



**ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET – PROPOSED FINAL**

Permit Number: AK0053490

Trident Seafoods – Saint Paul Facility

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Wastewater Discharge Authorization Program

555 Cordova Street

Anchorage, AK 99501

Public Comment Period Start Date: **DRAFT**
Public Comment Period Expiration Date: **DRAFT**
[Alaska Online Public Notice System](#)

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Issuance of an Alaska Pollutant Discharge Elimination System (APDES) permit to

TRIDENT SEAFOODS CORPORATION

For wastewater discharges from

Trident Seafoods – Saint Paul Facility
1027 Harbor Road
Saint Paul, AK 99660

The Alaska Department of Environmental Conservation (the Department or DEC) proposes to issue an APDES individual permit (permit) to Trident Seafoods – Saint Paul facility (Trident Saint Paul or the facility). The permit authorizes and sets conditions on the discharge of pollutants from this facility to waters of the United States. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the facility and outlines best management practices to which the facility must adhere.

This fact sheet explains the nature of potential discharges from Trident Saint Paul and the permit development, including:

- information on public comment, public hearing, and appeal procedures
- a listing of effluent limitations and other conditions
- technical material supporting the conditions in the permit
- monitoring requirements in the permit

Public Comment

The proposed final permit will be made publicly available for a five-day applicant review. The applicant may waive this review period. After the close of the proposed final permit review period, the Department will make a final decision regarding permit issuance. A final permit will become effective 30 days after the Department’s decision, in accordance with the state’s appeals process at 18 AAC 15.185 – 15.340.

The Department will transmit the final permit, fact sheet (amended as appropriate), and the Response to Comments document to anyone who provided comments during the public comment period or who requested to be notified of the Department’s final decision.

Informal Review and Adjudicatory Hearing

A person authorized under a provision of 18 AAC 15 may request an informal review of a contested decision by the Division Director in accordance with 18 AAC 15.185 and/or an adjudicatory hearing in accordance with 18 AAC 15.195 – 18 AAC 15.340. See DEC’s “Appeal a DEC Decision” web page <https://dec.alaska.gov/commish/review-guidance/> for access to the required forms and guidance on the appeal process. Please provide a courtesy copy of the adjudicatory hearing request in an electronic format to the parties required to be served under 18 AAC 15.200. Requests must be submitted no later than the deadline specified in 18 AAC 15.

Documents are Available

The permit, fact sheet, application, and related documents can be obtained by visiting or contacting DEC between 8:00 a.m. and 4:30 p.m. Monday through Friday at the addresses below. The permit, fact sheet, and other information are located on the Department’s Wastewater Discharge Authorization Program website: <https://dec.alaska.gov/water/wastewater/>.

Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 555 Cordova Street Anchorage , AK 99501 (907) 269-6285	Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 410 Willoughby Avenue Juneau , AK 99811 (907) 465-5180
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1.0 APPLICANT

This fact sheet provides information on the Alaska Pollutant Discharge Elimination System (APDES) permit for the following entity:

Name of Facility:	Trident Seafoods – Saint Paul Facility
APDES Permit Number:	AK0053490
Facility Location:	1027 Harbor Road, Saint Paul, AK 99660
Mailing Address:	P.O. Box 909, Saint Paul, AK 99660
Facility Contact:	Shawn Stokes

Figure 1 and Figure 2 show the facility and discharge locations.

2.0 FACILITY INFORMATION

2.1 Background

2.1.1 Facility Location and Description

The permit and this fact sheet are based on information submitted by Trident with their APDES application for the Saint Paul facility. Trident owns, operates, and maintains the facility, which conducts seafood processing. The village of Saint Paul is on a narrow peninsula on the southern tip of Saint Paul Island, the largest island in the Pribilofs. The facility is located on Saint Paul Harbor, adjacent to the village. Figure 3 shows the facility layout. The facility consists of (1) a processing building, (2) an equipment storage area, (3) a boat yard, and (4) a concrete dock. The dock and the nearby fuel connex do not belong to Trident.

2.1.2 Process Overview

The facility processes cooked and frozen crab (opilio, bairdi, and King) and frozen headed and gutted or fileted halibut. Over 90% of the volume of seafood processed at the facility is opilio crab.

Trident takes receipt of the seafood catch from fishermen along the dock, offloading the catch in brailer bags by crane and then forklifting them to a hopper at the plant. From the hoppers, crab is put onto a conveyor belt to a machine for mechanical butchering. The crab is then placed in stacked baskets for cooking and conveyed to an ambient seawater tank for cooling, then to a pre-chill tank (a mixture of fresh water and seawater), and finally to the brine tank and the packing room. King crab is processed live, in very limited quantities. Halibut is mechanically headed and then processed by hand or mechanical skinning.

Crab waste is conveyed to a flume and sprayed with seawater to flow to the grinder room, where it is chopped by Taskmaster crushers and pumped to the sump, through an Urschel grinder, and through the outfall pipe. Crab cooking and cooling water, and all wastewater from the floor drains and trenches and tote washing, flow to Muffin Monster grinders before to the sump and Outfall 001A. When the facility is processing halibut or acting as a fish buying station, wastewater is diverted from the grinders to the 0.5-mm rotary screen before being pumped to the sump and Outfall 001A. Halibut waste collected from the fillet line and rotary screen is pressed and frozen for bait or composting or disposed of into federal waters

in accordance with the Marine Protection, Research, and Sanctuaries Act, and buying station waste is sent by tender to Akutan for processing. Boiler blowdown (fresh) water is also discharged from Outfall 001A. The refrigeration system uses ammonia, but it is in a closed loop and only condensate is discharged. There has been concern that catch transfer water spilling onto the dock has not been captured before flowing through the dock into the Bering Sea, and Trident is working on a catchment system to capture that water and route it to the outfall. There was concern in the past about a floor drain in the shipping room draining to the main sump without treatment, but Trident states that the drain has been plugged. A flow meter records daily, and the total flow from Outfall 001A can reach around 3.0 million gallons per day (mgd). Sanitary wastewater is sent to the village’s sewage collection system.

For a facility flow diagram, see Figure 4.

Storm water discharged at the facility is covered by Multi-Sector General Permit (MSGP) authorization AKR06GA41, and the facility operates under a corresponding Storm Water Pollution Prevention Plan (SWPPP).

Outfall 001A starts as a PVC pipe running 0.75 miles underground from the plant to an area called East Landing on the southern side of the island. It then extends as a steel pipe 840 feet from shore and terminates at -9.45 meters mean lower low water (MLLW). The outfall is a 12-inch diameter pipe and terminates in a standard flange sitting on a large rock, which elevates the terminus one meter off the bottom. The terminus is at the edge of a rock cobble field, which gives way to sandy bottom to the east. The village’s wastewater treatment plant outfall line discharges within 200 feet of the Outfall 001A terminus.

Crab processing A Season occurs from January through April, but the facility typically processes about mid-January through mid-March. The facility occasionally also processes crab in B Season, which typically occurs in October. At the height of crab season, there can be 230 employees at the facility, which can process up to 700,000 pounds of crab per day. The facility processes halibut for the community in June – September. The facility can process up to 75,000 pounds of halibut per day. There is an annual shutdown in November and December. No processing and discharge has occurred at the facility since February 2022.

Table 1: Outfall Description

Number	Location	Description
001A	57.11925 N, 170.26640 W	Seafood processing wastewaters

2.1.3 Process Descriptions and Pollutants of Concern

Pollutants of concern known to be present in the facility’s discharge, discussed further below, include pH, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total phosphorus, total suspended solids (TSS), oil and grease (O&G), total residual chlorine (TRC), ammonia, temperature, fecal coliform, and residues. Metals

are also pollutants of concern and require monitoring to determine their prevalence in the effluent (see discussion in Part 4.4.1).

Overview and Butchering

The major types of waste found in seafood processing wastewater are blood, offal products, viscera, fins, fish heads, shells, skins, and meat fines. Operations include product receiving, vessel unloading, sorting and weighing, preparation (butchering, scaling, filleting, skinning, evisceration), inspection and trimming, product processing (e.g., freezing), further processing (e.g., cooking), packaging, and dispatch. The butchering process adds organic materials, such as blood and guts, to the wastewater stream. Thus, wastewater from the seafood processing operations can be very high in dissolved and suspended organic materials. This results in high BOD. Oils and grease are also present in high amounts. Ammonia is included in contact water effluent streams due to its production during organic matter decomposition. The 40 CFR Part 408 effluent limitation guidelines (ELG) development document recommended monitoring seafood processing wastewaters for pH even though processing waters are generally neutral.

Cleaning Agent and Disinfectant Discharges

Cleaning, disinfectant, and defoaming agents used for seafood processing where the permittee follows the manufacturer's use and disposal recommendations are authorized discharges under the permit. This includes the use of disinfectants added to wash down water to meet applicable state and federal sanitation standards while processing or sanitizing seafood processing areas. Wash-down activities can add residual chlorine to wastewater streams.

Catch Transfer Water

Fish are delivered to the plant from vessel holds. Catch transfer water must be treated and ultimately discharged with the seafood processing wastewater through Outfall 001A.

