shall be maintained by the permittee for three years (see Appendix A – Standard Conditions, Part 1.11) and made available to DEC upon request.

1.11.6 If there are reoccurring sea surface residues violations at the facility, the permittee is required to develop and implement mitigating BMPs.

1.11.7 A summary table of surface residues noncompliance shall be included in the Annual Report (Part 1.12).

1.11.8 Any person in charge of a vessel, an onshore facility, or an offshore facility shall, as soon as he has knowledge of any discharge of oil or a hazardous substance from such vessel or facility, immediately notify the U.S. Coast Guard's Command Center (1-800-478-5555) and DEC's Oil Spill Prevention and Emergency Response Hotline (1-800-478-9300) of such discharge.

1.12 Annual Report

1.12.1 The permittee shall prepare complete, accurate, and timely Annual Reports of noncompliance incidents, production and discharge information, and inspections and monitoring information collected January 1 through December 31 of the previous year. The permittee shall submit a completed Excel format Attachment A – Annual Report template as part of the Annual Report.

1.12.2 Annual Reports shall be submitted no later than March 15 of the following year.

1.12.3 The permittee shall include the following information in the Annual Report:

1.12.3.1 Verification of the permittee's APDES permit number, company name, facility name, the name or title of any duly authorized representative (if there is one), mailing address, telephone number(s), email address, and facsimile number (if available).

1.12.3.2 Production and Discharge Summary Report - The summary shall describe the seafood processed as well as pollutant loading results. Required information (Attachment A) includes:

1.12.3.2.1 The processing dates and total number of processing days each month.

1.12.3.2.2 The monthly total amount of raw seafood delivered per commodity line (pounds).

1.12.3.2.3 The monthly total amount of finished products produced per commodity line (pounds).

1.12.3.2.4 The estimated or measured daily total (for all discharge days) and monthly average effluent discharge flow for each outfall. Calculations supporting estimated flows shall be included.

1.12.3.3 A copy of the seafloor survey report (Part 1.8.3.4) and benthic assessment report (Part 1.8.3.6.7).

1.12.3.4 Summary of outfall system inspection (Part 1.4.3.3).

1.12.3.5 Summary of receiving water monitoring results and accompanying map of monitoring locations (Part 1.7).

1.12.3.6 Summary of sea surface and shoreline monitoring, with an accompanying photograph log (Part 1.11.5).

1.12.3.7 Summary report of any injured or dead animals observed under Part 1.11.2.3.1.

1.12.3.8 Summary of incidents of noncompliance. Include the reasons for such noncompliance, corrective actions, and preventative steps taken.

1.12.3.9 Summary of noncompliance and corrective actions for Sea Surface and Shoreline Monitoring observations (Part 1.11.7). The written summary shall contain:

1.12.3.9.1 A description of each noncompliance and its cause;

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

1.12.3.9.3 The estimated time noncompliance is expected to continue through if it has not been corrected; and

1.12.3.9.4 Corrective actions taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

1.12.3.10 Summary of any occurrences of leaks or breaks in the refrigeration/freezer systems that led to discharges to receiving waters, and how the accidental or emergency release was reported. Provide a summary of the type of refrigerant discharged along with the corresponding number of times discharged, approximate number of pounds discharged, and accompanying pH for each discharge event. The purposeful discharge of these substances without first monitoring the pH is prohibited.

1.12.3.11 A list of chemicals, disinfectants, cleaners, biocides, and food processing additives (salts, acids, bases, enzymes, etc.) that are used and discharged during the annual reporting period.

1.12.3.12 If any substances found in Part 1.12.3.11 are not used per the manufacturer's recommended use and application rates, if any, the permittee shall provide the following information:

1.12.3.12.1 Product intended use,

1.12.3.12.2 Total annual amounts used, and

1.12.3.12.3 Dilution ratio during use, if any.

1.12.3.13 Annual Petroleum Spill Summary Report. Time, date, amount, apparent dispersal distance, cause, remedial action, and results of any remedial action of petroleum spills occurring at the facility in conjunction with its refueling activities.

1.12.4 Signatory requirements. The Annual Report shall be signed by a principal officer or a duly authorized representative of the permittee in accordance with Appendix A, Part 1.12, Signature Requirement and Penalties.

2.0 SPECIAL CONDITIONS

2.1 Quality Assurance Project Plan (QAPP)

2.1.1 The permittee shall operate in accordance with the QAPP for any permit-required monitoring and any additional voluntary monitoring performed.

2.1.2 The permittee must develop, implement, and maintain a facility-specific QAPP for all monitoring required by this permit. The QAPP must be developed and implemented within 60 days of the effective date of the permit, except as established in Part 2.1.11. Any existing QAPP may be modified under this Part. All procedures in previous QAPPs must be followed until the new QAPP has been implemented.

2.1.3 A permittee shall document annual review of their QAPP. The permittee shall review the QAPP whenever process changes or changes in monitoring plans occur.

2.1.4 The permittee must amend the facility-specific QAPP whenever sample collection, sample analysis, monitoring parameter(s), or other procedures addressed by the QAPP are modified.

2.1.5 The QAPP shall be designed to assist in planning for the collection and analysis of all effluent and receiving water samples in support of the permit and to help explain data anomalies whenever they occur.

2.1.6 The permittee may use either the generic DEC QAPP or develop a facility-specific QAPP. Some facility-specific information is still required in order to complete the QAPP when using the generic DEC QAPP. A generic DEC QAPP is located at https://dec.alaska.gov/water/water-quality/quality-assurance/.

2.1.7 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.

2.1.8 An electronic or physical copy of the QAPP must be kept onsite and made available to DEC upon request.

2.1.9 At a minimum, the QAPP shall include:

2.1.9.1 The methods and analysis used to develop Outfall 001A-E's facility-specific conversion factor used in calculating SS discharged (Part 1.5.2.4).

2.1.9.2 Methods to monitor flow volumes for all outfalls (Part 1.4.1.4.4).

2.1.9.3 Until flow meters are installed, where flow volumes are estimated, the method(s) and calculation used to determine daily and monthly flow volumes, including methods to document revisions in order to accurately report permit limit calculations that include flow.

2.1.9.4 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.

2.1.9.5 Monitoring schedule and shipping requirements to ensure samples arrive within holding times. Instructions for performing repeat sampling (within the required sampling period) if samples do not arrive at the lab within required holding times.

2.1.9.6 A monitoring schedule applicable to stickwater and washed or unwashed mince and/or washed paste commodity lines that identifies how the permittee determines when each washed and unwashed mince and/or washed paste commodity line production cycle begins and ends, when the waste stream and/or stickwater is discharged, and when effluent monitoring should occur in compliance with Part 1.5.2.3 to ensure representative samples are obtained.

2.1.9.7 Maps indicating the location of each sampling point.

2.1.9.8 Qualification and training of monitoring personnel, including personnel training and review logs.

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

2.1.10 Sea Surface and Shoreline Monitoring. Develop specific QAPP monitoring instructions for the observer to document the occurrence and estimate the size of any films, sheens, discolorations, or mats of foam.

2.1.11 Seafloor Survey QAPP. The Seafloor Survey QAPP shall be developed at least 30 days prior to the Seafloor Survey being performed. The Seafloor Survey QAPP shall ensure that adequate documentation is available to allow reconstruction of a seafloor survey from field records and notes, survey plans, and still and video photography. At a minimum, the Seafloor Survey QAPP shall include:

2.1.11.1 Delivery and archiving of seafloor survey results using field records and notes, survey plans, digital images, and video photography.

2.1.11.2 Establishing survey location controls.

2.1.11.3 Measuring seafood waste thickness.

2.1.11.4 Determining percent seafood waste coverage.

2.1.11.5 Photographic procedures.

2.1.11.6 Measuring water depth and tide stage.

2.2 Best Management Practices (BMP) Plan

2.2.1 The permittee shall develop, implement, and operate in accordance with a BMP Plan within 60 days of the permit effective date. All procedures in the previous BMP Plan must be followed until the new BMP Plan has been implemented.

2.2.2 The permittee shall review the BMP Plan whenever process changes occur. At a minimum, the permittee shall document annual review of the BMP Plan.

2.2.3 The BMP Plan shall be developed in accordance with good engineering practices and the objectives described herein. The plan shall be consistent with the general guidance contained in the publication entitled "Guidance Manual for Developing Best Management Practices" (EPA 1993) or its subsequent revisions and "Seafood Processing Handbook for Materials Accounting Audits and Best Management Practices Plans, EPA and Bottomline Performance" (1995).

2.2.4 The BMP Plan shall be consistent with the City of Unalaska's master BMP Plan for public dock operations.

2.2.5 The BMP Plan must include the following information and management practices at a minimum:

2.2.5.1 Name and physical location of the seafood processing facility.

2.2.5.2 Facility plans, drawings, or maps.

2.2.5.3 Statement of BMP Policy. The BMP Plan shall include a statement that management is committed to providing the necessary financial, staff, equipment, and training resources to develop and implement the BMP Plan on a continuing basis.

2.2.5.4 Statement of BMP Purpose. The BMP Plan shall include a statement that the purpose of the plan is to:

2.2.5.4.1 Prevent and minimize the generation and discharge of wastes and pollutants from the facility to receiving water.

2.2.5.4.2 Prevent or reduce pollution at the source.

2.2.5.4.3 Recycle potential pollutants in an environmentally safe manner whenever feasible.

2.2.5.4.4 Ensure the discharge of pollutants into the environment be conducted in such a way as to have a minimal environmental impact.

2.2.5.5 Statement of BMP Objectives. The BMP Plan shall be consistent with the following objectives for the reduction and control of pollutants in waste and wastewaters resulting from seafood processing, including from the production of washed mince and washed paste:

2.2.5.5.1 Reduce and minimize the number and quantity of material generated, discharged, or potentially discharged at the facility to reduce pollutant loading by managing waste streams, including washed mince and washed paste waste streams, and implementing source control strategies where practicable. Strategies may include by-product production or pollutant removal where no product is produced but reduction of pollutant loading occurs.

2.2.5.5.2 Establish or reference standard operating procedures for the proper operation and maintenance of pollution control systems, in accordance with good engineering practices.

2.2.5.5.3 Examine each facility component or system for its waste and pollutant minimization opportunities and its potential for pollutant loading to waters of the U.S., such as:

2.2.5.5.3.1 Removing pollutant loading earlier in process waste stream transport,

2.2.5.5.3.2 Evaluating and implementing waste and wastewater treatment options,

2.2.5.5.3.3 Preventing equipment failure, including refrigeration leaks or improper operation, and

2.2.5.5.3.4 Examining all normal operations and ancillary activities, including:

2.2.5.5.3.4.1 Material storage areas – Identify how chemicals and additives used for washed mince and/or washed paste, if any, are stored in the facility to reduce pollutant loading.

2.2.5.5.3.4.2 Consider ways to reduce pollutant loading passing through currently installed screening technologies that may result in water quality violations.

2.2.5.6 Risk Identification and Assessment. The BMP Plan must ensure the facility performs risk assessment by implementing procedures for:

2.2.5.6.1 Reviewing existing materials and plans as a source of information to ensure consistency and to eliminate duplication.

2.2.5.6.2 Characterizing actual and potential pollutant sources that might be subject to release.

2.2.5.6.3 Evaluating potential pollutants based on the hazards they present to human health and the environment.

2.2.5.6.4 Identifying pathways through which pollutants identified at the site might reach environmental and human receptors.

2.2.5.6.5 Prioritizing prevention of potential releases.

2.2.5.7 Specific Management Practices and Standard Operating Procedures. These include, but are not limited to:

2.2.5.7.1 The modification of equipment, facilities, technology, processes, and procedures.

2.2.5.7.2 Verification that any proposed changes to waste treatment systems will have obtained any DEC engineering review required under 18 AAC 72.

2.2.5.7.3 The improvement in management, inventory control, materials handling, or general operational phases of the facility.

2.2.5.7.4 Reducing or eliminating any discharge of wastes that have the potential to collect and foul any set or drift nets used in subsistence or commercial fisheries in nearby traditional use areas.

