



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

**Permit: AK0029459 – Petro Marine Services,  
Wrangell Bulk Fuel Facility**

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Wastewater Discharge Authorization Program  
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Proposed issuance of an Alaska Pollutant Discharge Elimination System (APDES) permit to:

**PETRO MARINE SERVICES**

For wastewater discharges from

**WRANGELL BULK FUEL STORAGE FACILITY**

The Alaska Department of Environmental Conservation (Department or DEC) proposes to reissue APDES individual permit AK0029459 – Petro Marine Services, Wrangell Bulk Fuel Facility (Permit). 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 the facility and the development of the Permit including:

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

## Appeals Process

The Department has both an informal review process and a formal administrative appeal process for final APDES permit decisions. An informal review request must be delivered within 20 days after receiving the Department's decision to the Director of the Division of Water at the following address:

Director, Division of Water  
Alaska Department of Environmental Conservation  
P.O. Box 111800  
Juneau AK, 99811-1800

Interested persons can review 18 AAC 15.185 for the procedures and substantive requirements regarding a request for an informal Department review. See <http://dec.alaska.gov/commish/review-guidance/informal-reviews> for information regarding informal reviews of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department within 30 days of the permit decision or a decision issued under the informal review process. An adjudicatory hearing will be conducted by an administrative law judge in the Office of Administrative Hearings within the Department of Administration. A written request for an adjudicatory hearing shall be delivered to the Commissioner at the following address:

Commissioner  
Alaska Department of Environmental Conservation  
P.O. Box 111800  
Juneau AK, 99811-1800

Interested persons can review 18 AAC 15.200 for the procedures and substantive requirements regarding a request for an adjudicatory hearing. See <http://dec.alaska.gov/commish/review-guidance/adjudicatory-hearing-guidance/> for information regarding appeals of Department decisions.

## 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, application, and other information are also located on the Department's Wastewater Discharge Authorization Program website: <http://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, Suite 310, Juneau, AK 99801 (907) 465-5304	Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 43335 Kalifornsky Beach Road, Suite 11, Soldotna, AK 99615 907-262-5210
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# 1 INTRODUCTION

On January 29, 2019, the Alaska Department of Environmental Conservation (DEC or Department) received an application from Petro Marine Services (PMS), a Division of Petro 49 Inc., for reissuance of Alaska Pollutant Discharge Elimination System (APDES) Individual Permit AK0029459 – PMS, Wrangell Bulk Fuel Facility (Permit). This fact sheet was developed based on the application and supplemental information obtained through the application process.

## 1.1 Applicant

This fact sheet presents information for reissuance of the APDES permit for the following entity:

Name of Facility: Petro Marine, Wrangell Bulk Fuel Facility  
APDES Permit No.: AK0029459  
Facility Location: 1427 Peninsula Street, Wrangell, AK 99929  
Mailing Address: P.O. Box 776, Wrangell, AK 99929  
Facility Contact: Mr. David Simmerman

### Outfall Summary

<u>Discharge Description – Outfall#</u>	<u>Receiving Water</u>	<u>Latitude</u>	<u>Longitude</u>
Tank Farm and Truck Rack - 001	Wrangell Harbor	56° 27' 51.746"	132° 23' 2.928"

See Figure 1 - Vicinity Map and Figure 2 – Site Map.

## 1.2 Authority

The National Pollutant Discharge Elimination System (NPDES) Program regulates the discharge of wastewater to the waters of the United States (U.S.). For waters of the U.S. under jurisdiction of the State of Alaska, the NPDES Program is administered by DEC as the APDES Program. This is the second reissuance of the Permit under authority of the APDES Program.

Clean Water Act (CWA) Section 301(a) and Alaska Administrative Code (AAC) 18 AAC 83.015 provide that the discharge of pollutants to waters of the U.S. is unlawful except in accordance with an APDES permit. The Permit is being developed per 18 AAC 83.115 and 18 AAC 83.120. A violation of a condition contained in the Permit constitutes a violation of the CWA and subjects the permittee of the facility with the permitted discharge to the penalties specified in Alaska Statute (AS) 46.03.760 and AS 46.03.761.