Catch transfer water can be high in BOD, TSS, and O&G, with concentrations dependent on how long fish are held. Additionally, catch transfer water may create foam and scum on the surface of the receiving water (violating the Water Quality Standards (WQS) for residues).

The permit authorizes Outfall 001A's discharges of catch transfer water (fish hold waste and wastewater, live tank water, refrigerated seawater, or brine) conveyed to the onshore facility.

2.1.4 Facility History

The facility and outfall were built in 1993 and started operation and discharge in 1994. Trident acquired the facility in 1999 from UniSea. The screen house and rotary screen were installed in 2015. For a time, the facility was the largest crab processor in the world, but crab fishing in the area has since been closed.

The Environmental Protection Agency (EPA) issued a General Permit for Seafood Processors and the City of Saint Paul (AKG527000) effective in 1999, which expired in 2004. Trident applied in a timely manner for reissuance of the facility's authorization (AKG527702) in 2003, and EPA administratively extended the authorization in April 2004. It has been in administrative extension since then.

While the 1999 permit authorized Ocean Disposal from the onshore facility, this permit will no longer provide coverage for these types of discharges. Instead, for any at-sea discharges in state waters, the permittee will be required to obtain AKG523000 Offshore Seafood Processors Wastewater Discharge General Permit coverage. The facility typically utilized ocean disposal (into federal waters) during the short King Crab season.

2.2 Discharges not Authorized by the Permit

This permit does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such waste streams. Discharges not covered include those that may require coverage under other APDES permits.

Unused products – The Alaska Department of Environmental Conservation (DEC or the Department) has been made aware through review of some processors’ at-sea disposal logs that additives or other products other than raw or cooked seafood wastes have been disposed of in state waters. The discharge or disposal of these food additives (e.g., sugars, salts) or processed by-products (e.g., oils, hydrolysates, etc.) can severely alter the chemistry of the receiving water (including by causing high BOD and COD pollutant loading) and is not authorized under the permit. The restriction does not apply to by-product effluents meeting the terms of the permit.

Chemicals (e.g., sodium hydroxide, hydrochloric acid, aldehydes, ketones) that are not actively used in production or disinfection and are instead poured directly into wastewater discharge lines are prohibited discharges under Permit Part 1.3. Unmonitored and/or untreated discharges of these chemicals can lead to violations of WQS.

Hazardous or toxic substances – The WQS for toxic and other deleterious organic and inorganic substances for marine waters are codified in 18 AAC 70.020(b) and found in the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances*, as amended through December 12, 2008. The permit requires compliance with these WQS. Therefore, any toxic or hazardous substance discharges that may impair or violate WQS are prohibited.

Storm water - Both commingled and non-commingled industrial storm water discharge coverage is available under the 2020 APDES MSGP. The MSGP contains provisions that require industrial facilities in 29 different industrial sectors to implement control measures and develop site-specific storm water pollution prevention plans (SWPPP) to comply with APDES requirements. MSGP Permit Part 1.2.1 states that to be eligible to discharge, a permittee shall have a storm water discharge associated with an identified primary industrial activity. The MSGP defines ‘Primary Industrial Activity’ as including any activities performed on-site which are identified by a list of primary SIC codes. The MSGP lists ‘SECTOR U: FOOD AND KINDRED PRODUCTS – U3’ with SIC codes as 2091-2099 Miscellaneous Food Preparations and Kindred Products. Seafood Processing falls under Section U3 SIC codes (Frozen, Fresh or Canned).

For commingled discharges, the 2020 APDES MSGP Permit Part 1.2.3.1 provides coverage if the storm water is commingled with a discharge authorized by a different APDES permit (in this case, the seafood discharge).

Spoiled seafood waste - If a vessel delivers fish or other aquatic animals or plants to the permittee, or the permittee experiences a refrigeration system failure, and seafood/plant products are “spoiled” due to temperature, histamine concentration, or decomposition, these materials are prohibited from being discharged.

3.0 COMPLIANCE HISTORY

DEC reviewed the facility’s monitoring data from 2018 – 2019, the most recent years of processing during the last seven years. Table 2 presents the reported effluent characterizations.

Table 2: Outfall 001A Effluent Characterization

Parameter	Units ^a	Reported Range (Low - High)
Flow	mgd	0 – 3.011
Biochemical Oxygen Demand (BOD ₅)	mg/L	8.60 – 1590.67
Total Suspended Solids (TSS)	mg/L	<2.0 – 572.00
Oil and Grease (O&G)	mg/L	<1.4 – 182.00
Total Ammonia, as N	mg/L	0.15 – 33.30
Total Phosphorus	mg/L	0.13 – 8.10
Total Organic Carbon (TOC)	mg/L	1.3 – 55.00
Chemical Oxygen Demand (COD)	mg/L	<100 – 2780.00
Total Residual Chlorine (TRC)	mg/L	0.0 – 0.05
Temperature	°C	6.1 – 13.9
pH	SU	7.8 – 8.2
Fecal Coliform (FC)	FC/100 mL	<10 – 400
Arsenic	µg/L	2.40 – 75.00
Cadmium	µg/L	<0.20 – 17.10
Copper	µg/L	<8.0 – 91.90
Lead	µg/L	<0.50 – 4.70
Nickel	µg/L	0.90 – 49.30
Selenium	µg/L	<25.0 – 85.70
Silver	µg/L	<1.25 - <1000.0
Zinc	µg/L	12.50 – 81.50

Mercury	µg/L	<0.100 – 5.39
<u>Footnotes:</u> Units: mgd = million gallons per day, mg/L = milligrams per liter, °C = degrees Celsius, SU = standard units, FC/100 mL = colony forming units per 100 mL, µg/L = micrograms per liter.		

Facility Inspections

Inspections were carried out during the permit term by EPA/DEC jointly on September 12-13, 2006 and by DEC on July 10, 2017 and September 13-14, 2022.

After the 2006 inspection, the facility received a Notice of Violation for not having required documentation onsite (authorization to discharge, Notice of Intent, copy of the General Permit, most recent dive survey, daily monitoring and grinder logs, Quality Assurance Project Plan (QAPP), updated Best Management Practices (BMP) Plan), allowing plastic ribbon caught in the sump collection pit to discharge from the outfall, using a one-inch (non-representative) sample port for effluent sampling, not documenting shoreline monitoring thoroughly enough, and discharging near the village domestic sewage outfall line without knowing the exact configuration of each pipe and terminus.

After the 2017 inspection, the facility received a Compliance Letter for not implementing employee training to keep foreign materials out of the discharge and for allowing catch transfer water to discharge onto the dock and into the receiving water during product transfer. Trident responded that they planned to build a catchment extending off the dock sorting tables to capture contact water resulting from fish transfer and send it to the wastewater conveyance system for treatment and discharge. Trident planned to implement a prototype catchment before the start of the 2018 halibut season. The catchment was never implemented.

After the 2022 inspection, the facility received a Notice of Violation for failing to monitor for several required parameters, exceeding WQS in a FC sample, using expired reagent for TRC analysis, exceeding the allowed waste grind size, not logging sample collection and analysis times, not having an updated QAPP for the general permit, and having a floor drain in the shipping room flowing to the main sump without treatment. Trident responded that all drains in the Maintenance Shop and Storage Bay would be sealed before processing resumed.

Consent Decree

In 2012, a Consent Decree (CD) was entered between EPA and Trident negotiated to avoid litigation over alleged violations of the Clean Water Act (CWA) and National Pollutant Discharge Elimination System (NPDES) permits at fourteen of the company’s Alaskan facilities. The alleged violations at the Saint Paul facility pertained to unpermitted discharges, failure to collect effluent samples, failure to perform biological and shoreline monitoring, accumulation of seafood processing waste and waste residues on the seafloor, failure to submit complete or accurate monthly reports, and failure to respond to a CWA Section 308 Request for Information.

The CD ordered that, beginning in 2014, Trident cease discharging seafood processing waste residues greater than 1 mm in any dimension from May 1 to December 1. The CD also ordered that Trident monitor outfall discharge from May 1 to December 1 monthly for ammonia, BOD, COD, FC, metals, number of processing days, O&G, TOC, total phosphorus, and TSS; weekly for pH and temperature; and daily for flow, pounds of waste processed, and observations of marine mammals and sea birds

near the outfall. Finally, the CD ordered that Trident perform a dive survey at the outfall terminus annually to determine the areal extent of any deposits from seafood processing waste on the seafloor.

Seafloor Monitoring

The most recent seafloor monitoring survey, conducted on July 8, 2022, did not show any seafood waste or *Beggiatoa* on the seafloor. The same was true of the seven previous annual surveys.

4.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

4.1 Basis for Permit Effluent Limits

The CWA requires that the limits for a particular pollutant be the more stringent of either technology-based effluent limits (TBELs) or water quality-based effluent limits (WQBELs). TBELs are set according to the level of treatment that is achievable using available technology. EPA established ELGs for the Canned and Preserved Seafood Processing Point Source Category in 40 CFR Part 408. A WQBEL is designed to ensure that the WQS, 18 AAC 70 as amended June 26, 2003, are met for the waterbody as a whole. WQBELs may be more stringent than TBELs. A more extensive discussion providing the basis for the effluent limits in the permit is provided in APPENDIX B.