2.2.5.7.5 Descriptions and methods for the proper operation and maintenance of the screening system and outfall pumps.

2.2.5.7.6 Procedures to conduct and record inspections of outfall system(s) (Part 1.4.3.3).

2.2.5.7.7 Materials accounting of the inputs (water, raw seafood, chemicals, etc.), processes, and outputs (seafood processing wastes and wastewaters, chemicals, etc.) of the facility as submitted with the APDES application. Materials accounting is used to trace the inflow (i.e., water to be used for processing + transfer water + whole seafood product) through the seafood processing steps and outflow (i.e., seafood processing wastewater + non-process wastewater + marketed seafood product + by-products + process wastes) and to establish quantities of these components. Identifying and measuring the key components for a process is the basis for conducting materials accounting audits.

2.2.5.7.8 Minimization and plans to ensure that chlorine, other disinfectants, degreasers, defoaming agents, and other chemical products used at the facility will not cause exceedances of the WQS.

2.2.5.7.9 Descriptions and methods for each facility component or system that shall be examined for its pollutant minimization opportunities and its potential for causing a release of significant amounts of pollutants (which includes seafood waste and wastewaters) to receiving waters due to the failure or improper operation of equipment. The examination shall include all normal operations, including raw material and product storage areas, in-plant conveyance of product, processing and product handling areas, by-product production areas, loading or unloading operations, wastewater treatment areas, sludge and seafood processing waste and wastewater discharge areas, floor drains, and refueling areas.

2.2.5.7.10 Description of the equipment which shall be examined for potential failure and reporting of any resulting release of untreated pollutants to receiving waters. Provision shall be made for emergency measures to be taken in such an event.

2.2.5.7.11 Description of practices and training for staff to identify and ensure that all process and non-process wastewaters, those waters coming in contact with seafood processing, are

properly routed through the seafood waste treatment system, or otherwise treated and monitored. This includes a copy of the employee training log(s).

2.2.5.7.12 Methods to prevent, treat, or minimize the generation and discharge of pollutants in by-product production effluents, including stickwater, at the source to the greatest extent practicable. Description and methods for backup disposal treatment method(s) if the by-product wastewater treatment system fails. Stickwater shall be recycled and treated to the greatest extent practicable, in an environmentally safe manner, whenever feasible.

2.2.5.7.13 Pollution prevention and minimization measures at the point(s) of raw seafood transfer to the processing facility.

2.2.5.7.14 Methods to examine facility cleaning and sanitizing practices, and, where appropriate, select cleaning and disinfectant chemicals and compounds that minimize the addition of nitrogen and phosphorous-based chemical pollutants to the wastewater discharge.

2.2.5.7.15 Applying chemical cleaning compounds and disinfectants in accordance with manufacturer instructions and suggested application rates.

2.2.5.7.16 Practices for the proper operation, maintenance, and purging of ammonia or other chemical-based refrigerant and freezer systems. If the permittee references other documents to comply with this requirement, the permittee shall keep a copy of the document with this permit's BMP Plan. The BMP Plan or other documents shall include and implement:

2.2.5.7.16.1 Methods to direct purged wastewaters to the seafood processing waste treatment system.

2.2.5.7.16.2 The facility's approach for minimizing and treating discharged refrigerants, including:

2.2.5.7.16.2.1 How maintenance and purging practices are to be performed at the facility.

2.2.5.7.16.2.2 How repair wastewaters are handled and treated prior to discharge, which must address:

2.2.5.7.16.2.2.1 Determination that the pH is between 6.5 – 10.0 SU, and maintaining a log of pH readings, prior to commingling with processing water for discharge.

2.2.5.7.16.3 How the facility plans to mitigate and report accidental or emergency releases which are not authorized by the permit, including damaged or severed outfall pipe(s).

2.2.5.7.17 Methods developed and implemented to ensure attractive nuisance conditions are not created and seafood processing wastes and wastewaters do not cause nuisance or objectionable conditions. Response procedures and corrective actions if nuisance or objectionable conditions are reported to the permittee.

2.2.5.7.18 Practices to minimize incidental foam and scum produced by the discharge of seafood waste and wastewaters, as well as seafood catch transfer water, to the extent practicable, including the modification of equipment, facilities, technology, processes, and discharge procedures to be used to decrease the formation of foam and scum.

2.2.5.7.19 Good housekeeping. Describe the facility objectives and maintenance of a clean, orderly work environment. Maintaining an orderly facility means that materials and equipment are neat and well-kept to prevent untreated pollutant releases to the environment. If the permittee references other documents to comply with this requirement, the permittee shall keep a copy of the document with this permit's BMP Plan.

2.2.5.7.20 Preventative maintenance. Describe maintenance which includes periodically inspecting, maintaining, and testing seafood processing facility equipment and systems to uncover conditions that can cause breakdowns or failures. Preventative maintenance focuses on preventing untreated pollutant releases to the receiving water. If the permittee references other documents or SOPs to comply with this requirement, the permittee shall keep a copy of the document(s) and/or SOPs with this permit's BMP Plan.

2.2.5.7.21 Documentation of inspection, record keeping, and employee training pertaining to the BMP Plan. This includes a copy of the employee training log(s).

2.2.5.7.22 Procedures to reduce and control pollution from catch transfer water discharged through facility outfalls.

2.2.5.7.23 Development of educational materials to provide to vessels discharging fish hold water, live tank water, refrigerated seawater, or other effluents at the facility. Topics to be covered could include, but are not limited to:

2.2.5.7.23.1 Minimizing washing any residual solids into receiving waters while dockside, pier-side, or stationary.

2.2.5.7.23.2 Routing wastewaters accepted into the permittee's facility to the seafood waste treatment system or other treatment systems prior to discharge to remove solids.

2.2.5.7.23.3 Following the manufacturer's directions and disposal recommendations while using degreasers and defoamers. Using non-toxic degreasers and defoamers.

2.2.5.7.23.4 Selecting soaps and detergents that are phosphate-free, non-toxic, and do not lead to extreme shifts in receiving water pH. Using soaps and detergents that are free from toxic and bioaccumulative compounds.

2.2.5.7.23.5 Not discharging or placing any toxic or hazardous materials or related residuals into vessel discharge systems (e.g., laundry units, kitchen sinks, dishwashers, drains, sinks, showers, bath, etc.).

2.2.5.7.23.6 Not discharging or placing unused soaps, detergents, or pharmaceuticals into the discharge systems (e.g., laundry units, kitchen sinks, dishwashers, drains, sinks, showers, bath, etc.).

2.2.5.7.24 Fuel transfer. Describe vessel fuel transfer protocols and ensure that they comply with all federal and state regulations for the prevention of, preparedness for, and response to oil discharges, including:

2.2.5.7.24.1 Spill response procedures;

2.2.5.7.24.2 Storage of adequate oil and fuel clean-up equipment at the facility, on-board vessels, and at fuel transfer locations; and

2.2.5.7.24.3 Refueling practices. Must include ensuring that the refueling nozzles or valves at the facility are equipped with functional automatic back pressure shutoff nozzles or valves as required by 33 CFR §154.500 which prevent accidental spills during refueling due to overfilling of the receiving tank or to loss of operator control of the refueling hose.

2.2.5.8 BMP Plan Review. The BMP Plan shall include the following provisions concerning its review:

2.2.5.8.1 Annual Review. At a minimum, be reviewed annually by the facility manager and appropriate staff.

2.2.5.8.2 Include a statement that a review has been completed and that the BMP Plan fulfills the requirements set forth in this permit. The statement shall be signed and dated by the facility manager.

2.2.5.8.3 The permittee shall review, and revise if necessary, the BMP Plan whenever there is a change in the seafood processing facility or in the operation of the seafood processing facility which materially increases the generation of pollutants and their release or potential release to the receiving water.

2.2.5.8.4 At any time, if the BMP Plan proves to be ineffective in achieving the general objective of preventing and minimizing the generation of pollutants and their release, including but not limited to the situations referenced in Part 1.11.6, the BMP Plan shall be modified to incorporate revised BMP requirements.

2.2.5.8.5 Be reviewed, signed, and dated by the facility manager after any revisions are made.

2.2.5.9 BMP Plan Availability. The permittee shall maintain a copy of the BMP Plan at the seafood processing facility and shall make the plan available to DEC upon request.

2.3 Removed Substances

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.

2.4 Air and Land Releases

The permittee must not place, deposit, or allow to be placed or deposited on the premises, any material which may produce, cause or contribute to the spread of disease, create a safety hazard or in any way endanger the health of the public.

APPENDIX A

STANDARD CONDITIONS

APDES PERMIT

NONDOMESTIC DISCHARGES

September 2011

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

1.0 Standard Conditions Applicable to All Permits

1.1 Contact Information and Addresses

1.1.1 Permitting Program

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

State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone (907) 269-6285
Fax (907) 269-3487
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.

1.7 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 Existing Manufacturing, Commercial, Mining, and Silvicultural Discharges

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

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

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

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

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

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

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

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

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

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

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

3.0 Monitoring, Recording, and Reporting Requirements

3.1 Representative Sampling

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

3.2 Reporting of Monitoring Results

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

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

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

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

3.3 Additional Monitoring by Permittee

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

3.4 Twenty-four Hour Reporting

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

3.4.1 A report must be made:

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

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

3.4.2 A report must include the following information:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.5 Other Noncompliance Reporting

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

4.0 Penalties for Violations of Permit Conditions

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

4.1 Civil Action

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

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

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

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

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

4.2 Injunctive Relief

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

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

4.3 Criminal Action

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

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

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

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

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

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

4.4 Other Fines

Upon conviction of a violation of a regulation adopted under AS 46.03.020(12), a defendant who is not an organization may be sentenced to pay a fine of not more than $10,000 for each separate violation (AS 46.03.790(g)). A defendant that is an organization may be sentenced to pay a fine not exceeding the greater of: (1) $200,00; (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)(B), (c)(2), and (c)(3)).

Appendix B

Abbreviations and Acronyms

Abbreviations and Acronyms

18 AAC 70	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 70: Water Quality Standards. Available at: https://dec.alaska.gov/media/eovgrgs5/18-aac-70.pdf
18 AAC 72	Alaska Administrative Code. Title 18 Environmental Conservation, Chapter 72: Wastewater Disposal. Available at: http://dec.alaska.gov/media/1047/18-aac-72.pdf
18 AAC 83	Alaska Administrative Code Title 18 Environmental Conservation, Chapter 83: Alaska Pollutant Discharge Elimination System. Available at: http://dec.alaska.gov/media/1052/18-aac-83.pdf
33 CFR Part 159	Code of Federal Regulations Title 33: Navigation and Navigable Waters. Available at: http://www.ecfr.gov/cgi-bin/ECFR?page=browse
40 CFR	Code of Federal Regulations Title 40: Protection of Environment. Available at: http://www.ecfr.gov/cgi-bin/ECFR?page=browse
401 Certification	State of Alaska's CWA Section 401 Certificate of Reasonable Assurance
ADF&G	Alaska Department of Fish and Game
APDES	Alaska Pollutant Discharge Elimination System
AS 46.03	Alaska Statutes Title 46, Chapter 03: Environmental Conservation. Available at https://www.akleg.gov/basis/statutes.asp
BAT	Best Available Technology Economically Achievable
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BOD_5	Biochemical Oxygen Demand 5-Day Test
BPJ	Best Professional Judgment
CFR	Code of Federal Regulations. Available at: http://www.ecfr.gov/cgi-bin/ECFR?page=browse
CHA	Critical Habitat Area
COD	Chemical Oxygen Demand
CWA	Clean Water Act
DAF	Dissolved Air Flotation
DEC	Alaska Department of Environmental Conservation or The Department. Available at http://dec.alaska.gov/
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
DPS	Distinct Population Segment
ECHO	EPA's Enforcement & Compliance History Online
EFH	Essential Fish Habitat
e.g.	Latin, "*Exempli gratia"*, Latin for 'for the sake of example'
ELG	Effluent Limitation Guideline
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act of 1973
FDA	U.S. Food and Drug Administration

Abbreviations and Acronyms

GIS	Geographic Information System
gpd	Gallons per day
GPS	Global Positioning System
i.e.	Latin "*id est.*" for 'in other words' or 'that is'
MBR	Membrane Bioreactors
MDL	Method Detection Limits
mgd	Million gallons per day
mg/L	Milligram per liter
µg/L	Micrograms per liter
ML	Minimum Level
ml	Milliliter
MLLW	Mean Lower Low Water
MSGP	Multi-Sector General Permit
N/A	Not Applicable
NH_3	Ammonia
NH_4^+	Ammonium
nm	Nautical mile
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
ROVs	Remotely Operated Vehicles
RTC	Response to Comments
SPI	Sediment Profile Imaging
SU	Standard Units
T/E spp	Threatened or Endangered Species
TBEL	Technology-Based Effluent Limitations
TMDL	Total Maximum Daily Load
TRC	Total Residual Chlorine
TSS	Total Suspended Solids
USFWS	United States Fish and Wildlife Service
U.S.	United States
U.S.C.	United States Code
VGP	Vessel General Permit
WQBEL	Water Quality-Based Effluent Limitations
WQC	Water Quality Criteria
WQS	Water Quality Standards