## 1.3 Permit History

In June 1976, Union Oil Company of California (UNOCAL) submitted an application for an NPDES permit authorizing wastewater discharges from an oil-water separator (OWS) from secondary containment areas (SCAs) at the Wrangell bulk fuel terminal (facility). The Environmental Protection Agency (EPA) assigned NPDES Permit Number AK0029459 to the facility but a permit was not issued in response to the 1976 application until Wrangell Oil, Inc. purchased the terminal from UNOCAL. In 2007, EPA reissued the permit to Wrangell Oil, Inc. with an effective date of March 1, 2008 (2008 Permit).

The 2008 Permit expired on February 28, 2013. On January 16, 2013, Wrangell Oil, Inc. submitted an application to DEC for reissuing the 2008 Permit. On March 3, 2014, Harbor Enterprises, Inc. submitted an updated application to the Department on behalf of their

subsidiary, PMS. This was the first reissuance of the Permit under the APDES Program. The first reissuance replaced Technology Based Effluent Limits (TBELS) imposed by EPA based on the assumption effluent would be similar to Ballast Water in lieu of new TBELS based on the working assumption the effluent would more appropriately resemble contaminated runoff from refineries. This working assumption is being reevaluated in this fact sheet using data collected during the term of the 2014 Permit. Note also that the PMS facility currently has a “No Exposure Certificate” for exclusion from the APDES storm water permitting requirements.

The Department received a complete and timely application for reissuance on January 29, 2019 180 days prior to expiration. DEC issued a letter indicating the application was administratively complete and administratively extended the 2014 Permit until it could be reissued.

## 2 BACKGROUND

### 2.1 Facility Information

PMS is located at 1427 Peninsula Street in Wrangell, Alaska, approximately 155 miles south of Juneau. On February 27, 2014, Harbor Enterprises, Inc. submitted a request for a name change and permit transfer from Wrangell Oil, Inc. to PMS. PMS, now owns and operates the bulk petroleum fuel facility located at Wrangell Harbor and sells heating oil, aviation fuel, and gasoline to local commercial and residential customers and provides marine fueling services from a small marina they operate.

The facility receives fuel from barges and distributes product via tanker trucks to local land-based users and refuels vessels moored to their marina. The tank farm consists of a truck rack with impoundment pad, marine dispensary, and nine above ground storage tanks. The above ground tanks are used to store gasoline (Gas), aviation fuel (Jet A), heating oil (HO), and ultra-low sulfur diesel fuel (ULSD). Five of the nine are out-of-service (OS). Table 1 provides a breakdown of the tanks, products stored, nominal shell capacity and the volume of the SCA in million gallons (mg).

**Table 1: Tank Summary for PMS Wrangell Bulk Fuel Facility**

SCA (Outfall #)	Tank #	Product	Shell Capacity (mg)	SCA Volume (mg)
Truck Rack (001)	---	All	---	0.0029
Tank Farm (001)	1A	Gas (Unleaded)	0.0196	0.165
	2A	Gas (Supreme)	0.0196	
	CT-1	OS	--	
	CT-2	OS	--	
	CT-3	OS	--	
	4	Jet A	0.030	
	CT-5	OS	--	
	CT-6	OS	--	
	7	ULSD #2	0.070	
<b>Total In-service Capacity</b>			<b>0.1392</b>	<b>0.1679</b>

Both the tank farm and the truck rack are surrounded by bermed or diked SCAs that collect rain or snowmelt water. The purpose of an SCA is to protect the surrounding environment, including waters of the U.S., from a release of hydrocarbons should a tank or pipe failure occur. SCAs for fuel storage tanks are designed to contain the volume of the largest tank within the SCA and precipitation from a two-year, 24-hour storm event (approximately 110 percent of the largest

tank volume in the SCA) plus freeboard. Water is only discharged from the SCAs if no sheen is detected after inspection. During periods of heavy rain, the diked area surrounding the tank farm is drained two to three times a week for periods of 15 to 30 minutes each. Discharges occur intermittently year-round. The discharge of SCA containment water is to the nearby marine surface waters of Wrangell Harbor located in Zimovia Strait (See Figure 3– Outfall 001).