4.2 Basis for Effluent and Receiving Water Monitoring

In accordance with AS 46.03.110(d), the Department may specify in a permit the terms and conditions under which waste material may be disposed. Monitoring in a permit is required to determine compliance with effluent limits but may also be required to gather effluent and receiving water data to determine whether additional effluent limits are required and/or to monitor effluent impacts on the receiving waterbody quality.

4.3 General Requirements

4.3.1 Flow Meters

Mixing zone modeling requires certain parameter inputs (e.g., outfall depth, waterbody hydrodynamics, pollutant loading, flow, etc.) to assess mixing behavior and plume geometry. In order to accurately model environmental impacts as well as fully disclose all wastewaters discharged at the facility, the permittee needs to monitor the flow volumes to accurately determine pollutant loading for the outfall.

4.3.2 Outfall System Requirements

The permit includes a new requirement to conduct a pre-installation biological survey prior to outfall replacement or movement. The survey must demonstrate that the proposed outfall placement will not result in discharge into “living substrate.” The surveyor is required to report ambient tidal current velocity and direction and the water chemistry on the survey day, including salinity, water temperature, density, turbidity, dissolved oxygen (DO), and pH. These parameters should be taken on the day the survey is performed at the proposed outfall terminus location and depth, as a grab sample or in-situ probe sampling. For grab sampling at depth, a Van Dorn sampling bottle can be used to obtain water samples. The survey report should also contain seasonal data, if known.

The permit requires regular outfall system(s) inspections. These inspections may be performed with any number of techniques, such as pressure testing, dye testing, or visual, remotely operated vehicle, or diver inspection.

4.3.3 Waste Treatment System Inspection

The permit requires daily visual inspection of the discharge system. The permit prohibits the discharge of gloves, earplugs, rubber bands, or other equipment used during seafood processing that may be inadvertently entrained in the wastewater. Logs of daily inspections shall be kept at the facility and made available to DEC upon request.

The permit requires maintaining a written log of corrective actions taken on the solids recovery system(s) and occurrences of wastewater overflows, bypass incidents, and other operational problems. Examples of corrective actions include screening system improvements, such as upstream removal of solids, or pump speed adjustments.

4.3.4 Monitoring and Reporting Requirements

Where sampling is required, the permittee must use a sufficiently sensitive EPA-approved test method that quantifies the 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).

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 unless approved by the Department prior to use.

The permit continues the requirement to monitor for “residues.” Residues include floating and suspended solids, debris, foam, and scum and may cause a film, sheen, or discoloration on the water surface or cause a sludge, solid, or emulsion to be deposited upon adjoining shorelines or seafloor. The permit contains limits that are based on WQBELs. In compliance with 18 AAC 70.020(b)(20), the permittee shall not discharge effluents that cause a foam, film, sheen, scum, or deposit to form on the surface of the receiving water; the adjacent shoreline; or the structures, vessels, or vessel moorages of the adjacent harbors. The permit requires recording the occurrence and extent (size and presence, or “none”) of films, foam, scum, discoloration, or sheens on the sea surface and shoreline monitoring log.

4.3.5 Discharge Monitoring Report (DMR)

The permit requires that monitoring results be recorded on a DMR and submitted monthly. Copies shall be kept at the facility and made available to DEC upon request.

4.4 Effluent Limits and Monitoring Requirements

The following summarizes the effluent limits contained in the permit (see APPENDIX B for more details).

4.4.1 Outfall 001A Effluent Limits and Monitoring (Table 3 and Table 4)

The previous permit required that Trident monitor Outfall 001A for BOD, COD, TSS, total phosphorus, ammonia, temperature, pH, O&G, TRC, flow, and TOC at two-week intervals during crab processing and once per species (only in 2001) for other processing. The permit

required that Trident monitor Outfall 001A for metals and volatile organic compounds (VOCs) once during crab season, in 2001 only. The Consent Decree increased the required monitoring, from May 1 to December 1, to monthly for ammonia, BOD, COD, FC, metals, O&G, TOC, total phosphorus, and TSS; weekly for pH and temperature; and daily for flow.

The Department determined that it is appropriate for this permit to require effluent monitoring in accordance with the Consent Decree requirements and to require metals monitoring monthly or until ten samples are collected that demonstrate no exceedances of the WQS. DEC will reevaluate whether monitoring for VOCs is necessary based on TRC results collected during this permit term.

DEC has changed the BOD, COD, TOC, total phosphorus, and TSS sample type from a grab sample to a composite sample. One grab sample is not sufficient to represent the variations in the effluent stream for these conventional organic pollutants. Composite sampling is described in the *Standard Methods for the Examination of Water and Wastewater*, Part 1060B.

Table 3: Outfall 001A 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	Report	Report	Daily	Measured
Biochemical Oxygen Demand (BOD ₅)	mg/L	N/A	Report	Report	1/Month	Composite ^c
Chemical Oxygen Demand (COD)	mg/L	N/A	Report	Report	1/Month	Composite ^c
Total Organic Carbon (TOC)	mg/L	N/A	Report	Report	1/Month	Composite ^c
Total Phosphorus	mg/L	N/A	Report	Report	1/Month	Composite ^c
Total Suspended Solids (TSS)	mg/L	N/A	Report	Report	1/Month	Composite ^c
Oil and Grease (O&G)	mg/L	N/A	Report	Report	1/Month	Grab
Total Ammonia, as N	mg/L	N/A	Report	Report	1/Month	Grab
Fecal Coliform (FC) ^d	FC/100 mL	N/A	Report	Report ^e	1/Month	Grab
pH	SU	6.5	8.5	N/A	1/Week	Grab
Total Residual Chlorine (TRC)	mg/L	N/A	0.013 ^f	0.0075 ^f	1/Week	Grab
Temperature	°C	N/A	Report	Report	1/Week	Grab

Footnotes:

- a. Units: mgd = million gallons per day, mg/L = milligrams per liter, SU = standard units, °C = degrees Celsius.
- b. Daily flow recorded shall be the totalized 24-hour flow meter reading.
- c. 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.
- d. DEC may grant a waiver from fecal coliform monitoring if the permittee can demonstrate that, through all shipping attempts during the first full year after starting to discharge under the permit, the samples cannot arrive within required hold times.
- 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 $(100 \times 200 \times 300)^{(1/3)} = 181.7$
- f. Chlorine monitoring is required only if used as a disinfectant or introduced elsewhere in the seafood processing area. The TRC effluent limits are not quantifiable using EPA-approved analytical methods. DEC will use the minimum level (ML) of 0.1 mg/L as the compliance evaluation level for this parameter.

Table 4: Outfall 001A Metals Monitoring Requirements

Parameter	Effluent Limits			Monitoring Requirements		
	Units ^a	Daily Minimum	Daily Maximum	Monthly Average	Sample Frequency ^b	Sample Type
Arsenic, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Copper, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Zinc, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Silver, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Cadmium, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Lead, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Nickel, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Selenium, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab
Mercury, Total Recoverable	µg/L	N/A	Report	Report	1/Month	Grab

Footnotes:

- a. Units: µg/L = micrograms per liter.
- b. The permittee may request in writing that monitoring frequencies be reduced or eliminated for these parameters after ten sample analyses are reported 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.

4.5 Effluent Monitoring

4.5.1 Routine Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. The permittee has the option of taking more frequent samples than required under the permit. These additional samples shall be used 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(f)]). All limits that require averaging measurements shall be calculated using an arithmetic mean unless the Department specifies another method in the permit.

4.6 Receiving Waterbody Limits and Monitoring Requirements

4.6.1 Water Quality Monitoring

The previous permit required Trident to carry out ambient water quality monitoring for DO, O&G, total phosphorus, nitrate, BOD, settleable solids, ortho-phosphate, salinity, temperature, ammonia, TOC, TSS, total Kjeldahl nitrogen, and pH at nine locations in the outfall vicinity and beyond. DEC does not have data available from that monitoring, nor from the sediment chemistry and benthic monitoring that was required in 2001. This permit requires ambient water quality monitoring twice per year (for DO, temperature, pH, and salinity) at three locations up to 1,000 feet from the outfall terminus and at one reference location to verify that the discharge is not degrading the oxygen available to aquatic life in the water column.

Table 5: Ambient Receiving Water (ARW) Monitoring

Parameter	Monitoring Requirements		
	Units ^a	Frequency ^{b, c}	Reporting Requirement
Dissolved Oxygen (DO)	mg/L	2 per year	Annual Report
Temperature	°C	2 per year	Annual Report
pH	SU	2 per year	Annual Report
Salinity	ppt	2 per year	Annual Report
Footnotes:			
a. Units: mg/L = milligrams per liter, °C = degrees Celsius, SU = standard units, ppt = parts per thousand.			
b. Monitoring must occur once January – March and once June - September. Monitoring during each specified time period is only required if discharge under the permit occurs for at least 24 hours during that period.			
c. The monitoring schedule may be adapted during the permit term if approved under Permit Part 1.6.5.			