Appendix C

Definitions

Alaska Pollutant Discharge Elimination System (APDES)	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 an arithmetic mean obtained by adding quantities and dividing the sum by the number of quantities
Average Monthly Discharge Limitation	Means the highest allowable average of "daily discharges" over a calendar month calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month
Baseline	Generally speaking, the baseline consists of the mainland low-water line and any offshore island and additional features that are applicable to the U.S. coast, such as straight lines or closing lines of river mouths, bays and enclosed harbors from which the breadth of the territorial sea is measured. See U.S. Maritime Zones and the Determination of the National Baseline at http://ushydro.thsoa.org/hy07/11_01.pdf for more information on baseline
Best Management Practices (BMPs)	Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage
Biochemical Oxygen Demand (BOD_5)	Means the amount, in milligrams per liter, of oxygen used in the biochemical oxidation of organic matter in five days at 20º C
Bone Meal	Means a by-product made from the bones recovered from seafood processing
Boundary	Means a line or landmark that serves to clarify, outline, or mark a limit, border, or interface
Bypass	Means the intentional diversion of waste streams from any portion of a treatment facility
Catch Transfer Water	Means waste or wastewaters conveyed to an onshore seafood processing facility from a vessel as part of the seafood offloading process. Includes fish hold waste and wastewater, live tank water, refrigerated seawater, and brine
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	Means the condition that results in the visual sensations of hue and intensity as measured after turbidity is removed
Commissioner	Means the commissioner of the Alaska Department of Environmental Conservation or the commissioner's designee

Composite Samples	Composite samples shall consist of at least one equal volume grab sample aliquot per every full three hours in the compositing period. The sample aliquots shall be collected, stored and analyzed within applicable hold times in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*
Construction	Means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises" (see Section 306(a) of the CWA), a number of activities may give rise to new source status
Contact Recreation	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 Coverage	Means seafood waste deposits that are found to be 95% or greater areal coverage within a 3-foot by 3-foot sample plot as measured along a transect of the seafloor. Within the project area ZOD, the surveyor shall use a seafood waste deposition threshold which is one-half inch or thicker on the seafloor as the minimum detection level. Outside the project area ZOD, no minimum detection level applies to the seafood waste deposit thickness. At DEC's discretion, the area will include boulders, rock outcrops, ridges, and other protrusions within an area of continuous coverage that are not covered by seafood waste.
Cooling Water	Means once-through, non-contact cooling water
Criterion	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	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 with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with 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	Means the Alaska Department of Environmental Conservation
Design Flow	Means the wastewater flow rate that the plant was designed to handle

Detectable	Means any amount of observable seafood waste deposits. In general, seafloor surveyors have reported that seafood deposits must be greater than 2% coverage in the 3-foot by 3-foot sample plot to be evident.
Director	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	Means, when used without qualification, the discharge of a pollutant
Discharge of a Pollutant	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
Discontinuous coverage	Means areas of seafood waste deposits that are estimated to cover 10% or more of the seafloor, but less than 95%, within the 3-foot by 3-foot sample plot. Within the project area ZOD, the surveyor shall use a seafood waste deposition threshold which is one-half inch or thicker on the seafloor as the minimum detection level. Outside the project area ZOD, no minimum detection level applies to the seafood waste deposit thickness.
Dissolved Oxygen (DO)	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 Wastewater	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 or sewage
Ecosystem	Means a system made up of a community of animals, plants, and bacteria and the system's interrelated physical and chemical environment
Effluent	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 determine the discharge volume and flow rates. Approvable estimations include, but are not limited to, the lift station run time combined with pump speeds, averaging the direct volume measurements over several time-periods correlated to commodity line production amounts, etc.

Existing Use of the Waterbody	The protected use classes and subclasses of state waters. For marine waters these uses include water supply, water recreation, growth and propagation of fish, shellfish, other aquatic life, and wildlife, and harvesting for consumption of raw mollusks or other aquatic life. An existing use includes all of these protected uses. See 18 AAC 70.020 for the protected subclasses
Fish Hydrolysate	Means a seafood by-product where solid fish is transformed into a liquid or dry product obtained through various biological processes, sometimes including the addition of enzyme and acid reducers to speed up the hydrolysis process and possible dehydration
Fish Meal/Powder	Means a seafood solid by-product obtained by removing most of the water and some or all of the oil from fish or fish waste
Fish Oil	Means the oil recovered from the tissue of oily fish such as salmon through a by-product recovery process to be sold as a usable product
Fish Protein	Means a minced, paste or ground seafood product that may be made up of multi-species. In example, 'fish protein' (contains one or more of the following: pollock, cod, and/or Pacific whiting, salmon, etc)
Fishery Resource	Means finfish, mollusks, crustaceans, and any other form of marine animal or plant life, other than marine mammals and birds. Referred to as 'seafood'
Fishing vessel / barge	Means a vessel/barge that commercially engages in the catching, taking, or harvesting of a fishery resource or an activity that can reasonably be expected to results in the catching, taking, or harvesting of a fishery resource.
Food Ingredients, Additives & Colors	As defined by the FDA 21 CFR
Garbage	Means all kinds of victual, domestic and operational waste, excluding fresh seafood and part thereof, generated during normal operation and liable to be disposed of continuously or periodically except dishwater, graywater and those substances that are defined in other Annexes to MARPOL 73/78
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
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
Graywater	Means wastewater from a laundry, kitchen, sink, shower, bath, or other domestic source that does not contain excrement, urine, or combined storm water

Hydrodynamically energetic waters	Means waters that will disperse the seafood processing waste before settling, re-suspend and disperse wastes during high current events, or facilitate the decay and decomposition of the seafood waste
Influent	Means untreated wastewater before it enters the first treatment process of a wastewater treatment works
Living substrate	Means intertidal and seafloor communities of benthic plants (e.g., macroalgae and kelp) and animals (e.g., mussels, tube-building polychaete worms, and erect bryozoans) in dense aggregations. The Habitat Conservation Division of NMFS may be contacted at 907-271-5006 (Anchorage) or 907-586-7235 (Juneau) for further guidance on and the known locations of living substrates and other Habitat Areas of Particular Concern listed under the Essential Fish Habitat section of the Magnuson Fishery Conservation and Management Act
Maximum Daily Discharge Limitation	Means the highest allowable "daily discharge"
Mean	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 (MLLW)	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 (MDL)	Means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte
Micrograms per Liter (µg/L)	Means the concentration at which one millionth of a gram (10^{-6} g) is found in a volume of one liter
Mid-Depth	Means the depth of the sample location proportional to the water depth at the time of monitoring. Mid-depth is approximately half of the distance from the water surface to the seafloor at the monitoring location
Milligrams per Liter (mg/L)	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
Mince	Means finely chopped seafood, particularly fish
Minimum Level (ML)	Means the concentration at which the entire analytical system shall 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	An area in a waterbody surrounding or downstream of, a discharge where the effluent plume is diluted by the receiving water within which specified water quality criteria may be exceeded
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
Non-Process wastewaters	Means any water which, during manufacturing or processing, does not come into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Including: refrigerated seawater, non-contact cooling water, boiler water, freshwater pressure relief water, refrigeration/freezer condensate, continuous exchange live tank water, air scrubber water, wastewater generated from wash stations directly related to and located in the seafood processing area, and other non-process water (except domestic wastewater, graywater or wastewater from processing area floor drains).
Nuisance discharge	Means, a substantial and unreasonable interference with the use or enjoyment of real property, including water. Including seafood processing effluent discharges that are discharged or stored where animals are attracted to the waste in a manner that creates a threat to animal or human health and safety
Oil and Grease	Mean those components of a waste water amenable to measurement by the method described in Methods for Chemical Analysis of Water and Wastes, 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217, and utilizing approved methods, per Title 40 Code of Federal Regulations (CFR) Part 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants), adopted by reference at 18 AAC 83.010(f)
Operator / 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 this permit
Ordinary High Water Mark	Means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas
pH	Means a measure of the hydrogen ion concentration of water or wastewater, expressed as the negative logarithm of the hydrogen ion

	concentration, expressed as moles/L (pH = -log10 (H+)). A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic
Point Source	Means any discernible, confined, and discrete conveyance, including but not limited to: any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft form which pollutants are or may be discharged
Pollutant	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
Process wastewater	Means, based on definition of 'process wastewater' found in 18 AAC 83.990(54), any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Including, but not limited to: contact wastewater (e.g. contact cooking or cooling waters, such as retort water, or water used to boil or cool seafood directly); wastewater from floor drains; drains where water or process water has come in contact with water from seafood processing areas and by-product lines; or those waters that have been in contact with seafood, seafood waste and wastewaters and offal, ice and water used to transfer seafood (i.e. catch transfer water) into the facility, and live tank water transferred into the facility
Processor	Operator of a facility who prepares raw fish or shellfish into a marketable form
Project Area Zone of Deposit (ZOD)	Means the total area of the seafloor bottom in marine or estuarine waters within which DEC has authorized and limited the deposit of substances in exceedance of the water quality criteria in 18 AAC 70.020(b) and the antidegradation requirement in 18 AAC 70.015. The project area ZOD includes the entire operating area of an onshore seafood processing facility, including those adjacent to the facility, including the following: seafood transfer devices; vessel and barge loading and unloading areas; offshore processing areas for supporting vessels and barges; bulkheads, ramps, floating walkways, docks, pilings, dolphins, anchors, buoys and other marine appurtenances; outfall locations and the length of the outfall line(s) connecting the facility to the point(s) of discharge; previous outfall discharge locations that have no record of historical seafloor survey; and the bedland areas underlying and connecting these features.
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 or Quarterly	Means the time period of three months based on the calendar year beginning with January
Readily Visible	The readily-visible receiving water and shoreline areas are defined as the receiving water area that a shore-based trained personnel can see the water areas without being blocked by buildings or ships. The water's visible area may vary with weather (e.g. fog), sea conditions (waves) and where the observer is located (standing). As a result, the extent of the readily-visible receiving water area will vary from day to day based on weather and sea conditions and should be noted as part of each daily monitoring event. Shoreline observations of where residues typically wash ashore may need to be made off the permittee's parcel.
Receiving Water Body	Means waters of the U.S. including: 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(66) & AS 46.03.900(37))
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
Residues	Means floating solids, debris, sludge, deposits, foam, scum, or any other material or substance remaining in a waterbody as a result of direct or nearby human activity
Sample Plot	Means a sampling area, 3-foot by 3-foot square, used in the Seafloor Survey Protocol (Appendix E), used in measuring percentages of seafood waste coverage
Sampling Day	Means any consecutive 24-hour sampling period
Scupper	Means an opening for draining off water, as from a floor or the roof of a building
Seafood	Means the raw material, including freshwater and saltwater fish and shellfish, to be processed from the form in which it is received as a seafood processing plant
Seafood by-product	Means the process wastewater effluent and seafood waste fluids, organs, flesh, bones, and chitinous shells produced in the conversion of seafood from a raw form to a marketable form that is utilized as source of material in a by-product recovery process line or facility. See also fish meal, bone meal, fish oils, hydrolysate
Seafood Processing	The conversion of aquatic animals from a raw to marketable form which involves more than evisceration of fish or other seafood at-sea
Seafood Processing Waste and Wastewaters	Means the water, fluids, heads, organs, flesh, fins, bones, skin, chitinous shells, waste and wastewaters produced from the conversion of seafood from a raw form to a marketable form, including any seafood processing

	lines and by-product commodity line's effluent such as butchering, fish oil, fish meal/powder, canning, stickwater, and/or washed and unwashed seafood mince and/or paste. Includes ice and water used to transfer seafood (i.e., catch transfer water) into the facility and live tank water transferred into the facility
Seasons A, B	Means the Bering Sea fishing openings: Generally, the seasons run as follows - Season A: January - May; Season B June – October
Secondary Recreation	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	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)
Shall	Used in laws, regulations, or directives (including the use in this permit) to express what is mandatory <it *shall* be unlawful to carry firearms>
Sheen	Means an iridescent appearance on the water surface
Shellfish	Means a species of crustacean, mollusk, or other aquatic invertebrate with a shell or shell-like exoskeleton in any stage of its life cycle
Source	Mean any building, structure, facility or installation from which there is or may be a discharge of pollutants
Spoiled Seafood Waste and Wastewaters	Means those wastes and wastewaters associated with putrid, raw (non-processed) fish and other aquatic animals which had previously been intended for seafood processing and spoiled or unsold, hydrolysate, fish meal, fish oil.
Stickwater	Means the wastewater collected produced from a fish meal, fish oil or fish hydrolysate processes production. Occurs when where fish processing byproducts are cooked, pressed and non-soluble protein solids and oils are usually removed by centrifuges, decanters, tricanters, etc. The leftover solids and solubles after by-product recovery and oil recovery
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 non-filterable
Totalizer	Means a piece of equipment used with flow meters that displays the total flow on a real time basis, measuring the total flow of a media over a given time period. Also referred to as a flow totalizer.
Total Maximum Daily Load (TMDL)	The sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If receiving water has only one point source discharger, the

	TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure
Total Residual Chlorine	Means chlorine remaining in water or wastewater at the end of a specified contact period as combined or free chlorine
Total Suspended Solids (TSS)	Means a measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136 (most current version)
Trace coverage	Means areas of seafood waste that are estimated to cover detectable to less than 10% areal coverage within a 3-foot by 3-foot sample plot. Within the project area ZOD, the surveyor shall use a seafood waste deposition threshold which is one-half inch or thicker on the seafloor as the minimum detection level. Outside the project area ZOD, no minimum detection level applies to the seafood waste deposit thickness.
Twice per year (2 per year)	Means two time periods during the calendar year: October through April and May through September.
Unwashed Mince / Unwashed Paste	Means minced seafood or seafood flesh that is paste consistency that is neither washed, nor dewatered and is processed fresh or frozen into blocks
Upset	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 operator. 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
Washed Mince / Washed Paste	Means a washed mince or washed paste seafood or seafood flesh that is washed, dewatered, and is processed fresh or frozen into blocks. In example, key ingredients in surimi, kamaboko, fish sausage, washed seafood carcasses as by-product, and cured surimi products are included in this classification
Water Depth	Means the depth of the water between the surface and the seafloor as measured at MLLW, or from the water surface to the bed lands
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.	Has the meaning given in 18 AAC 83.990(77)
Water Recreation	See contact recreation or secondary recreation
Water Supply	Means any of the waters of the state 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

Appendix D

Pre-Installation Biological Survey

Pre-Installation Biological Survey

Survey Purpose

The pre-installation survey shall provide adequate site-specific information to indicate whether the proposed outfall location will meet the requirements of the permit, to document the biological resources (including habitat) which may be affected by the outfall installation and discharge, and to document any existing residues (such as seafood processing waste) at the proposed outfall location.

Submittal of Information

The results of the pre-installation survey shall be submitted before repair or replacement of a broken outfall line or installation of a new outfall line. The survey shall have been performed within the six months prior to outfall placement. The report shall provide transect sample site data, a summary of the survey, and whether the discharge area is appropriate for the proposed discharge, with careful consideration of excluded areas. The survey may be performed using a photographic survey method, but if any existing deposits are found within the survey area, a dive survey will be required. The dive survey performed shall follow this permit's Part II Seafloor Survey Protocol. The pre-installation survey shall be submitted to the Department in writing and may include a narrated underwater video.

Quality Assurance Project Plan Information

The operator shall, prior to commencing survey operations, prepare a written, facility-specific Quality Assurance Project Plan- Monitoring Plan (QAPP-Monitoring Plan) addressing the following:

1. Objectives for measurement data
2. Sampling procedures
3. Analytical procedures
4. Data reduction, validation, and reporting
5. Internal quality control checks
6. Specific routine procedures used to assess data precision, accuracy, completeness, representativeness, and comparability.

Survey Requirements

The pre-installation survey shall include a representative description of the numbers and species of marine organisms, types of aquatic vegetation/benthic fauna, and depths and substrate types where organisms/vegetation/benthic fauna are found within a 300-foot radius of the center of the proposed discharge site.

If seafood waste discharge has not occurred at the proposed site, a photographic survey (performed by Remotely Operated Vehicle (ROV)) may suffice and the Department may not require a dive survey, establishment of hard transect lines, or a central permanent marker. However, a rigorous, repeatable method shall be set out in a Pre-Installation Biological Survey Quality Assurance Project Plan (QAPP) developed to meet the monitoring requirements set out below. For example, the center of the proposed discharge area shall be located by Wide Area Augmentation System (WAAS)-augmented Global Positioning System (GPS), and the depth of the (proposed) outfall location, reported at Mean Lower Low Water (MLLW), shall be noted. If there are any significant benthic features that would help with re-locating the exact position of the (proposed) outfall, (e.g., a unique rock feature), then this information shall be marked on the location map. The survey may be performed at the surface at low tide stage without performing a dive survey if the representative habitat and water clarity is such that data objectives can be met.

Establish Markers. A surveyor's Quality Assurance Project Plan (QAPP)-Monitoring Plan is required to include the establishment of at least five permanent shore-based or facility-based markers (monuments) at suitable locations, provided there is sufficient land/facility property to place five monuments. Some facilities are located over water, or the operator does not own the land the seafood processing facility is located on. In these cases, the survey is required to document useable permanent underwater markers (large rock outcrops, boulders, etc.) or identify why markers/monuments were not established. If permanent markers are not established, the operator shall work with the surveyor to establish repeatable methods for future surveyors to make observations and establish consistent transects. The operator's QAPP-Monitoring Plan is required to be updated to include the surveyor's established underwater markers for use in the next required seafloor survey. GPS coordinates derived using WAAS technologies, or other equivalent technology, are required to be recorded for each permanent shore or underwater marker.

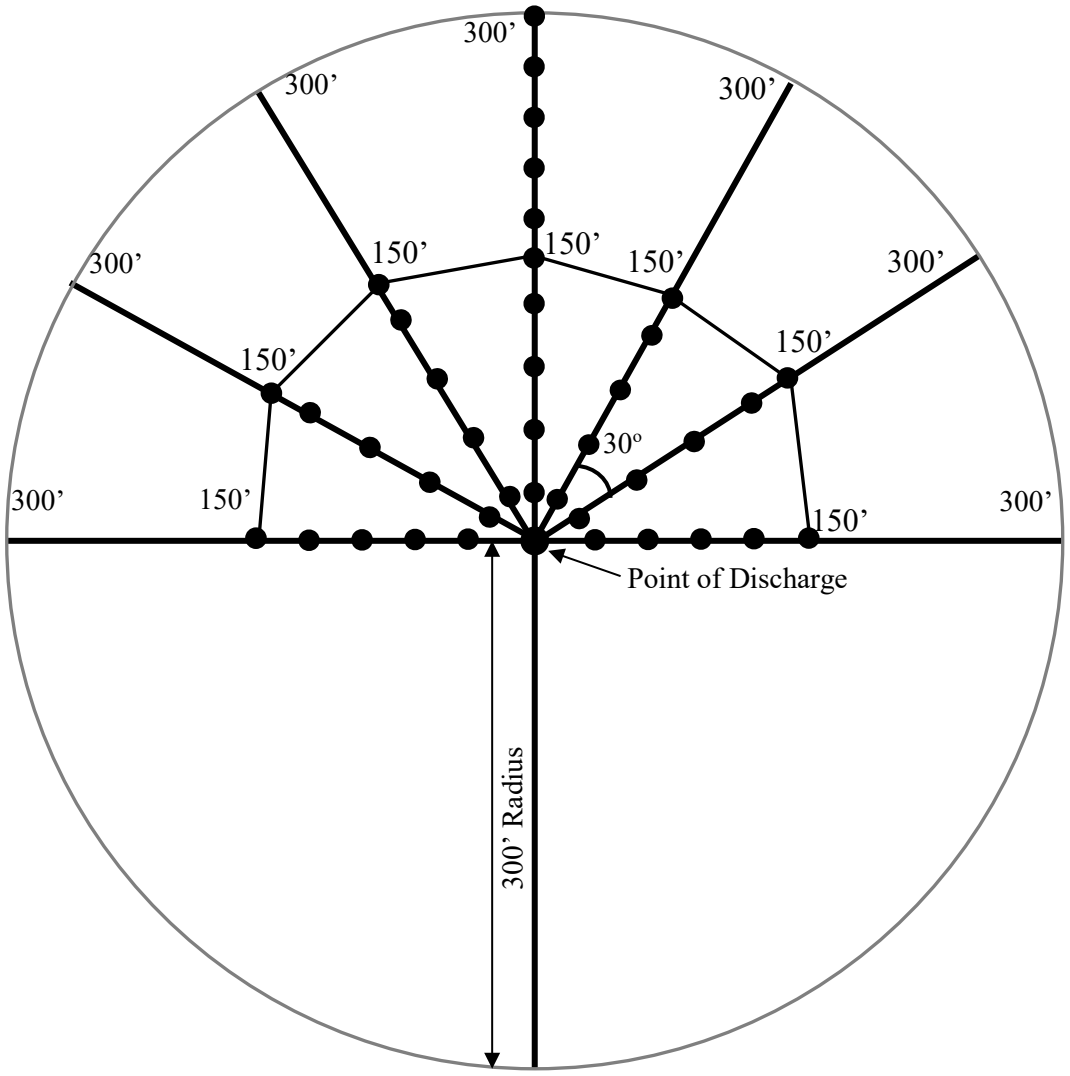
Establish Transect Lines. The surveyor must establish transect lines for the entire survey area. The operator's QAPP-Monitoring Plan must specify the methods used to establish the transect lines. Parallel transects (if used) are required to be established no more than 30 feet apart and extend in a perpendicular direction from the permanent markers.

The survey shall use radial or parallel transects located surrounding the outfall terminus, with a 300 foot radius, at the proposed outfall terminus depth. Determine the number of transects (shall meet a minimum of at least three) which will most accurately delineate the area surrounding the center of the discharge site and the area of any seafood waste accumulation, if present.

Surveys using **Radial Transects**: Use the discharge point as the central marker of the survey. GPS coordinates derived using WAAS technologies shall be recorded at the location of the center of the survey (reported in decimal degrees, to the fifth decimal place if available). Establish a minimum of at least three transects radially from the location of the discharge point. If historic seafood waste accumulations are found, the operator is required to have the surveyor complete a seafloor dive survey for a minimum of 300 feet from the proposed outfall terminus (or as determined by DEC).

The following diagram (Figure 1) shows "typical" radial transects set 30 degrees apart. Points of measurement are at 30-foot intervals spaced on the survey transects, which extend along a 300 foot radius from the point of discharge.