## 2.2 Facility Performance and Wastewater Characterization

Discharge flows from the designated outfall at the facility typically range from 0.67 to 16,500 gallons per day (gpd) depending on the amount of precipitation the area receives. Table 2 gives a characterization of estimated flows reported under the existing permit from August 2014 through November 2018 for Outfall 001.

**Table 2: Discharge Flows**

Outfall	Year	Total Annual Discharges (mg)	Daily Flow Ranges (gpd) (Low-High; Average)
Outfall 001	2014 <sup>1</sup>	---	---
	2015	0.0012	0 – 168; 102
	2016	0.0111	0 – 2,449; 921
	2017	0.0490	570 – 11,191; 4,085
	2018	0.1640	0 – 21,300; 14,912
Notes:			
1. Values for 2014 not available.			

### 2.2.1 Characterization of Discharge Parameters with Limits

Parameters that had numeric permit effluent limits in the 2014 Permit were examined by reviewing Discharge Monitoring Report (DMR) data from August 2014 through November 2018 and comparing those limits. The parameters that had narrative limitations (i.e., sheen observations) instead of numeric limits were not included in the comparison. The limited parameters reviewed include pH in standard units (su) and oil and grease and total organic carbon (TOC) reported in milligrams per liter (mg/L). Table 3 provides a summary of observed ranges and averages of compliance monitoring results, and a comparison to the existing permit limits expressed in Maximum Daily Limits (MDL) and Average Monthly Limits (AML).

**Table 3: Characterization of Parameters with Limits**

Parameter (Units)	Existing Limit		Observed Range <sup>1</sup> (Low-High, Average)
	MDL	AML	
pH <sup>2</sup> (su)	6.5 < pH < 8.5		<b>5.0 – 7.6, 6.3</b>
Oil and Grease (mg/L)	15	8	< 1.0 – 5.1, 1.48
TOC (mg/L)	110	NA	0.524 – 23.4, 5.30
Notes:			
1. Values that exceed limits are shown in bold.			
2. Median values are used instead of average values for pH.			

### 2.2.2 Characterization of Discharge Parameters Requiring Monitoring Only

Parameters that did not have limits and only required monitoring during the previous permit cycle were evaluated by reviewing DMRs and original analytical laboratory reports from August 2014 through November 2018. The parameters that were required to be monitored in the 2014 Permit but did not have corresponding effluent limits include total

aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH). Table 4 provides a summary of observed ranges and averages of monitoring results in units of micrograms per liter ( $\mu\text{g/L}$ ) and a comparison to water quality criteria where applicable.

**Table 4: Characterization of Parameters Requiring Monitoring Only**

Parameter (units)	Criteria	Observed Range <sup>1</sup> (Low-High; Average)
Annual Flow (mg)	---	0.0012 – 0.1640; 0.0563
TAH ( $\mu\text{g/L}$ )	10	0.50 – 6.92; 1.43
TAqH ( $\mu\text{g/L}$ )	15	0.056 – 7.36; 1.37
Notes:		
1. Values that exceed water quality criteria are shown in bold.		

The water quality parameters TAH and TAqH did not exceed their respective water quality criteria and the results were predominantly below detection, three of 17 results for TAH were detectable while eight of 16 for TAqH were detectable. DEC considers the low averages for TAH and TAqH as an indicator of effluent quality, which resembles that of storm water. Given these low to nondetectable concentrations did not result in exceeding criteria, DEC is not making a determination of reasonable potential or authorizing a mixing zone for TAH and TAqH.