4.6.2 Zone of Deposit and Seafloor Monitoring

A ZOD is defined as a limited area where substances may be allowed to be deposited on the seafloor of marine waters. In accordance with state regulations at 18 AAC 70.210, the Department may issue a permit that allows a deposit of substances on the seafloor of marine waters within set limits. The previous permit did not authorize a ZOD, and neither does this permit, so the water quality criteria (WQC) in 18 AAC 70.020(b) for marine residues must be met at every point around the outfall terminus.

In accordance with the Consent Decree, this permit requires annual surveys of the seafloor to determine compliance with the WQS for settleable residues in marine waters. If the previous survey shows no detectable seafood waste, the required survey frequency drops to every four years. As described in Part 3.0, surveying since 2015 has not shown any violation of the WQS for residues.

Table 6: Seafloor Monitoring Schedule

Survey Type ^a	Survey Frequency and Requirements
Initial Seafloor Survey	Performed within 60 days of discharging 168 hours cumulatively during a 12-month period
<u>Additional Seafloor Survey</u> If no detectable seafood processing waste is found in the most recent previously completed seafloor survey	Performed every four years
<u>Annual Seafloor Surveys</u> If detectable seafood processing waste is found in the most recent previously completed seafloor survey ^b	Surveys performed annually Evaluation of source control and remediation options developed once
<p><u>Notes:</u></p> <p>a. The seafloor surveys must be performed as established in the Permit Appendix E Seafloor Survey protocol, or with other Department-approved methodologies.</p> <p>b. The permit does not authorize a zone of deposit. If a deposit is found to be above detectable in any 3-foot by 3-foot square sample plot within the mapped survey area, annual seafloor surveys and an evaluation of source control and remediation options are required until the deposit is no longer detectable.</p>	

4.6.3 Sea Surface and Shoreline Monitoring

The previous permit required daily observations of the sea surface and shoreline for the presence of wastes and for marine mammals and/or seabirds interacting with discharges. This permit continues that requirement. The permit requires the facility's observer to be located at an area from which they can see the sea surface area above the outfall terminus. The observer should also be able to see the shoreline areas of the processing facility's seaward boundaries (encompassing a minimum of 100 feet to either side of the parcel lines and including docks and piers) while a seafood wastewater discharge is occurring. The purpose of the monitoring is to record the occurrence and extent of films, foam, scum, discoloration, or sheens (18 AAC 70.020(b)(20)).

The permittee must submit a summary of sea surface and shoreline residues noncompliance occurrences (observations of films, foams, scum, discolorations, or sheens) with the Annual Report.

5.0 RECEIVING WATERBODY

5.1 Description of Receiving Waterbody

5.1.1 Nature of the Bering Sea

The Pribilof Islands are located on the Bering Sea shelf approximately 300 miles southwest of mainland Alaska. Saint Paul and Saint George Islands are the largest land masses in the Pribilofs.

Shorelines are dominated by high bedrock cliffs, low bluffs, rock platforms, sand beaches, and mixed sand and gravel beaches. The port area at Saint Paul contains large protective riprap.

5.1.2 Climate

The Saint Paul Island climate is arctic maritime, with cool and overcast weather most of the year.

5.1.3 Water Column

The Pribilof Islands nearshore coastal waters have a hydrographic front present around Saint Paul Island. Discharges from the facility are taken by tidal currents in a clockwise direction southwest around Reef Point and then north-northeast from the coast of the island. Local tidal currents reach approximately 1.0 knot, and wave conditions range from calm to 25 feet. Since the shorelines are exposed to high wave conditions, shoreline sensitivities are generally low but ecological sensitivity can be high.

Current observations show that the flow around the island decreases in strength with distance away from shore. There are also occurrences of current reversals caused by strong wind events.

There are no streams on the Pribilofs.

5.2 Water Quality Standards

Regulations in 18 AAC 70 require that the conditions in permits ensure compliance with the WQS. The state's WQS are composed of use classifications, numeric and/or narrative WQC, and an Antidegradation Policy. The use classification system identifies the designated uses that each waterbody is expected to achieve. The numeric and/or narrative WQC are the criteria deemed necessary by the state to support the designated use classification of each waterbody. The Antidegradation Policy ensures that the existing uses and the level of water quality necessary to protect the uses are maintained and protected.

Waterbodies in Alaska are designated for all uses unless the water has been reclassified under 18 AAC 70.230 as listed under 18 AAC 70.230(e). Some waterbodies in Alaska can also have site-specific WQC per 18 AAC 70.235, such as those listed under 18 AAC 70.236(b).

The receiving water for the proposed discharge, Bering Sea, has not been reclassified, nor have site-specific WQC been established. Accordingly, the Bering Sea must be protected for all marine use classes listed in 18 AAC 70.020(a)(2). These marine water designated use classes consist of the following: water supply for aquaculture, seafood processing, and industrial; water recreation for contact and secondary recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife; and harvesting for consumption of raw mollusks or other raw aquatic life.

5.3 Water Quality Status of Receiving Water

Any part of a waterbody for which the water quality does not or is not expected to meet applicable WQS is defined as a "water quality limited segment" and placed on the state's impaired waterbody list. Section 303(d) of the CWA requires states to develop a Total Maximum Daily Load (TMDL) management plan for a waterbody determined to be water quality limited. The TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's WQS and allocates that load to known point sources and nonpoint sources.

The Bering Sea is not listed as an impaired water.

5.4 Mixing Zone Analysis

In accordance with state regulations at 18 AAC 70.240, the Department has authority to authorize a mixing zone in a permit. No mixing zones are authorized in the permit.

6.0 ANTIBACKSLIDING

Regulations at 18 AAC 83.480 require that "effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit." Also, 18 AAC 83.480(c) states that a permit may not be reissued "to contain an effluent limitation that is less stringent than required by effluent guidelines in effect at the time the permit is renewed or reissued."

All permit effluent limits, standards, and conditions in the permit are at least as stringent—if not more so—as in the previously issued permit and are consistent with 18 AAC 83.480. Accordingly, no backsliding analysis is required for this permit issuance.

7.0 ANTIDegradation

Section 303(d)(4) of the CWA states that, for waterbodies where the water quality meets or exceeds the level necessary to support the waterbody's designated uses, WQBELs may be revised as long as the revision is consistent with the state's Antidegradation policy. The state's Antidegradation policy is found in the 18 AAC 70 WQS regulations at 18 AAC 70.015. The Department's approach to implementing the Antidegradation policy is found in 18 AAC 70.016, *Antidegradation implementation methods for discharges authorized under the federal Clean Water Act*. Both the Antidegradation policy and the implementation methods are consistent with 40 CFR §131.12 and approved by EPA. This Part analyzes and provides rationale for the Department's decisions in the permit issuance with respect to the Antidegradation policy and implementation methods.

Using the policy and corresponding implementation methods, the Department determines a Tier 1 or Tier 2 classification and protection level on a parameter by parameter basis. A Tier 3 protection level applies to a Tier 3 designated water. At this time, no Tier 3 waters have been designated in Alaska.

Regulatory requirements of 18 AAC 70.015(a)(1) state that the existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected (Tier 1 protection level).

The Bering Sea is not designated as an impaired waterbody. This antidegradation analysis conservatively assumes that the Tier 2 protection level applies to all parameters, consistent with 18 AAC 70.016(c)(1).

The state's Antidegradation policy in 18 AAC 70.015(a)(2) states that if the quality of water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected, unless the Department authorizes a reduction in water quality (Tier 2 protection level).

The Department may allow a reduction of water quality only after the specific analysis and requirements under 18 AAC 70.016(b)(5)(A-C), 18 AAC 70.016(c)(7)(A-F), and 18 AAC 70.016(d) are met. The Department's findings are as follows:

18 AAC 70.016(b)(5)

(A) existing uses and the water quality necessary for protection of existing uses have been identified based on available evidence, including water quality and use related data, information submitted by the applicant, and water quality and use related data and information received during public comment;

(B) existing uses will be maintained and protected; and

(C) the discharge will not cause water quality to be lowered further where the department finds that the parameter already exceeds applicable criteria in 18 AAC 70.020(b), 18 AAC 70.030, or 18 AAC 70.236(b).

Per 18 AAC 70.020 and 18 AAC 70.050, all marine waters, including the Bering Sea, are protected for all uses; therefore, the most stringent WQC found in 18 AAC 70.020 and in the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances* (DEC 2008) apply and were evaluated. The evaluation ensures existing uses and the water quality necessary for protection of existing uses of the receiving waterbody are fully maintained and protected.

The permit places limits and conditions on the discharge of pollutants. The limits and conditions are established after comparing TBELs and WQBELs and applying the more restrictive of those limits. The WQC, upon which the permit effluent limits are based, serve the specific purpose of protecting the existing and designated uses of the receiving water. WQBELs are set equal to the most stringent WQC available for any of the protected water use classes. The permit also requires ambient water quality monitoring to evaluate possible impacts to the receiving waters and existing uses.

Pollutants of concern in seafood waste are primarily the biological wastes generated by processing raw seafood into a marketable form, along with chemicals used for processing or for cleaning processing equipment and fish containment structures in order to maintain sanitary conditions. Biological wastes are primarily seafood parts: heads, fins, bones, entrails, skins, blood, and shells. The chemicals used for cleaning are primarily disinfectants, which shall be used in accordance with EPA specifications. Refrigerant used is generally ammonia. The natural fish waste degradation process also creates ammonia pollutant loading. Monitoring for ammonia is required to evaluate whether WQS are being met.