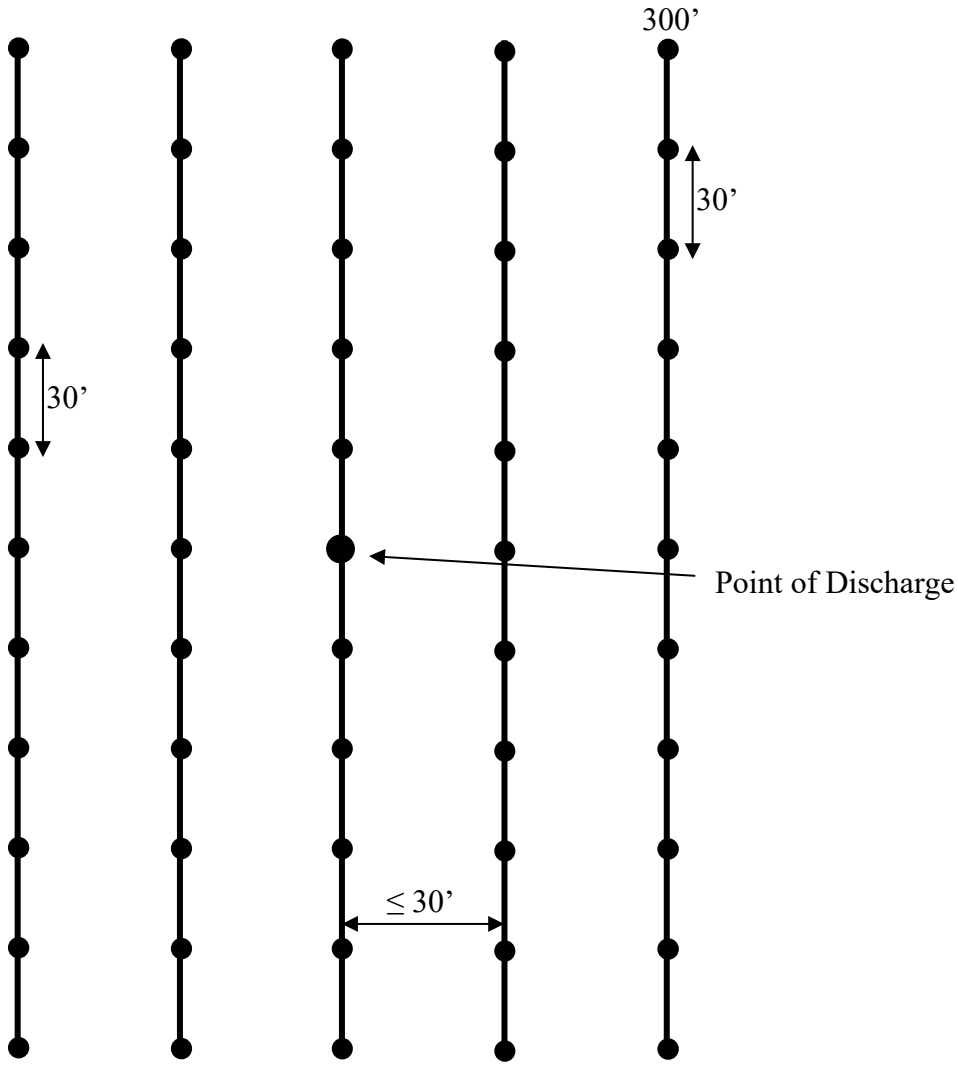
Figure 1 – Example of Radial Transects



Surveys using **Parallel Transects**: Use the discharge point as the central marker of the survey. GPS coordinates derived using WAAS technologies shall be recorded at the location of the discharge point (reported in decimal degrees, to the fifth decimal place if available). A minimum of three parallel transects shall be established, with the center transect passing through or near the discharge point. Transects shall be no more than 30 feet apart, and the number and length of transects shall be adequate to cover the entire estimated area of discharge (at least a 300 foot radius around the point of discharge) and any historic seafood waste accumulations. The sample plots shall be located at 30-foot increments along the transect lines. The sample plots shall be 3-ft by 3-ft squares.

The following diagram (Figure 2) shows "typical" parallel transects set no more than 30 feet apart. Points of measurement (sample plots) are at 30-foot intervals along the transect lines.

Figure 2 – Example of Parallel Transects



Reporting

Pre-Installation Survey Report. Within 30 days of completing the pre-installation survey, a facility operator shall submit a report to DEC that contains the following information:

I. Facility Information

A. Name, address, responsible party (e.g., the permitted entity) and contact information.
B. Alaska Pollutant Discharge Elimination System (APDES) permit number.
C. Type of waste treatment process(es).
D. The proposed discharge and/or current cumulative total annual pounds discharge based on historical BOD, SS, and TSS pollutant loading calculations or known total pounds seafood waste annually.

II. Surveyor and Survey Information

A. Name and contact information of the surveyor.
B. Brief background of surveyor's previous work history performing seafloor surveys and mapping.
C. Date and time the survey was completed.
D. Name of the receiving water where the survey was completed.
E. Whether there are other seafood waste discharges within 0.25-mile of the discharge.
F. Information on whether a seafood processing discharge was occurring during the time(s) of the survey.
G. Method used to:
    1. Establish markers (if placed)
    2. Establish transects
    3. Locate sample plot locations along the transects
    4. Record the required sample plot data
H. Table or narrative with a summary of findings from video of transects and sample plots.
I. A photographic log with photo number, transect and sample plot number, and photograph description, including GPS data collected at the sample plots. Photographs shall be in color and minimally 3 inch x 5 inch.
J. Recommendations for the location of the discharge at the proposed location or at an alternative location that would have less adverse impact to the seafloor community.

III. Sample Plot Information. The following must be provided for the sample plots:

A. **Digital photographs.** Digital photographs must:
    a. Depict the nature and coverage of seafood waste deposit(s), if any, on the seafloor.
    b. Capture images of natural sediment, natural sediment covering seafood processing waste (if observable), and/or seafood waste covering natural sediment.
    c. Be of sufficient definition, clarity, and detail to clearly document the conditions present on the seafloor.
    d. Include a digital date and time stamp.
    e. Be compiled into a photographic log to include the sample plot location identifier.

Photographs are required to be submitted electronically. If feasible, an electronic copy of the report, GIS/GPS map layers, and video recordings shall be submitted at the same time.

B. **Sea Flora and Fauna.** Type and number of macro sea fauna (sea life) and type of aquatic vegetation observed on the seafloor during the survey. The survey shall note observed differences, if any, in numbers and types of marine biota present on or within the waste deposit area and those marine biota found 100' outside the deposit area (on the natural sediments). Types and quantities of sea life observed adjacent to, on, in, or feeding on any seafood processing waste deposits during the survey, along with representative photos that include time and date stamps. Mention shall be made of any indication of change in sea life behavior from any previous observations or seafloor survey reports, and any other observations relevant to the condition of the benthic community or seafloor.

C. **Hydrology.** Report ambient tidal current velocity and direction and the water chemistry (both seasonal and in-situ on the day of the survey), including salinity, water temperature, density, turbidity, DO, and pH. These parameters shall be taken as a grab sample or using a probe at the proposed outfall terminus location and proposed depth of the outfall.

D. **Substrate.** Composition of substrate (soft sediments, cobble, gravels, solid rock, glacial silts, ground seafood, etc.).

E. **Water Depth.** (adjusted to MLLW, reported in feet) The water depth shall be reported with the bottom reading measured at the seafloor or at the top of any waste pile, whichever feature results in a shallower reading, at each sample plot location.

F. **Plume Size.** If actively discharging at the time of survey, the estimated height (rise) and length of any observed discharge plume during the survey. The surveyor shall note any changes in benthic habitat or sea flora/fauna use near the outfall terminus and at 100' from the outfall terminus in or under the influence of the plume.

G. **Water Clarity.** A description of water clarity and changes in water clarity as a result of the discharge, if occurring.

If select information required in the Pre-installation Survey Report is not obtainable using the video/camera methods described above, the report shall include an explanation as to why the information could not be obtained.

Appendix E

Calculations for Discharge Monitoring Reporting

Calculations for
Discharge Monitoring Reporting

Acronyms:

lbs/day = Pounds per day

mg/L = Milligrams per liter

mgd = Million gallons per day

TSS: Total suspended solids

O&G: Oil and grease

BOD_5: Biochemical oxygen demand

SS: Settleable solids

Part A: Calculations for TSS, O&G, and BOD_5

Formulas Used:

Formula A: Calculate pollutant discharged in lbs/day

= (pollutant sample result in mg/L) x (volume of wastewater discharged on sample day in mgd) x (8.34 lbs/gal)

Example: Seafood is processed for 28 days in September. One time per week, wastewater is analyzed for TSS, O&G, and BOD_5. The operator is required to record the amount of wastewater discharged each day. Monitoring logs show the following data:

Example Data

Date	TSS (mg/L)	O&G (mg/L)	BOD_5 (mg/L)	Total Daily Flow (mgd)
Sept 6	244	142	2,490	0.043
Sept 14	183	95	914	0.050
Sept 20	175	88	2,630	0.041
Sept 28	110	113	2,740	0.035

A-I. Calculate the TSS, O&G, and BOD_5 discharged in lbs/day for each sampling day in September

Date	TSS (mg/L)	O&G (mg/L)	BOD_5 (mg/L)	Total Daily Flow (mgd)	Conversion Factor (lbs / gal)	TSS (lbs/day)	O&G (lbs/day)	BOD_5 (lbs/day)
September 6	244	142	2,490	0.043	8.34	87.5	50.9	893
September 14	183	95	914	0.050	8.34	76.3	39.6	381.1
September 20	175	88	2,630	0.041	8.34	59.8	30.1	899.3
September 28	110	113	2,740	0.035	8.34	32.1	33	799.8

Using Formula A:

= (pollutant sample result in mg/L) x (volume of wastewater discharged on sample day in mgd) x (8.34 lbs/gal)

TSS Example for **Sept. 6** = 244 mg/L TSS x 0.043 mgd x 8.34 lbs/gal = 87.5 lbs TSS/day

O&G Example for **Sept. 28** = 113 mg/L O&G x 0.035 mgd x 8.34 lbs/gal = 33 lbs O&G/day

BOD_5 Example for **Sept. 20** = 2,630 mg/L BOD_5 x 0.041 mgd x 8.34 lbs/gal = 899.3 lbs BOD_5/day

Part B: Calculations for SS

Formulas Used:

Formula A: Calculate SS discharged in lbs/day for each sampling day

= (Imhoff cone SS result (mL/L)) x (SS conversion factor (g/mL)) x (3.785 L/gallon) x (volume of wastewater discharged on sample day in gallons per day) x (1 lb / 454 g)

Formula B: Calculate the 'daily average by month' SS discharge in lbs/day

= (sample date 1 lbs/day + sample date 2 lbs/day + sample date 3 lbs/day + … sample date n lbs/day) / (n)

Formula C: Calculate the monthly total SS discharge in lbs

= (SS daily average by month in lbs/day) x (number of seafood processing days that month)

Formula D: Calculate the year-to-date total SS discharge in lbs

= (month 1 SS monthly total lbs + month 2 SS monthly total lbs + … month m SS monthly total lbs)

Note: n = the total number of samples taken during the month
m = the total number of months (including the current reporting month) elapsed in the year to date

Example: Seafood is processed in January and February. One time per week, wastewater is analyzed for SS. The operator is required to record the amount of wastewater discharged each day. Monitoring logs show the following data:

Example Data

Date	SS (mL/L)	Total Daily Flow (gallons/day)
Jan 3 - 9	No sample taken	No processing Jan 3 – 9
Jan 11	0.1666	684,000
Jan 19	0.3333	416,000
Jan 25	0.4333	1,459,000
Feb 1	0.7333	1,929,000
Feb 9	0.2333	983,000
Feb 15	0.4666	1,838,000
Feb 22	0.3666	1,692,000

B-I. Calculate the SS discharged in lbs/day for each sampling day

Date	SS (mL/L)	Total Daily Flow (gallons/day)	SS (lbs/day)	SS (lbs/month)
No processing Jan 3 - 9	--	--	--	--
Jan 11	0.1666	684,000	1,074	
Jan 19	0.3333	416,000	1,306	
Jan 25	0.4333	1,459,000	5,956	
Jan. Ave.			**2,778**	
				52,791
Feb 1	0.7333	1,929,000	13,326	
Feb 9	0.2333	983,000	2,161	
Feb 15	0.4666	1,838,000	8,079	
Feb 22	0.3666	1,692,000	5,844	
Feb. Ave.			**7,352**	
				198,515

Using Formula A (Assumed conversion factor for example calculations = 1.13 g/mL):
SS lbs/day = (Imhoff cone SS result (mL/L)) x (SS conversion factor (g/mL)) x (3.785 L/gallon) x (volume of wastewater discharged on sample day in gallons per day) x (1 lb / 454 g)

January 11: (0.1666 mL/L) x (1.13 g/mL) x (3.785 L/gallon) x (684,000 gallons per day) x (1 lb / 454 g) = 1,074 lbs/day

February 1: (0.7333 mL/L) x (1.13 g/mL) x (3.785 L/gallon) x (1,929,000 gallons per day) x (1 lb / 454 g) = 13,326 lbs/day

B-II. Calculate the 'Daily Average by Month' SS discharge (lbs/day) for each month

Using Formula B (Note: n = the total number of samples taken during the month):
= (sample date 1 lbs/day + sample date 2 lbs/day + sample date 3 lbs/day + … sample date n lbs/day) / (n)

January: (1,074 lbs/day + 1,306 lbs/day + 5,956 lbs/day) / 3 = 2,778 lbs/day

February: (13,326 lbs/day + 2,161 lbs/day + 8,079 lbs/day + 5,844 lbs/day) / 4 = 7,352 lbs/day

B-III. Calculate the Monthly Total SS Discharge, in lbs

Using Formula C: (assume 19 processing days in January and 27 processing days in February)

= (SS daily average by month in lbs/day) x (number of seafood processing days that month)

January: (2,778 lbs) x (19) = 52,791 lbs

February: (7,352 lbs) x (27) = 198,515 lbs

B-IV. Calculate the year-to-date total SS discharge in lbs

Using Formula D:

= (month 1 SS monthly total lbs + month 2 SS monthly total lbs + … month m SS monthly total lbs)

(January monthly total lbs + February monthly total lbs) = 52,791 lbs + 198,515 lbs = 251,306 lbs

SEAFLOOR SURVEY PROTOCOL OVERVIEW

Seafloor Survey Applicability. The Seafloor Survey Protocol shall be used by the permittee to demonstrate compliance with the project area Zone of Deposit (ZOD) permit conditions. Seafloor surveying must be performed within one year of obtaining permit coverage and subsequently as required in Permit Table 7.