### 2.2.3 Discussion

The overall characterization of the discharge was found to be compliant with limits and well below applicable water quality criteria, with the exception of pH. The permittee conducted both onsite measurements using a field meter as well as submitting to the laboratory. Both sets of pH data had exceedances and seemed to be suspect. For field measurements, the facility operator indicated poor calibration of the pH meter used on-site is suspected and the laboratory results are suspect to be erroneous due to lengthy hold times that can affect pH. Per EPA, changes in pH due to extended hold times greater than 15 minutes can occur and are likely the cause of the elevated levels recorded by the contract laboratory. Although affected by hold times, the laboratory results were used for characterization in Table 3 as these were perceived to be less variable than field measurements. Regardless of cause, there were numerous exceedances for pH during the period of review, spanning several months in 2016, 2017, and 2018.

The flow measurements reported during the period of review appeared to be inconsistent and likely low. DEC attributes these reporting concerns to confusing language in the 2014 Permit that will be clarified during the reissuance of the Permit.

The characteristics of the effluent indicate the facility is discharging high-quality effluent resembling storm water. Specifically, none of the quarterly samples for TAH or TAqH resulted in exceedances. The TBELs, TOC and oil and grease, results were also very low, suggesting the imposition of these limits may not be appropriate for controlling the discharge (See Section 4.1.1 for discussion on TBELs).

## 2.3 Compliance History

### 2.3.1 Limits Exceedances

A review of facility compliance during the previous permit cycle was conducted by comparing compliance monitoring data from DMRs to limits required in the previously issued permit. The comparative review included DMR data from August 2014 through November 2018. Table 5 shows the number of effluent limit exceedances observed during

the term of the 2014 Permit. During the period of review, there were 20 exceedances of pH that is attributable to poor instrument calibration. The permittee was informed of this error and has reportedly upgraded the on-site pH instrument and established procedures to help ensure accurate pH measurements going forward.

**Table 5: Limit Exceedances for Outfall 001 (8/2014 to 11/2018)**

Parameter	Number of Observed Exceedances
pH	20
Oil and Grease	None
TOC	None
TAH	None
TAqH	None

### 2.3.2 Reporting Violations

Non-receipt violations for the period of review consisted of six occurrences whereby incorrect No Data Indicator (NODI) codes were submitted on eDMRs. All six actually referred to the absence of sheen on SCA rain/melt water that was discharged.

## 3 RECEIVING WATERBODIES

### 3.1 Water Quality Standards

Section 301(b)(1)(C) of the CWA requires the development of limits in permits necessary to meet Water Quality Standards (WQS) by July 1, 1977. Regulations in 18 AAC 83.435 require that conditions in permits ensure compliance with WQS. The WQS are composed of waterbody use classifications, numeric and/or narrative water quality criteria, and an Antidegradation policy. The use classification system designates the beneficial uses for each waterbody. The Antidegradation policy ensures that the beneficial uses and existing water quality are maintained.

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 water quality criterion per 18 AAC 70.235, such as those listed under 18 AAC 70.236(b). The Department has determined that there has been no reclassification nor has site specific water quality criteria been established at the location of the permitted facility.

### 3.2 Water Quality Status of Receiving Water

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

Wrangell Harbor is not included in the *Alaska’s Final 2014/2016 Integrated Water Quality Monitoring and Assessment Report*, November 2, 2018 (*2014/2016 Integrated Report*) and therefore not listed as being impaired. Accordingly, no TMDLs have been developed for this waterbody.

## 4 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

### 4.1 Basis for Effluent Limits

The Department prohibits the discharge of pollutants to waters of the U.S. (18 AAC 83.015) unless first obtaining a permit issued by the APDES Program that meets the purposes of AS 46.03 and is in accordance with CWA Section 402. Per these statutory and regulatory provisions, the Permit includes effluent limits that require the discharger to (1) meet standards reflecting levels of technological capability, (2) comply with WQS, (3) and comply with other state requirements that may be more stringent.

The CWA requires that the limits for a particular parameter be the more stringent of either TBEL or water quality-based effluent limits (WQBEL). TBELs are set via EPA-rule makings in the form of Effluent Limitation Guidelines (ELG) and correspond to the level of treatment that is achievable using available technology. In situations where ELGs have not been developed or have not considered specific discharges or pollutants, a regulatory agency can develop TBELs using best professional judgment (BPJ) on a case-by-case basis. A WQBEL is designed to ensure that the WQS codified in 18 AAC 70 are maintained and the waterbody as a whole is protected. WQBELs may be more stringent than TBELs. In cases where both TBELs and WQBELs have been generated, the more stringent of the two limits will be selected as the final permit limit. The Permit contains case-by-case TBELs based on BPJ and two WQBELs set equal to the applicable water quality criteria: a numeric limit for pH and a narrative limit for visual sheen.