The permit includes numeric or narrative effluent limits addressing each of the pollutants of concern. The permit also requires the facility to implement a BMP Plan to minimize the production of waste and the discharge of pollutants to waters of the U.S., to ensure that the facility provides for the protection or attainment of existing and designated uses. Trident Saint Paul has an existing BMP Plan, and it is updated as necessary to reflect current conditions at the facility.

The BMP Plan reflects current facility equipment, processes, operations, and outfalls in accordance with Permit Part 2.2 to ensure that the amount of discharged waste and pollutants is minimized. The facility must grind or screen all seafood processing waste streams. Management staff and employees are trained on appropriate waste disposal and permit requirements. Key employees are properly trained to ensure that monitoring procedures in Permit Part 1.5 and Permit Part 1.6 are adhered to and quality assurance requirements in Permit Part 2.1 are met. The facility also coordinates with fishermen and tender boats (who offload product at the dock) prior to and during the season to ensure that WQS for residues are not exceeded.

Permit Part 1.4.2.1 requires that discharges shall not cause or contribute to a violation of the WQS at 18 AAC 70.

The permit does not implement a ZOD under 18 AAC 70.210 nor a mixing zone under 18 AAC 70.240.

The Department concludes that the terms and conditions of the permit will be adequate to fully protect and maintain the existing uses of the water and that the findings under 18 AAC 70.016(b)(5) are met.

18 AAC 70.016(c)(7)(A –F) If, after review of available evidence, the Department finds that the proposed discharge will lower water quality in the receiving water, the Department will not authorize a discharge unless the Department finds that:

18 AAC 70.016(c)(7)(A) the reduction of water quality meets the applicable criteria of 18 AAC 70.020(b), 18 AAC 70.030, or 18 AAC 70.236(b), unless allowed under 18 AAC 70.200, 18 AAC 70.210, or 18 AAC 70.240.

As previously stated, Permit Part 1.4.2.1 requires that the discharge shall not cause or contribute to a violation of the WQS at 18 AAC 70. WQBELs are set equal to the most stringent WQC available under 18 AAC 70.020(b) for any of the protected water use classes. Because of the nature of the permitted discharges, other pollutants are not expected to be present in the discharges at levels that would cause, have the reasonable potential to cause, or contribute to an exceedance of any Alaska WQS, including the whole effluent toxicity limit at 18 AAC 70.030. Site-specific criteria as allowed by 18 AAC 70.235 have not been established for the Bering Sea; therefore, 18 AAC 70.236(b) is not applicable.

The permit does not authorize a short-term variance under 18 AAC 70.200; therefore, a finding under this section does not apply.

Sea surface monitoring data dating back several years has shown that, in general, the marine environment around and nearby the outfall quickly disperses wastewater.

The Department concludes that the reduction in water quality will not violate the WQS of 18 AAC 70.020, 18 AAC 70.235, or 18 AAC 70.030 and that the finding under 18 AAC 70.016(c)(7)(A) is met.

18 AAC 70.016(c)(7)(B) each requirement under (b)(5) of this section for a discharge to a Tier 1 water is met;

See 18 AAC 70.016(b)(5) analysis and findings above.

18 AAC 70.016(c)(7)(C) point source and state-regulated nonpoint source discharges to the receiving water will meet requirements under 18 AAC 70.015(a)(2)(D); to make this finding the department will:

- i. Identify point sources and state-regulated nonpoint sources that discharge to, or otherwise impact, the receiving water; and
- ii.
 - a. Consider whether there are outstanding noncompliance issues with point source permits or required state-regulated nonpoint source best management practices;
 - b. Consider whether receiving water quality has improved or degraded over time; and
 - c. If necessary and appropriate, take actions that will achieve the requirements of 18 AAC 70.015(a)(2)(D); and
- iii. Coordinate with other state or federal agencies as necessary to comply with (i) and (ii) of this subparagraph.

(i) & (ii-1st bullet) The Department reviewed available information on known point source discharges to the Bering Sea receiving waters, which include the Village of Saint Paul Wastewater Treatment Facility and Trident Saint Paul (which is subject to the terms of an EPA Consent Decree negotiated due to CWA violations). There are no regulated nonpoint sources that discharge to, or otherwise impact, the receiving waters covered under the permit.

(ii-2nd bullet) As previously discussed, Trident installed a screen house and rotary screen at the facility in 2015 for wastewater treatment May through November. Therefore, the operator has improved the water quality over time.

(ii- 3rd bullet) The requirements under 18 AAC 70.015(a)(2)(D) state:

(D) all wastes and other substances discharged will be treated and controlled to achieve

(i) for new and existing point sources, the highest statutory and regulatory requirements; and

(ii) for nonpoint sources, all cost-effective and reasonable best management practices;

The highest statutory and regulatory requirements are defined at 18 AAC 70.015(d):

(d) For purposes of (a) of this section, the highest statutory and regulatory requirements are

(1) any federal technology-based effluent limitation identified in 40 C.F.R. 122.29 and 125.3, revised as of July 1, 2017 and adopted by reference;

(2) any minimum treatment standards identified in 18 AAC 72.050;

(3) any treatment requirements imposed under another state law that is more stringent than a requirement of this chapter; and

(4) any water quality-based effluent limitations established in accordance with 33 U.S.C. 1311(b)(1)(C) (Clean Water Act, sec. 301(b)(1)(C)).

The first part of the definition includes all federal technology-based ELGs. The permit requirements comply with the ELGs established in 40 CFR Part 408, Canned and Preserved Seafood Processing Point Source Category (adopted by reference at 18 AAC 83.010(g)). The ELGs require seafood processing wastes to be less than 0.5-inch in all dimensions prior to discharge. The permit applies this as well as a more stringent standard for May - November (requiring treatment of all seafood processing waste and wastewater to 0.5 mm or less).

The second part of the definition references the minimum treatment standards found at 18 AAC 72.050, which refers to domestic wastewater discharges only. The permit does not authorize the discharge of domestic wastewater, as the permittee routes domestic wastewater to the Village of Saint Paul Wastewater Treatment Facility. Therefore, a finding under this section is not applicable.

The third part of the definition refers to treatment requirements imposed under another state law. State regulations that apply to this permitting action include 18 AAC 70 and 18 AAC 72. The permit requires discharge to comply with WQS (18 AAC 70) and to comply with non-domestic waste and wastewater system requirements found in 18 AAC 72. The Department is not aware of more stringent requirements in other state laws.

The fourth part of the definition refers to WQBELs. A WQBEL is designed to ensure that the WQS of a waterbody are met. Section 301(b)(1)(C) of the CWA requires the development of permit limits necessary to meet WQS. Accordingly, the permit includes effluent limits for pH and TRC, along with monitoring for other pollutants of concern.

(iii) As discussed in Part 9.2, DEC has coordinated and will continue to coordinate with other state or federal agencies as necessary to comply with (i) and (ii).

After review of the methods of treatment and control and the applicable statutory and regulatory requirements, including 18 AAC 70, 18 AAC 72, and 18 AAC 83, the Department finds that the discharge authorized under this permit meets the highest applicable statutory and regulatory requirements; therefore, the 18 AAC 70.016(c)(7)(C) finding is met.

18 AAC 70.016(c)(7)(D)(i-ii) the alternatives analysis provided under (4)(C-F) of this subsection demonstrates that

(i) a lowering of water quality under 18 AAC 70.015(a)(2)(A) is necessary; when one or more practicable alternatives that would prevent or lessen the degradation associated with the proposed discharge are identified, the department will select one of the alternatives for implementation; and

(ii) the methods of pollution prevention, control, and treatment applied to all waste and other substances to be discharged are found by the department to be the most effective and practicable;

This permit does not authorize a lowering of water quality through a mixing zone or a ZOD. Therefore, an alternatives analysis under 18 AAC 70.016(c)(7)(D) is not required.

18 AAC 70.016(c)(7)(E) except if not required under (4)(F) of this subsection, the social or economic importance analysis provided under (4)(G) and (5) of this subsection demonstrates that a lowering of water quality accommodates important social or economic development under 18 AAC 70.015(a)(2)(A);

This permit does not authorize a lowering of water quality through a mixing zone or a ZOD. Therefore, an economic justification under 18 AAC 70.016(c)(7)(E) is not required.

18 AAC 70.016(c)(7)(F) 18 AAC 70.015 and this section have been applied consistent with 33 U.S.C. 1326 (Clean Water Act, sec. 316) with regard to potential thermal discharge impairments.

Discharges authorized under the permit are not associated with a potential thermal discharge impairment; therefore, the finding under 18 AAC 70.016(c)(7)(F) is not applicable.