Purpose. The purpose of a seafloor survey is to 1) determine compliance with marine water quality criteria for residues (seafood processing waste deposits) on the seafloor; 2) evaluate the potential impacts on aquatic life, including the potential for bioaccumulation and persistence; 3) evaluate the expected duration of the deposit and any adverse effects; and 4) evaluate the potential transport of pollutants by biological, physical, and chemical processes. The permittee's historic and current discharge location(s) may have accumulated or be currently accumulating seafood waste deposits. Thus, the seafloor surrounding the current and all previous outfall terminus locations must be evaluated. The permit limits the allowed deposit of substances (seafood waste residues) to 1.0 acre, as allowed by 18 AAC 70.210(a). Thus, the seafloor survey of the project area ZOD is required to fulfill 18 AAC 70.210(c).

Project Area Zone of Deposit (ZOD)

Means the total area of the seafloor bottom in marine or estuarine waters within which DEC has authorized and limited the deposit of substances in exceedance of the water quality criteria in 18 AAC 70.020(b) and the antidegradation requirement in 18 AAC 70.015.

The project area ZOD includes the entire operating area of an onshore seafood processing facility, including those adjacent to the facility, including the following: seafood transfer devices; vessel and barge loading and unloading areas; offshore processing areas for supporting vessels and barges; bulkheads, ramps, floating walkways, docks, pilings, dolphins, anchors, buoys and other marine appurtenances; outfall terminus locations and the length of the outfall line(s) connecting the facility to the point(s) of discharge; previous outfall discharge locations that have no record of historical seafloor survey; and the bedland areas underlying and connecting these features.

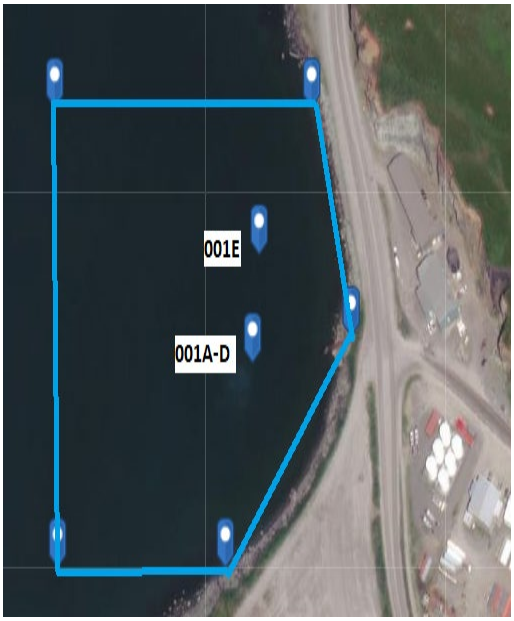
Seafloor Survey Protocol. The Seafloor Survey Protocol must be reviewed by the permittee and the permittee's surveyor. An equivalent method may be acceptable if it meets the survey purpose as well as the data gathering and reporting objectives contained herein. The Protocol method is set up as a two-part process. Alternate survey methods selected must be approved by DEC prior to implementation.

Part I: Seafloor Survey will determine the general location(s) and initial areal extent of seafood waste seafloor deposits. The Seafloor Survey results, information gathered, and observed seafood waste deposit location(s) shall be used to inform the Part II Seafloor Survey. The permittee may choose to perform a more discrete seafloor survey (closer grid spacing, varied methods) to gather

data as required in order to provide greater precision in defining the size and type of seafood waste deposits.

Adjusting the size of the Project Area ZOD: The Part I Seafloor Survey results may be used by the permittee to propose a modification to the authorized Project Area ZOD if the survey demonstrates that the authorized Project Area ZOD should be resized and/or relocated to more accurately capture the facility's seafood waste deposits. The areas of normal operational activity adjacent to the facility must be included in the authorized Project Area ZOD boundaries and are not subject to removal, as defined in the Project Area Zone of Deposit definition.

Figure 1: Initial UniSea Project Area ZOD (Two-Part)



Outfall 001A-E ZOD Vertex Coordinates:

53.880417 -166.562695

53.880417 -166.559749

53.879433 -166.559307

53.878429 -166.560739

53.878429 -166.562695

Outfall 002A / Outfall 003A ZOD Vertex Coordinates:

53.88001 -166.550368

53.878796 -166.552449

53.87791 -166.549703

53.876683 -166.548415

53.876884 -166.548071

53.878122 -166.549388

53.878831 -166.551536

53.879817 -166.550095

Part II: Seafloor Survey, and any subsequent surveys as required by the seafloor monitoring schedule, shall be derived from the Part I Seafloor Survey results and shall refine the location(s), type, thickness, and mapping of seafood waste deposits. Continued surveying will document existing and ongoing seafood waste deposition as well as natural ambient dispersion and biological decay processes.

Appendix F – Table 1 Seafloor Monitoring Schedule

Survey Type	Sample Location	Survey Result Triggers	Frequency
Part I Seafloor Survey	Project Area ZOD	Report as required in Appendix F	The first year of permit coverage
Part II Seafloor Survey	Project Area ZOD	Report as required in Appendix F	The second year of permit coverage
Additional Part II Seafloor Surveys	Project Area ZOD	Previous Part II Seafloor Survey reporting ≥ **0.75 acre** of deposits	Required every year, See Part 1.8.3.5.2.1
	Project Area ZOD	Previous Part II Seafloor Survey reporting < **0.75 acre** of deposits	Required every two years, See Part 1.8.3.5.2.2.
Benthic Assessment Survey	Project Area ZOD	N/A	The third year of permit coverage

Part I Seafloor Survey Protocol

Survey Method: The permittee shall complete a seafloor survey (primarily an observation and photographic survey) of the entire project area Zone of Deposit (ZOD).

The permittee shall provide the surveyor a copy of the permit, any identified location(s) of seafood waste deposits as documented through previously conducted seafloor survey(s), and this Seafloor Survey Protocol. The permittee may use either a diver as a surveyor, a remotely operated vehicle (ROV) with high definition photographic capability (with still-image capture capability), or a high definition underwater video camera (with still-image capture capability) towed behind a vessel to obtain the required photographs.

The survey shall be completed on a 30 foot by 30 foot grid pattern (30 feet between transect lines and 30 feet between sample plots along each transect). A minimum of nine sample plots must be surveyed. The sample plots must be centered around the outfall and must be adequate to encompass all seafood processing waste coverage areas. The survey must continue beyond the boundaries of seafood processing waste found as "Trace" so that all deposits can be mapped as continuous, discontinuous, or "Trace" coverage. The permittee may choose to perform a more discrete seafloor survey (closer grid spacing, varied methods) to gather data as required in order to provide greater precision in defining the size and type of seafood waste deposits.

The permittee is required to collect continuous Wide Area Augmentation System (WAAS) enhanced Global Positioning System (GPS) location information (reported in decimal degrees, to the fifth decimal place, if available, using the North American Datum (NAD) 1983 or World Geodetic System (WGS) 1984 datum). The accuracy of coordinates shall be at least within ±50 feet (17 meters) while conducting the survey so that any vessel drift can be mapped and used comparatively in the Part II Seafloor Survey. The permittee is also required to collect depth information for each sample plot location, corrected to Mean Lower Low Water (MLLW).

Photographs are required on the designated grid spacing and, along with sample plot results, will establish the general locations of the seafood deposits and may be used for future adjustments to the initial project area ZOD. If seafood processing waste is visible farther than the initially mapped project area ZOD, the photographic survey shall continue beyond the initially mapped project area ZOD until seafood processing waste is no longer visible. Current technologies exist that allow the Part I Seafloor Survey to extend into water depths greater than -120 feet MLLW.

Skipping the Part I Seafloor Survey: As found above in the 'Seafloor Survey Protocol Overview,' the size and location of a project area ZOD may be adjusted (be made smaller or larger or change in shape) based on the findings of a seafloor survey. The permittee may request a change to the project area ZOD by submitting a letter to the Department with a copy of the Part I survey. The Department's subsequent approval of a reduction in project area ZOD size could lead to less dive time during the Part II Seafloor Survey. On the other hand, the permittee may find that performing the Part I survey and hiring a survey company to return to the site to perform the Part II survey the following year may be an added expense. Therefore, the Protocol allows the permittee to elect to skip the Part I Seafloor Survey if the permittee wishes to perform a complete Part II Seafloor Survey of the entire project area ZOD during the first year of permit coverage. If choosing to skip the Part I Seafloor Survey, the permittee must submit a letter to the Department within 180 days of the permit effective date indicating the permittee's plans for conducting a Part II Seafloor Survey of the entire project area ZOD within 365 days of the permit effective date.

Part I Seafloor Survey Report

The permittee shall submit a Part I Seafloor Survey report to DEC containing the following information (due with the survey year's Annual Report):

1) **Facility Information**
   a) Permittee name, APDES permit number, facility address, and contact information.
   b) Type of waste treatment processes, product and by-product production process(es).
2) **Surveyor and Survey Information**
   a) Surveyor's name, signature, and contact information.
   b) Brief background of surveyor's previous work history performing seafloor surveys and mapping.
   c) Date and time the survey was completed.
   d) Name and USCG number of the vessel assisting in the survey.
   e) Name of the receiving water where the survey was completed.
   f) Continuous Global Positioning System (GPS) location information (as described in the survey method).
   g) Whether there are other seafood waste discharges occurring within 0.25 miles of the permittee's discharge location(s).
   h) Whether seafood waste discharge was occurring at the time of the survey.
   i) Description of methods used to:
      i) Establish linear transects,
      ii) Locate sample plot locations along the transects,
      iii) Estimate percent coverage at each sample plot (photograph location), and
      iv) Calculate the continuous and discontinuous coverage area(s) of seafood waste deposits.
3) **Previous Survey Information**
   a) Name of surveyor(s) who completed the previous survey(s).
   b) Name of receiving water.
   c) Date, time, and place of previous seafloor survey(s).
   d) Date of completion of any previous seafloor survey report(s) and first and last name(s) of individual(s) who performed the analysis and report writing.
   e) A narrative that describes the methods and results of previous survey(s), including:
      i) Total cumulative area(s) of seafood waste deposits,
      ii) Any available electronic or hard copy mapping of seafood waste deposits found
   f) Annual discharge load (pounds) at time of previous survey

g) Whether the permittee has performed mechanical raking or other pile reduction mechanisms.