#### 4.1.1 Technology Based Effluent Limits (TBELs)

EPA has not established ELGs for bulk storage facilities. The discharge consists of rain and snowmelt accumulated in SCAs that has the potential for hydrocarbon contamination (i.e., contaminated runoff). During the reissuance of the 2014 Permit, DEC conducted a critical evaluation of the preexisting TBELs derived by EPA for chemical oxygen demand, biochemical oxygen demand, and chloride that had been established based on the assumption the wastewater would be similar to ballast water. Based on the analytical results available at the time, DEC concluded discharges from SCAs do not resemble the characteristics of ballast water and DEC replaced these TBELs with ones for oil and grease and TOC based on a new working assumption. The working assumption for the existing TBELs was that the effluent could be similar to contaminated runoff as defined in Chapter 40 Code of Federal Regulations Part 419 - Petroleum Refining Point Source Category (40 CFR 419). After reviewing facility discharge practices and monitoring results, the Department adopted TBELs based on the working assumption that the discharges from the facility could resemble contaminated runoff discharges as described in the following specialized definition from 40 CFR 419.11 Petroleum Refining Point Source Category:

#### **419.11 (g)**

The term *contaminated runoff* shall mean runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property.

To reevaluate the existing TBELs for oil and grease and TOC, DEC reviewed analytical results generated from August 2014 through November 2018 for four similar bulk fuel permits including the PMS Permit. However, one outfall from the U.S. Coast Guard (USCG) Permit has been excluded due to unidentified source contributions that make this discharge an outlier in the statistical evaluation. Overall statistics for TOC and oil and grease for all four permits were compared to those of just the PMS Permit. Table 6 shows

the summary of the statistics used to reevaluate the applicability of the existing TOC TBEL (without USCG Outfall 002) and the summary for the applicability of the oil and grease TBEL.

**Table 6: Statistical Evaluation of TOC in Four Bulk Fuel Permits**

Statistical Parameter	Outfall 001		All Permits	
	TOC	O&G	TOC	O&G
Maximum	23.4	5.10	23.4	8.48
Minimum	0.52	1.00	0.05	1.00
Average	5.30	1.48	3.53	2.73
Standard Deviation	5.36	0.84	3.45	1.66
Coefficient of Variation	1.01	0.57	0.98	0.61
Data Set	51	51	435	483
Detected Data	50	7	391	83
Percent Detected	98%	14%	90%	17%

The one discharge evaluated during this reissuance had results for TOC that indicate the TBELs are not applicable; the calculated average concentrations for the outfall were < 5 % of the 110 mg/L TBEL for TOC. The calculated average for oil and grease was < 10 % of the 15 mg/L TBEL for oil and grease (see Table 5). Based on comparison of statistical parameters in Table 6, the effluent does not appear to be impacted by hydrocarbons and the TOC and oil and grease limits do not appear to be applicable as given the effluent characteristics resemble that of storm water. Therefore, the pollutant parameters applicable to a petroleum refinery contaminated runoff do not appear to be applicable to the facility based on current effluent characteristics. Based on these comparisons and conclusions, the oil and grease and TOC TBELs are being eliminated from the Permit as a technical mistake realized upon review of recent data. With TBELs essentially eliminated from the Permit, DEC will impose WQBELs to the extent necessary to control discharges and comply with WQS.