8.0 OTHER PERMIT CONDITIONS

8.1 Quality Assurance Project Plan (QAPP)

The permittee is required to develop procedures to ensure that the monitoring data submitted are accurate and to explain data anomalies if they occur. The permittee is required to develop or update and implement the QAPP within 60 days of the final permit effective date. The QAPP shall consist of standard operating procedures the permittee must follow for collecting, handling, storing, and shipping samples; laboratory analysis; precision and accuracy requirements; data reporting, including method detection/reporting limits; and quality assurance/quality control criteria. The permittee is required to amend the QAPP whenever any procedure addressed by the QAPP is modified. The current QAPP shall be retained onsite and made available to the Department upon request.

8.2 Best Management Practices Plan

In accordance with AS 46.03.110(d), the Department may specify in a permit the terms and conditions under which waste material may be disposed. This permit requires the permittee to develop a BMP Plan in order to prevent or minimize the release and potential for the release of pollutants to waters of the U.S. The permit contains certain BMP conditions that must be included in the BMP Plan. The permit requires the permittee to develop or update and implement the BMP Plan within 60 days of the final permit effective date. The plan shall be reviewed annually, be updated as necessary, be retained onsite, and be made available to the Department upon request.

8.3 Annual Report

The permit requires the permittee to complete and submit an Annual Report which compiles effluent and environmental monitoring data and reports permit violations, upset conditions, by-pass conditions, and corrective actions undertaken to improve wastewater treatment and pollution prevention at the facility. The Annual Report provides a comprehensive record of wastewater discharge at the facility and its effect on the receiving water.

The permit includes a new requirement that the Annual Report provide a summary of any occurrences of leaks or breaks in the refrigeration/freezer systems that led to discharges to receiving waters. Discharging purged refrigerants untreated is prohibited. A recent review of processors statewide has revealed improper handling and discharge of these substances, and DEC wishes to collect further information. Discharging these compounds can cause extreme shifts in pH in the receiving water and can exert stress on or cause mortality to aquatic life (EPA, 1975). Due to similar concerns about impacts on receiving water quality, the permit also requires the permittee to provide 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.

8.4 Electronic Reporting

E-Reporting Rule - Phase I (DMRs). The permittee must submit a DMR for each month by the 28th day of the following month. DMRs shall be submitted electronically through NetDMR, per Phase I of the E-Reporting Rule (40 CFR 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 Permit Appendix A – Standard Conditions unless requested or approved by the Department. Any DMR data required by the permit that cannot be reported in a NetDMR field (e.g., receiving water data, etc.), shall be included as an attachment to the NetDMR submittal. DEC has established an e-Reporting Information website at <http://dec.alaska.gov/water/compliance/electronic-reporting-rule>, which contains general information about this reporting format. Training modules and webinars for NetDMR can be found at https://usepa.servicenow.com/oeca_icis.

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 <http://dec.alaska.gov/water/compliance/electronic-reporting-rule> for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports required by the permit shall be submitted in accordance with Permit Appendix A – Standard Conditions.

8.5 Standard Conditions

Permit Appendix A 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 monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements.

9.0 OTHER LEGAL REQUIREMENTS

9.1 Ocean Discharge Criteria Evaluation

Section 403(a) of the CWA, Ocean Discharge Criteria, prohibits issuing a permit under Section 402 of the CWA for a discharge into the territorial sea, the water of the contiguous zone, or the oceans except in compliance with Section 403. Permits for discharges seaward of the baseline of the territorial seas must comply with the requirements of Section 403, which include development of an Ocean Discharge Criteria Evaluation (ODCE). An interactive map depicting Alaska's baseline plus additional boundary lines is available at:

https://alaskafisheries.noaa.gov/mapping/arcgis/rest/services/NOAA_Baseline/MapServer

The map is provided for informational purposes only. The U.S. Baseline Committee makes the official determinations on baseline.

A review of the baseline maps revealed that Trident Saint Paul's discharges are positioned landward of the territorial sea baseline. Therefore, Section 403 of the CWA does not apply to the permit, and an ODCE analysis is not required to be completed for this permit issuance. Further, the permit requires compliance with WQS such that 40 CFR §125.122(b) is met, and therefore the discharge is presumed not to cause unreasonable degradation of the marine environment. An EPA-conducted ODCE analysis from 2008 concluded that the permit should require effluent discharge monitoring and seafloor monitoring to ensure compliance with Alaska WQS. Such monitoring is included in this permit.

9.2 Endangered Species Act

The National Marine Fisheries Service (NMFS) is responsible for administration of the Endangered Species Act (ESA) for listed cetaceans, seals, sea lions, sea turtles, anadromous fish, marine fish, marine plants, and corals. All other species (including polar bears, walrus, and sea otters) are administered by the U.S. Fish and Wildlife Service (USFWS).

The ESA requires federal agencies to consult with NMFS and USFWS if their actions could beneficially or adversely affect any threatened or endangered species. As a state agency, DEC is not required to consult with these federal agencies regarding permitting actions. However, DEC voluntarily contacted the agencies to notify them of the proposed permit issuance and to obtain threatened and/or endangered species or critical habitat near the discharges to the Bering Sea on July 16, 2024. The USFWS directed the Department to consult their Information for Planning and Consultation system (<https://ecos.fws.gov/ipac>) to obtain lists of threatened and endangered species within USFWS jurisdiction in the facility's discharge area. Using this site as well as the National Oceanic and Atmospheric Administration (NOAA) [Alaska Endangered Species and Critical Habitat Mapper Web Application](#), the Department gained an approximate determination that the discharge vicinity may contain endangered whales (bowhead, North Pacific right and gray, sperm, blue, fin, and humpback), endangered Steller sea lions, northern fur seals, threatened Steller's eiders, endangered short-tailed albatross, harlequin ducks, and red-legged kittiwakes. Threatened northern sea otters have been sighted in the area but are not common.

DEC concludes that the localized effluent discharges authorized by this permit will have no effect on the continued existence of the threatened and endangered species near the discharge.

However, it is valuable to record general observations of listed species' interactions with seafood processing wastes, especially since some species have critical habitat around the discharge vicinity. Thus, the permit requires noting observations of listed species as part of the sea surface monitoring program.

This fact sheet and the permit will be submitted to the agencies for review during the public notice period, and any comments received from the agencies will be considered prior to permit issuance.

9.3 Essential Fish Habitat

Essential fish habitat (EFH) includes the waters and substrate (sediments, etc.) necessary for fish from commercially fished species to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires federal agencies to consult with NOAA when a proposed discharge has the potential to adversely affect (reduce quality and/or quantity of) EFH.

As a state agency, DEC is not required to consult with NOAA on EFH; however, DEC voluntarily contacted NOAA to notify them of the proposed permit issuance and to obtain listings of EFH in the area on July 16, 2024. NOAA directed the Department to consult their EFH Mapper at <https://www.habitat.noaa.gov/apps/efhmapper/> to obtain locations of EFH in the area.

Species with major concentrations that spawn in the area include Pacific cod, walleye pollock, Alaska plaice, and Pacific halibut. Several species of crab (bairdi, opilio, and King) also occur in the area.

DEC will provide NMFS with copies of the permit and fact sheet during the public notice period. Any comments received from NMFS regarding EFH will be considered prior to permit issuance.

9.4 Permit Expiration

The permit will expire five years from the effective date of the permit.

10.0 References

1. Alaska Department of Environmental Conservation, 2008. *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances*, as amended through December 12, 2008.
2. Alaska Department of Environmental Conservation, 2014. *Alaska Pollutant Discharge Elimination System (ADPES) Permits Reasonable Potential Analysis and Effluent Limits Development Guide*, June 30, 2014.
3. National Marine Fisheries Service, Office of Habitat Conservation. *Essential Fish Habitat Mapper*. Retrieved from <https://www.habitat.noaa.gov/apps/efhmapper/>.
4. National Oceanographic and Atmospheric Administration, 1998. *Pribilof Islands, Alaska Environmentally Sensitive Areas*. August 1998.
5. U.S. Environmental Protection Agency, 1974. 40 CFR Part 408. *Canned and Preserved Seafood Processing Point Source Category*. June 26, 1974.
6. U.S. Environmental Protection Agency, 1975. *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Fish Meal, Salmon, Bottom Fish, Clam, Oyster, Sardine, Scallop, Herring, and Abalone Segment of the Canned and Preserved Fish and Seafood Processing Industry Point Source Category*. Effluent Guidelines Division, Office of Water and Hazardous Materials. September 1975.
7. U.S. Environmental Protection Agency, 1991. *Technical Support Document for Water Quality-based Toxics Control*. Office of Water Enforcement and Permits, Office of Water Regulations and Standards. Washington DC, March 1991. EPA/505/2-90-001.
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12. U.S. Fish & Wildlife Service, 2011. *Biological Opinion for Approval of the State of Alaska's Mixing Zones Regulation Section of the Alaska Water Quality Standards*. April 25, 2011.
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APPENDIX A. FACILITY INFORMATION