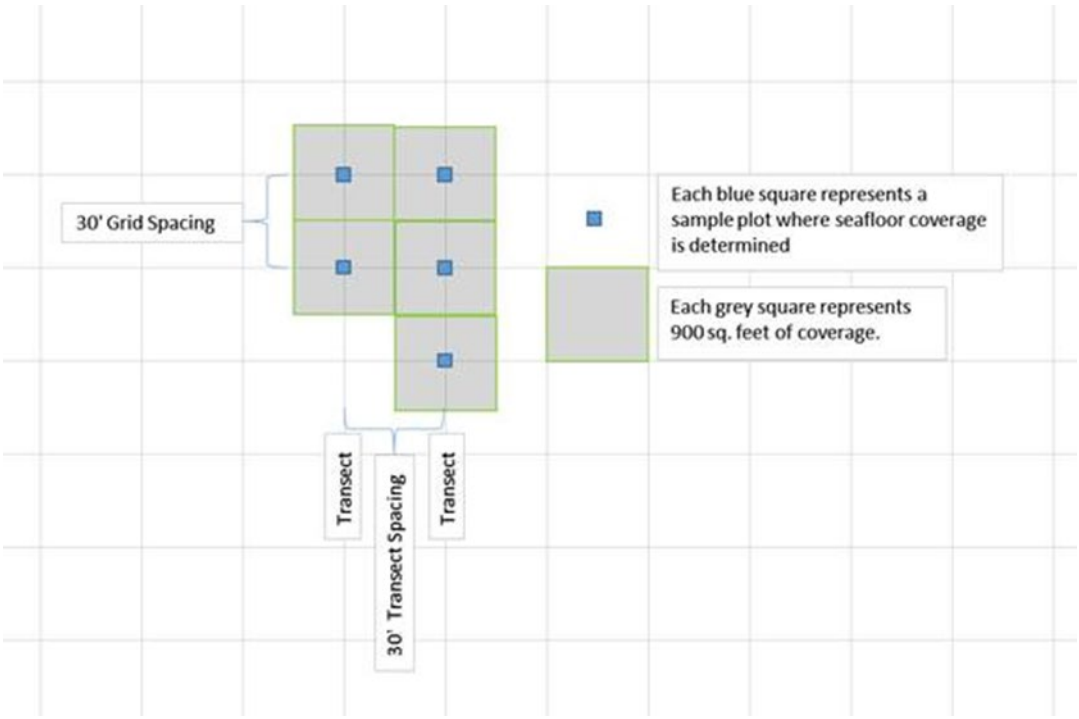
4) **Sample Plot Observations.** The Seafloor Survey shall be completed on a 30 foot by 30 foot grid pattern (30 feet between transect lines and 30 feet between sample plots (photographic image locations) along each transect) for the entire seafloor survey area. If the outfall is found to be broken or floating, the seafloor survey must encompass the permitted outfall location as well as below the discharge location(s) where the break/floating outfall was found. The Seafloor Survey is required to occur into water depths greater than -120 feet MLLW until seafood processing waste is no longer visible. At each sample plot, the surveyor shall use a three-foot by three-foot square to determine required items in the Seafloor Survey Report, which include the following:

   a) **Digital photograph.** Digital photographs representative of the sample plots must depict the nature and coverage of seafood processing waste deposit(s), if any, on the seafloor. Digital photographs or video shall capture images of natural sediment, natural sediment covering seafood processing waste, if observable, continuous and percentages of discontinuous seafood waste, and/or bacterial mats covering sediment. The surveyor must document whether they are able to differentiate between natural sediments or evidence of seafood waste residues based on observations and photographs. If the surveyor is unable to differentiate between natural sediments and fine particle size seafood processing waste, the surveyor shall conduct additional investigation, which may require grab samples. Photographs shall be of sufficient definition, clarity, and detail to clearly document the seafloor conditions and observations. Photographs shall include a digital date and time stamp or other verification of when the photograph was taken. The photograph log shall include the name of the seafood processor, survey date, and photographic sample plot location identifier. Photographs are not required for every sample plot; the surveyor may provide the amount of representative photographs to characterize distinctly different areas and seafood waste types, as described above.

   b) **Deposit Type.** Type of seafood waste deposits observed (e.g., bones, whole heads, fins & tails, ground seafood waste including average size (1.0-inch, 0.5-inch), fine screened seafood waste particles (residues), natural sediments (sediment sloughs, tidal sands), and/or sediments covering seafood waste.

      i) **Amount and Type of Seafood Waste Coverage.** The surveyor must estimate and record the percentage (Detectable to 100%, rounding as directed in the table below) of seafloor area(s) covered by recent seafood processing deposits and any historic deposits (decaying bones, Beggiatoa mats, etc.) at each sample plot location. The observation at the sample plot must also include a description of the types of observed seafood waste deposits.

      ii) Each three-foot by three-foot (3 ft by 3 ft) ‘sample plot’ represents 900 square feet (ft^2) of seafloor.



iii) The seafloor survey shall report each 3 ft by 3 ft sample plot's seafood waste coverage as directed in the table below, as follows:

(1) **Trace - Report**

Zone of Deposit	Result	Report
Within the project area ZOD	Detectable[1] – 9% (0.5 inch or greater thickness)	Trace
Outside the project area ZOD	Detectable[2] – 9% (no thickness threshold)	Trace

(2) **Discontinuous Coverage:** Within the project area ZOD, the surveyor shall use a seafood waste deposition threshold which is one-half inch or thicker as the minimum detection level. Outside the project area ZOD, no minimum detection level applies to the seafood waste deposit thickness. All 'Discontinuous' coverage will be calculated and reported as follows:

[1] Detectable seafood waste has typically been reported to be 2% coverage.

Discontinuous Coverage (not applicable to 1.0-acre limit)

Result	Report
10-14%	10%
15-24%	20%
25-34%	30%
35-49%	40%

Discontinuous Coverage (applicable to 1.0-acre limit)

Result	Report
50-54%	50%
55-64%	60%
65-74%	70%
75-84%	80%
85-94%	90%

Calculate the areal extent of discontinuous seafood processing waste deposits with 10 – 49% coverage and 50 - 94% coverage, as a percentage of each 900 sq. feet.

Discontinuous Coverage (not applicable to 1.0-acre limit) Example Calculations:

- Discontinuous Areas "A" – Six sample plots reported as 40% coverage

$$6 * 900\ ft^2 * 0.4 = 2{,}160\ ft^2$$

- Discontinuous Areas "B" – Twelve sample plots reported as 30% coverage

$$12 * 900\ ft^2 * 0.3 = 3{,}240\ ft^2$$

Total 10-49% discontinuous coverage: 2,160 + 3,240 =	**5,400 ft²**
Report Acres: 5,400/43,560 =	**0.12 acres**

Greater than 50% Discontinuous Coverage Areas (applicable to 1.0-acre limit) Example Calculations:

- Discontinuous Areas "C" – Six sample plots reported as 60% coverage

$$6 * 900\ ft^2 * 0.6 = 3{,}240\ ft^2$$

- Discontinuous Areas "D" – Eighteen sample plots reported as 80% coverage

$$18 * 900\ ft^2 * 0.8 = 12{,}960\ ft^2$$

- Discontinuous Areas "E" – Seven sample plots reported as 90% coverage

$$7 * 900\ ft^2 * 0.9 = 5{,}670\ ft^2$$

Total 50-94% discontinuous coverage: 3,240 + 12,960 + 5,670	**21,870 ft²**
Report Acres: 21,870/43,560 =	**0.50 acres**

(3) **Continuous Coverage (applicable to 1.0-acre limit):** Transect squares with 95% - 100% coverage will be considered Continuous Coverage. Within the project area ZOD, the surveyor shall use a seafood waste deposition threshold which is one-half inch or thicker as the minimum detection level. Outside the project area ZOD, no minimum detection level applies to the seafood waste deposit thickness. All continuous coverage will be calculated and reported as follows:

Continuous Coverage (applicable to 1-acre limit)

Result	Report
95-100%	100%

Continuous Coverage (applicable to 1.0-acre limit) Example Calculations:

15 sample plots x 900 ft^2 each (15 * 900) = 13,500 ft^2 of continuous coverage = 0.31 acres

Total Coverage Areas Applicable toward 1.0-acre Limit

Total 50-94% discontinuous coverage	21,870 ft^2
Total 95-100% continuous coverage	13,500 ft^2
Total coverage counting toward 1.0-acre limit (21,870 + 13,500) =	35,370 ft^2
Total Acres: 35,370/43,560	**0.81 acres**

c) **Beggiatoa or other types of Bacterial Mats.** Document the absence or presence, as well as size and location, of Beggiatoa or other microbial mats observed on or near any seafood waste deposits or on the seafloor (if waste deposits are not evident). All Beggiatoa or other bacterial mat areas shall be counted in the ZOD coverage area according to the areal coverage percentage thresholds established in Part (4)(b) , as they represent seafloor impairment, unless the permittee provides the Department sufficient documentation and the Department agrees that the bacterial mats were not the result of seafood processing discharges and/or the subsequent nutrient enhancement as a result of the waste coverage.

d) **Sea Flora and Fauna.** General observations of quantity and types of macro sea fauna (sea life) and aquatic vegetation observed on the seafloor during the photographic survey. Include sea life observed adjacent to, on, or feeding on any seafood processing waste deposits during the survey. The surveyor shall mention any indication of change in sea life behavior from any previous observation or seafloor survey reports, and any other observations relevant to the condition of the benthic community or seafloor.

e) **Hydrology.** Report ambient tidal current velocity and direction at the time of the survey.

f) **Substrate.** Composition of substrate (soft sediments, cobble, gravels, solid rock, glacial silts, ground/screened seafood waste, etc.). If previous benthic assessments, dive surveys, or remediation actions have documented the presence of buried seafood waste, this waste must be included in the continuous coverage calculations if those buried areas are located directly adjacent to outfalls discharging seafood processing waste and wastewaters, or to other continuous coverage areas surveyed. The surveyor has the option to obtain new core samples to document whether seafood waste is or is not present at the previously identified locations.

g) **Water Depth.** (adjusted to MLLW, reported in feet) Must be reported at the seafloor and at the top of any waste pile observed.

h) **Plume Size.** An indication of an active or inactive discharge occurring during the time(s) of the survey. Include the approximate width and length of each outfall's effluent plume when discharge is occurring.

i) **Water Clarity.** A description of water clarity and changes in water clarity as a result of the discharge, if occurring.

5) **Sample Plot Observations Map** - A map or representative drawing (with an identified scale, including a north arrow) shall be developed that depicts the facility and the seafloor area surveyed, including the transect grid. Each sample plot location must be identified on the map and correlated[2] to the information required in 4.a-i (above). The total cumulative area(s) of both the continuous and discontinuous coverage shall be reported in square feet and in acres to the nearest tenth of an acre. The map must include:

[2] Correlating data - Portions of the information required by #4 may be identified by numbers or letters on the map. The numbers are then used to correspond to the data gathered for each sample plot location and presented in a table format or Excel spreadsheet.

a) The locations of any seafood processing waste deposits, including the outer boundaries of any continuous and/or discontinuous coverage areas, in relation to the discharge location(s), mapped seafloor area boundaries, transect grid, and outfalls, including:

i) **Continuous Coverage:** The relative location and estimated size (ft2 and acre) of any continuous coverage areas (95% - 100% coverage) of seafood waste.

ii) **Discontinuous Coverage:** The relative location and estimated size (ft2 and acre) of any discontinuous coverage areas (10% - 94% coverage) of seafood waste.

iii) **Trace Coverage:** The relative location and estimated size (ft2 and acre) of any trace coverage areas (less than 10% coverage, or floating seafood residues) of seafood waste.

iv) **Beggiatoa (or other bacterial) Mats:** The relative location and estimated size (ft2 and acre) of any Beggiatoa or other bacterial mats discovered during the photographic survey.

v) **Outfalls and Water Intakes:** Coordinates of beginning and end points for all outfalls/intakes (including pipes that do not belong to the permittee, and the permittee's inoperative pipes), description and condition of the outfall(s) (Outfall System Inspection Protocol - corrosion, condition of cathodic protection for metal outfalls, bends, or breaks), depth of outfall(s) at MLLW, and outfall diffuser description(s), if any.

vi) **Permanent Markers (if any):** The location of surface or subsurface permanent survey marker monuments, if any.

6) **Change Sheet.** A change sheet at the end of the seafloor survey report attached by the permittee, documenting any changes to the seafloor survey report as required by the permittee. Or, the two documents may be submitted in red-line track changes. Seafloor Survey Reports shall be certified by the survey project manager and signed by a principal officer or duly authorized representative of the permittee. The survey project manager shall certify that the survey data is true and accurate, and document review of any changes to the original seafloor survey report.

7) **Explanation of Information Not Reported.** If select information required was not obtained, the Seafloor Survey Report must include an explanation as to why the information could not be obtained and submit alternate methods as to how the data should be obtained. If seafloor surveys or other available evidence submitted by the operator are not sufficient to determine the amount of seafood processing waste deposit coverage, DEC will, in its discretion, require the operator to conduct additional surveys or other monitoring for that purpose.