Figure 1: Trident Saint Paul Facility Location

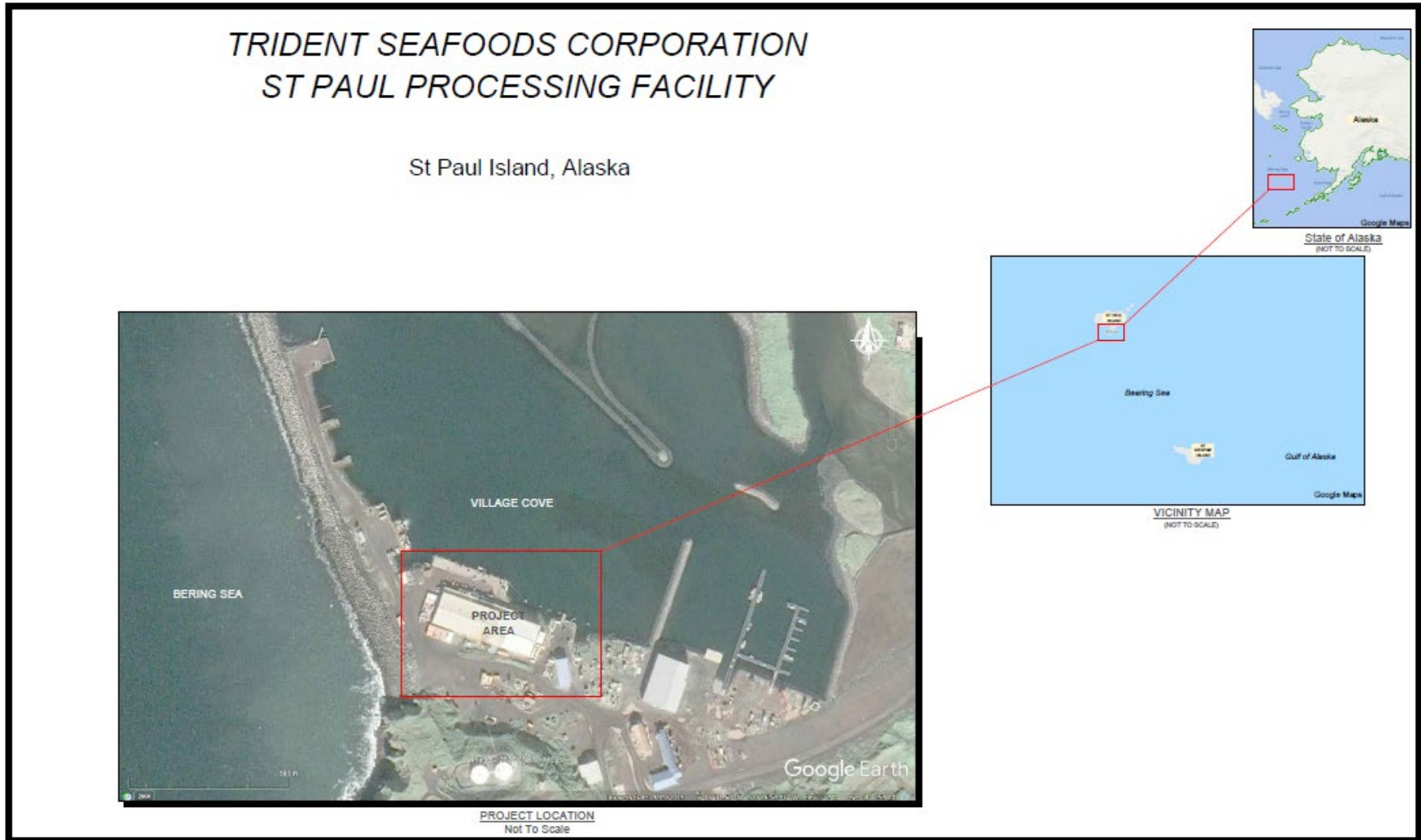
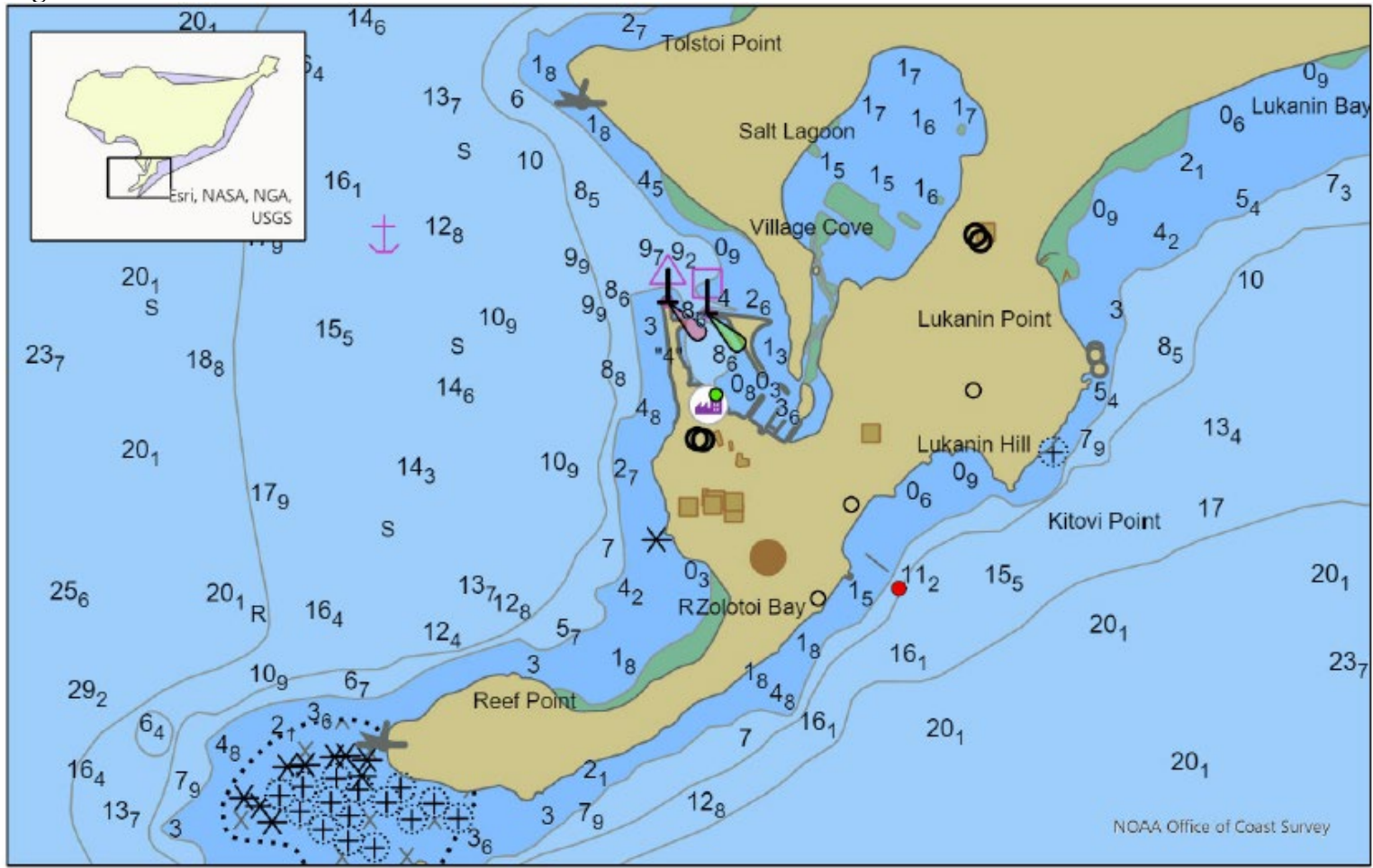


Figure 2: Trident Saint Paul Intake and Outfall Locations



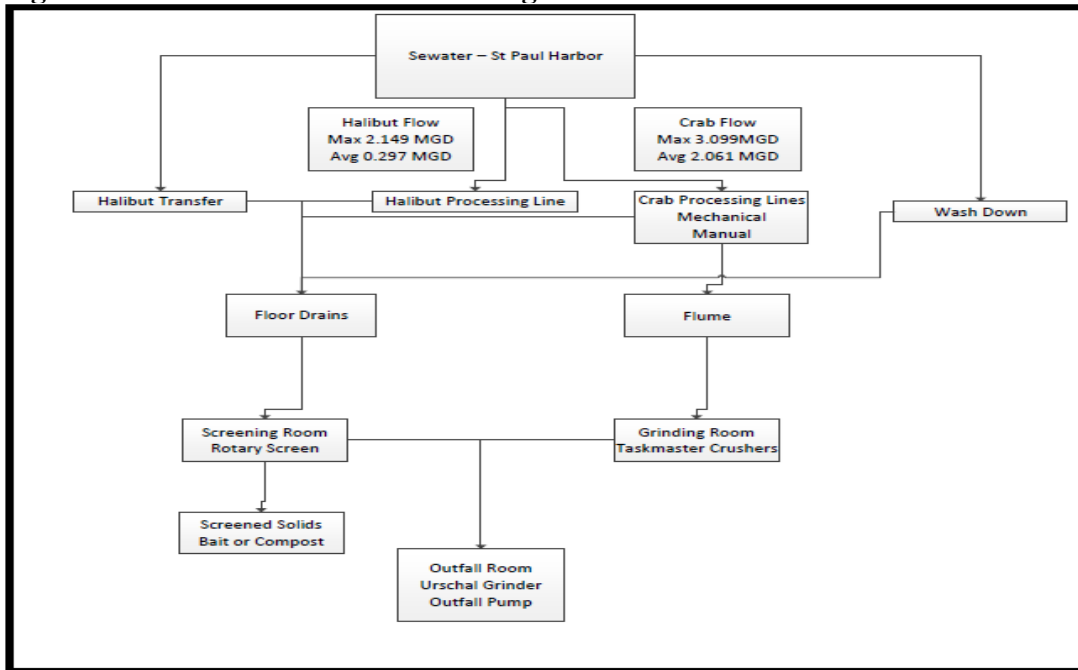
0 0.1 0.2 0.4 0.6 0.8 Nautical Miles

Scale: 1:26,624

Legend

- Trident Property Boundaries
- Trident Intake Locations
- Trident Outfall Locations

Figure 4: Trident Saint Paul Flow Diagram



APPENDIX B. BASIS FOR EFFLUENT LIMITATIONS

The Clean Water Act (CWA) requires seafood processing facilities to meet effluent limits based on available wastewater treatment technology, specifically technology-based effluent limits (TBELs). TBELs are national in scope and establish performance standards for all facilities within an industrial category or subcategory. The Alaska Department of Environmental Conservation (DEC or the Department) may find, by analyzing the effect of an effluent discharge on the receiving waterbody, that TBELs are not sufficiently stringent to meet Water Quality Standards (WQS). In such cases, the Department is required to develop more stringent water quality-based effluent limits (WQBELs), which are designed to ensure that the WQS of the receiving waterbody are met.

In establishing permit limits, the permit writer first determines which TBELs must be incorporated into the permit. When TBELs do not exist for a particular pollutant expected to be in the effluent, the Department must determine whether the pollutant may cause or contribute to an exceedance of a WQS for the waterbody. If a pollutant causes or contributes to an exceedance of a WQS, a WQBEL for the pollutant must be established in the permit.

B.1 Effluent Limitation Guideline

In June 1974, the Environmental Protection Agency (EPA) promulgated an effluent limitation guideline (ELG), 40 CFR Part 408 [adopted by reference at 18 AAC 83.010(g)(3)], for canned and preserved seafood processing point sources. The ELG regulations establish national technology-based effluent performance standards.

The Trident Saint Paul facility is an existing seafood processing facility that processes as described in Part 2.1.2. Accordingly, 40 CFR Part 408 Subparts E, G, and T apply to the discharges. The facility is defined as a remote facility. Thus, the ELG limitation under all applicable Subparts requires that no pollutants be discharged which exceed 1.27 centimeters (0.5 inches) in any dimension. The permit's grinding and screening requirements, implemented per the currently installed technology, are as or more stringent than this ELG.

B.2 Mass-Based Limitations

The regulation at 18 AAC 83.540 requires that effluent limits be expressed in terms of mass, unless they cannot appropriately be expressed by mass, it is infeasible, or the limits can be expressed in terms of other units of measurement. The mass based limits are expressed in pounds per day (lbs/day) and are calculated as follows:

Mass based limit (lbs/day) = pollutant concentration (mg/L) × flow (mgd) × 8.34 lbs/gallon

The permit does not have limits for any parameters that can be expressed in terms of mass.

B.3 Water Quality – Based Effluent Limits

B.3.1 Statutory and Regulatory Basis

Regulations at 18 AAC 70.010 prohibit conduct that causes or contributes to a violation of the WQS. Regulations in 18 AAC 15.090 require that permits include terms and conditions to ensure criteria are met, including operating, monitoring, and reporting requirements.

The regulations require the permitting authority to make this evaluation using procedures that account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and, where appropriate, dilution in the receiving waterbody. The limits must be stringent enough to ensure that WQS are met and must be consistent with any available Waste Load Allocation (WLA).

The CWA requires that the effluent limit for a particular pollutant be the more stringent of either TBELs or WQBELs. TBELs are established by EPA for many industries in the form of ELGs and are based on available pollution control technology. The Department adopts the subject ELGs by reference in 18 AAC 83.010.

B.3.2 Reasonable Potential Analysis (RPA)

When evaluating the effluent to determine whether WQBELs based on chemical-specific numeric water quality criteria (WQC) are needed, the Department projects the receiving waterbody concentration for each pollutant of concern downstream of where the effluent enters the receiving waterbody. The chemical-specific concentration of the effluent and receiving waterbody and, if appropriate, the dilution available from the receiving waterbody are factors used to project the receiving waterbody concentration. If the projected concentration of the receiving waterbody exceeds the WQC for a limited parameter, then there is a reasonable potential (RP) that the discharge may cause or contribute to an excursion above the applicable WQS, and a WQBEL must be developed.

According to 18 AAC 70.990(38), a mixing zone is an area in a waterbody surrounding, or downstream of, a discharge where the effluent plume is diluted by the receiving water. WQC and limits may be exceeded within a mixing zone. A mixing zone can be authorized only when adequate receiving waterbody flow exists and the concentration of the pollutant of concern in the receiving waterbody is below the WQC necessary to protect the designated uses of the waterbody.

B.3.3 Procedure for Deriving Water Quality-Based Effluent Limits

The *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (EPA, 1991) and the WQS recommend the flow conditions for use in calculating WQBELs using steady-state modeling. The TSD, Alaska Pollutant Discharge Elimination System (APDES) guidance, and the WQS state the WQBELs intended to protect aquatic life uses should be based on the lowest seven-day average flow rate expected to occur once every ten years (7Q10) for chronic WQC and the lowest one-day average flow rate expected to occur once every ten years (1Q10) for acute WQC. In marine settings, tidal velocities must be representative of critical conditions as well.

The first step in developing a WQBEL is to develop a WLA for the pollutant. A WLA is the concentration or loading of a pollutant that the permittee may discharge without causing or contributing to an exceedance of WQS or a Total Maximum Daily Load (TMDL) in the receiving waterbody. If a mixing zone is authorized in the permit, the WQS apply at all points outside the mixing zone.

In cases where a mixing zone is not authorized, either because the receiving waterbody already exceeds the WQC, the receiving waterbody flow or tidal velocity and duration is too low to provide dilution, or for some other reason one is not authorized, the WQC becomes the WLA. Establishing the WQC as the WLA ensures that the permittee will not cause or contribute to an exceedance of the WQC. The WQS at 18 AAC 70.020(a) designate standards for beneficial uses

such as water supply; water recreation; and growth and propagation of fish, shellfish, other aquatic life, and wildlife.

B.3.4 Specific Water Quality-Based Effluent Limits

B.3.4.1 Residues

The WQS for marine “floating solids, debris, sludge, deposits, foam, scum, or” other residues are narrative. The most stringent standard, found at 18 AAC 70.020(b)(20)(A)(ii), states that residues “may not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use; cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.” This standard is carried from the previous permit and implemented through seafloor monitoring in Permit Part 1.7 and sea surface and shoreline monitoring in Permit Part 1.8.

B.3.4.2 pH

Alaska WQS at 18 AAC 70.020(b)(18)(A)(i) (aquaculture) and 18 AAC 70.020(b)(18)(C) (Growth and Propagation of Fish, Shellfish, Other Aquatic Life, and Wildlife) state that the pH may not be less than 6.5 or greater than 8.5 SU.

This permit requires pH monitoring, carried forward from the previous permit, and implements WQBELs: a minimum of 6.5 SU and a maximum of 8.5 SU.

B.3.4.3 Total Residual Chlorine

The most stringent WQS for total residual chlorine (TRC) to protect designated uses requires that concentrations may not exceed 13 micrograms per liter ($\mu\text{g/L}$) for acute marine aquatic life and 7.5 $\mu\text{g/L}$ for chronic marine aquatic life [18 AAC 70.020(b)(23)(c)].

These standards are implemented in the permit as end-of-pipe limits. The compliance evaluation level for this parameter is 0.100 mg/L, as the effluent limits are not quantifiable using EPA-approved analytical methods.

B.3.5 Selection of Most Stringent Limitations

B.3.5.1 Waste Particle Dimension

As discussed in Part B.1, the TBEL applicable to the facility’s seafood processing waste discharge is found at 40 CFR Part 408 and requires that pollutants discharged do not exceed 0.5 inch in any dimension. However, as discussed in Part 3.0, the facility’s consent decree requires that all seafood processing waste and wastewater be treated by screening from May – November in order to maintain state water quality. The permit requires that waste and wastewater be screened to 0.5 mm or less during that period, in accordance with currently installed technology. This is more stringent than the TBEL.

B.3.5.2 Parameter Summary

Table B-1 provides a summary and reference to those parameters that contain effluent limits at the point of discharge at the Trident Saint Paul Facility.

Table B- 1: Summary of Effluent Limitations

Parameter	Fact Sheet Reference	Type of Effluent Limit
Residues	APPENDIX B- Part B.3.4.1	Narrative WQBEL, implemented through Best Management Practices (BMPs) and ambient monitoring
pH	APPENDIX B- Part B.3.4.2	WQBEL, implemented at end of pipe
Total Residual Chlorine (TRC)	APPENDIX B- Part B.3.4.3	WQBEL, implemented at end of pipe
Waste Particle Dimension	APPENDIX B- Part B.3.5.1	WQBEL, implemented through in-plant monitoring