8) Electronic File Submittal. A copy of the Seafloor Survey Report must be submitted in Adobe Acrobat or Microsoft Word to DEC with the survey year's Annual Report. If GIS files are developed, shape files with supporting metadata shall also be submitted to DEC.

Part II Seafloor Survey Protocol

Seafloor Survey Method: The Part II Seafloor Survey area will be based on the initially identified location(s) of seafood processing waste deposit coverage areas reported in the Part I Seafloor Survey report. Results of the Part I report will be used to establish the initial transects for the Part II - Seafloor Survey. If observations from the Part I report did not reveal any evidence of seafood processing waste deposits, then the Part II - Seafloor Survey will minimally encompass a 200 foot by 200 foot area surrounding the outfall terminus.

The permittee shall provide the surveyor completing the Part II Seafloor Survey a copy of the permit, the discharge locations, the Part I Seafloor Survey report, and all other pertinent data collected (i.e., previous benthic assessments, seafloor surveys, US Army Corps of Engineers-required seafloor surveys, etc.). The permittee should provide the surveyor information on any maintenance completed that could have affected seafloor deposits. Additionally, the permittee shall inform the surveyor of any change in discharge locations since the Part I Seafloor Survey, or last Part II Seafloor Survey, was completed.

The Part II Seafloor Survey shall use parallel transects 30 ft apart, with sample plot locations each 30 feet along each transect, and report the information in the Part II Seafloor Survey Report section below. The number and length of transects must be adequate to encompass all seafood processing waste coverage areas found in the Part I Seafloor Survey and extend to all areas of seafood processing waste observed by the surveyor while performing the Part II Seafloor Survey.

If feasible, at least five permanent markers (e.g., large rock outcrops, boulders, etc.) must be established at suitable locations, provided there are sufficient land/facility and/or locations available. If markers/monuments are not established, the Part II Seafloor Survey report shall record why they were not established and identify methods to establish repeatable transects. GPS coordinates derived using WAAS technologies, or another technology with equivalent or better position accuracy, must be recorded for each underwater marker.

The surveyor must establish transect lines with a surveyor's tape or other precise methodology extending in a perpendicular direction from the permanent marker(s). If seafood processing waste deposit coverage extends more than 15 feet beyond the Part I Seafloor Survey transect locations, then transects must be added or lengthened to identify the extent of seafood processing waste deposits.

At each sample plot, the surveyor shall use a three-foot by three-foot square to determine required items in the Seafloor Survey Report.

Part II Seafloor Survey Report

The permittee shall submit the Part II – Seafloor Survey Report to DEC containing the following information (due with the survey year's Annual Report).

The Part II Seafloor Survey report must gather and report the same data parameters as found in the Part I Seafloor Survey report listed above, including:

1) Facility Information
2) Surveyor and Survey Information
3) Previous Survey Information
4) Sample Plot Observations Data as required in Part I - 4.a – 4.i.

Additional Part II Sample Plot Observation Requirements. At each sample plot, the surveyor must also collect the following data:

j) **Seafood Waste Deposit Thickness.** Determine and record whether the estimated seafood processing waste deposit thickness is greater than or less than 0.5-inch (1/2") thick at each sample plot. If seafood waste is visible, but less than ½" thick, record as "Trace.

k) **Report of Anoxic Conditions.** Anoxic conditions often form in the seafood processing waste deposits as the material decomposes. The surveyor should identify and document whether gas is being released from undisturbed seafood processing waste deposits or is released when measuring seafood waste pile thickness.

l) **Dissolved Oxygen and Other Gases.** When gas is observed escaping from the seafloor in the vicinity of the outfall or the seafood waste deposit pile, the surveyor is required to collect water samples or measure directly for dissolved oxygen. Sampling or measurement shall be conducted six inches or less above the seafloor/seafood waste deposit where the greatest amounts of gas release are observed.

5) Sample Plot Observations Map
6) Change Sheet
7) Explanation of Information Not Reported
8) Electronic File Submittal

If seafloor surveys or other available evidence submitted by the operator are not sufficient to determine whether coverage exceeds the authorized ZOD, DEC will, in its discretion, require the operator to conduct additional surveys or other monitoring for that purpose.

Approved Sampling Methods

A combination of sampling methods may be used to gather the information required in this Seafloor Survey Protocol as long as all data gathering and reporting objectives are met.

Sediment Grab Samples

A sediment grab sample is often used to supplement a dive survey, video by ROV, or benthic analysis by sediment profile imaging. Grab sampling surveys may be performed instead of a dive survey in areas where a dive survey is not practical due to limiting ambient conditions, very low visibility, or dangerous diving conditions. Grab sampling should not be used when bottom substrate is composed of large boulder-type material or bedrock. Various types of sample collection devices and techniques are available. Usually, surveyors are able to push a tube core sampler into the waste pile. In other circumstances, core samples are obtained from a bottom grab sampler known as a Van Veen Grab Sampler. Obtaining core samples of the top foot of the seafloor has a number of advantages. The benthic life successional stage may be determined if background samples are also obtained, including infaunal and epifaunal species, species densities, and level of invasive species. Additionally, the true thickness of seafood or other solids deposited on the bottom can be measured, depending on the type of grab sampler used. Beggiatoa bacteria may be positively identified through coring/grab sampling if present. Subsurface grain size and type of substrate can be identified. Grab sampling must be augmented by a photographic method, such as a video seafloor survey, to document the presence or absence of macro flora and fauna and to map the contours of the ZOD. Alternatively, the grab sampler would need attached depth and location instrumentation in order to provide a contour map of the ZOD and seafloor.

Benthic Analysis by Sediment Profile Imaging

The benthic analysis by sediment profile imaging (SPI) method has been used in large areas of seafood processing waste coverage or areas of fine material (screened seafood waste) coverage to assess the health of the benthic community in the deposit area. The sediment profile camera works by burying a knife-edged probe that houses a digital camera into the seafloor area being examined, including into the seafood waste deposit area(s). The probe is normally fitted with water depth and location instruments to provide seafloor contour information. The probe has a Plexiglas faceplate cover to collect images of the sediment profile. An internal strobe light is mounted inside to provide illumination. The probe housing the camera descends into the sediment at a slow, controlled rate to prevent disturbance of the sediment-water interface. After an appropriate time delay, the strobe and camera are activated to obtain a cross sectional image of the upper 20 cm of the sediment column. Depth of penetration by the probe depends on the substrate consistency (i.e., density and hardness of the sediment, thickness and type of seafood waste deposits) and the probe width. The probe is fitted with lights, a plan view camera, and a laser generated scale to allow determination of the size of objects in the picture that is taken.

This survey method provides information that meets some data objectives, including: benthic life evaluation, estimations of anoxic condition and depth of anoxic conditions, presence or absence of Beggiatoa bacteria, thickness of waste to the limit of the probe, estimation of coverage areas of any seafood waste deposits, water depth, visual appearance of the bottom, and the total area of the seafood waste deposits. However, the method does have its limitations. The method is only suitable for sediments that can be penetrated by the knife probe, requires vessels large enough to handle the probe, and is susceptible to currents moving the vessel. The method is not suitable for characterizing deep waste deposits, and the costs to complete the survey are usually higher than for other survey methods.

Outfall System Inspection Protocol

Purpose: The purpose of the outfall system inspection is to verify outfall functionality, ensuring compliance with authorized discharge locations.

The permittee shall perform an operational inspection of the outfall system(s), using such techniques as pressure testing, visual, ROV, dye testing, or diver inspection, during each Seafloor Survey to ensure that the outfall system is operable and functioning as designed. The permittee shall record the inspection methods and results and keep the records at the facility and available upon request. Verification of the inspection shall be included in the submittal of the inspection year's Annual Report (See Permit Part 1.11).

The permittee shall cease discharging from a severed, failed, or leaking outfall system as soon as possible, but no more than ten days past discovery of the severance, failure, or damage, with the allowance of enough time to process seafood already offloaded to the facility. Discharging shall be discontinued if the system is unable to be repaired within ten days. Any failure of the outfall system shall be verbally reported to DEC within 24 hours of discovery, and written notification is required within five days of discovery in accordance with Appendix A, Part 3.4 (Twenty-four Hour Reporting).

Permittees shall record:

- Evidence of breaking or dragging
- Outfall condition and remaining life
- Evidence of leaks by use of fluorescent dye, in-line leak detector monitoring , hydrostatic testing, or pneumatic testing
- System operability
- Cathodic protection
- Log of outfall system repairs
- Photographs of breaks, leaks, damage, floating, etc.
- Pressure tests (both hydrostatic and pneumatic), when performed, must always be performed under controlled conditions, following an approved test plan, and documented in a test record. A single approved test plan could be used for several similar tests, but for each test a separate test record is required.

FLUORESCENCE DETECTORS

Fluorescence forms the basis of one of the most widely used and effective approaches to seafloor outfall leak detection. The use of this approach requires the medium's natural ability to fluoresce or the addition of fluorescent tracers to the medium being detected. Large leak sources have often been located by visual observations from divers or cameras within the water. However, subsea fluorescence technology can provide a more effective detection system and is less restricted by depth while offering the potential to reduce the quantity of dye required. These detectors can be point sensors and have been used successfully with ROVs, and they can provide an indication of leak size from the relative signal intensity. Turbidity within the water column, however, can impede recognition of the desired medium.

Appendix G

Eiders Monitoring Protocol

The United States Fish and Wildlife Service (USFWS) needs to document mortality of threatened species whenever possible. Fish and Wildlife Service programs that use this information include Endangered Species, Environmental Contaminants, Conservation Planning Assistance (to aid in recovery plans and implementation), and Law Enforcement (for enforcing the Endangered Species Act and other wildlife-related laws), in addition to numerous related research programs. Every dead spectacled and Steller's eider can aid in its species recovery by providing information on eiders found dead.

In the past, this protocol covered handling and transport of injured or sick eiders. Because of avian flu concerns, we cannot currently transport injured or ill eiders for rehabilitation, so we can no longer provide instructions or a protocol for handling them. To minimize your risk, we recommend that you do not contact or handle wild birds that appear to be ill or injured.

Due to concerns about contracting avian influenza from handling bird carcasses, please make sure that you have proper personal protective equipment (PPE) and training prior to observing carcasses. Do not collect or handle carcasses. Protect yourself from fluids and feces by using impermeable gloves, safety glasses, and a mask if necessary when going near (not touching) a bird to assist in determining sex and making observations of the bird(s).

Reporting

Report all dead spectacled and Steller's eiders as soon as possible. If there is no reason to suspect that the bird(s) died as the result of any illegal activity, you should attempt to contact the following people, in the order listed, until you reach someone.

1. Neesha Stellrecht, USFWS, Fairbanks: (907) 456-0297 work
2. Ted Swem, USFWS, Fairbanks: (907) 456-0441 work
3. Anchorage Fish and Wildlife Field Office, USFWS, Anchorage: (800) 272-4174 toll free, (907) 271-2888 work
4. Robert Suydam, North Slope Borough Department of Wildlife Management, Barrow: (907) 852-0350

<u>If you encounter any dead spectacled or Steller's eiders that you suspect may have died as a result of an illegal act such as shooting, a Service Law Enforcement Officer should be notified immediately. Ensure that one of the individuals in the above list is also contacted in these instances.</u>

You should be prepared to report any observations and/or knowledge you might have regarding the incident, and you may be provided with additional instructions regarding proper custodial handling techniques, which will allow a Special Agent to follow-up with an investigation into the incident.

USFWS, Office of Law Enforcement:

Fairbanks: (877) 535-1795 toll-free, (907) 456-2335, (907) 456-2356 fax

Nome: (907) 443-2479, (907) 443-2938 fax

Anchorage: (800) 858-7621 toll-free, (907) 271-2828, (907) 271-2827 fax

Regional Office, Anchorage: (907) 786-3311, (907) 786-3313 fax

Juneau Office: (907) 586-7545, (907) 586-7574 Fax

Your report should include:

1. Species, age, sex, and number of birds, date, time and location (latitude and longitude and area name).
2. Suspected cause of death.
3. Circumstances under which found.
4. If known, the names of witnesses or suspects, and a description of any vehicles or boats involved (but, non-law enforcement individuals are not expected to conduct investigations or obtain information that is not readily available).

If a camera is available, photograph birds and other evidence such as shotgun shells or casings, and persons and vehicles involved. Note photo date, time, and location. You should put all this information, plus any additional details you think important (such as location of nearest power line), in a short written narrative.