DEC used the effluent limits found in 40 CFR 419.12(e)(1) as the basis for carrying over case-by-case TBELs using BPJ in the last Permit. Analytical results generated from August 2014 through November 2018 consistently showed either non-detects or very low concentrations for TOC and oil and grease at the outfall. The parameters did not, as presumed during the last permit cycle, serve as indicators for other organic parameters. The discharge consists of accumulated rain and snow melt within the SCA and not wastewater generated at a petroleum refinery. As a result, the Department is removing limits and monitoring requirements for TOC and oil and grease parameters from outfalls in all bulk fuel facilities with the exception of one outfall at the USCG bulk fuel facility on Kodiak Island that carries with it some unique circumstances. Additional rationale for removing these limits and select monitoring requirements is found in Section 5.

#### 4.1.2 Water Quality Based Effluent Limits (WQBELs)

WQBELs developed for the last Permit for pH, TAH, and TAqH are being carried over for this Permit. Per 18 AAC 70.020(b)(A)(i), pH must not be less than 6.5 nor greater than 8.5 ( $6.5 \leq \text{pH} \leq 8.5$ ). The Department has set the pH WQBEL equal to the pH water quality criteria on a determination through characterization that the facility can attain the criteria.

Per 18 AAC 70.020(b)(17)(B)(ii), discharges “may not cause a film, sheen, or discoloration on the surface or the floor of the waterbody or adjoining shoreline.” DEC is imposing this narrative limitation of no discharge of petroleum hydrocarbons as determined by the

presence of film, sheen, or a discoloration of the surface of the SCA containment water prior to discharge. An observed sheen must be removed by treatment methods prior to discharge. This narrative WQBEL prohibiting the discharge of SCA water that has a sheen has been carried over from the previous permit and will be used as a trigger for additional testing for TAH and TAqH (In addition to regular -quarterly testing). For petroleum hydrocarbons, the WQS include narrative criterion for contact recreation in marine waters [18 AAC 70.020(b)(17)(B)(i)] that states discharges “may not cause a film, sheen, or discoloration on the surface or the floor of the waterbody or adjoining shoreline.” The Permit includes a narrative limitation for this criterion.

Similar to petroleum hydrocarbons, the Alaska WQS [18 AAC 70.020(b)(20)] also require that discharges “may not, alone or in combination with other substances, 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.” The Permit will contain a general requirement for this narrative to ensure these conditions do not occur from the authorized discharges.

The Permit stipulates no discharge of free oil in all discharges. The limitation of no discharge of free oil is determined by the presence of film, sheen, or a discoloration of the surface of the SCA containment water prior to discharge. An observed sheen must be removed by treatment methods prior to discharging.

#### 4.2 Effluent Limits and Monitoring Requirements

In accordance with AS 46.03.110(d), the Department may specify the terms and conditions for discharging wastewater in a permit. The Permit includes monitoring requirements so that compliance with effluent limits can be determined, but may also be required to characterize the effluent and to assess impacts to the receiving water. Sufficiently sensitive methods per 40 CFR 136 are required for analyzing collected samples. TBELs for TOC and oil and grease have been discontinued and a discharge specific Best Management Practice (BMP) has been added per Section 7.3.1. Table 7 provides the applicable effluent limits and monitoring requirements for Outfall 001.

**Table 7: Effluent Limits and Monitoring Requirements (Outfall 001)**

Parameter (Units)	Effluent Limits	Monitoring Requirements	
		Frequency	Sample Type
Flow Volume (gpd) <sup>1</sup>	Report	Daily	Measure or Estimate
Oil and Grease (Sheen)	No visible sheen	Daily	Visual
pH (su)	6.5 ≤ pH ≤ 8.5	Monthly	Grab
TAH (µg/L) <sup>2</sup>	Report	Quarterly <sup>3</sup>	Grab
TAqH (µg/L) <sup>2</sup>	Report	Quarterly <sup>3</sup>	Grab

Notes:

1. Flow volumes and visual observations for sheen must be measured daily when discharges occur and recorded in a daily log. Report total monthly flow volumes and average monthly flow volumes determined by dividing the total monthly volume by the number of discharge events for the month.
2. See Section 4.2.1 details for reporting TAH and TAqH results below detection.
3. Monitoring for TAH and TAqH must be conducted quarterly initially. After 12 consecutive monitoring events (the equivalent of 3 (three) years) demonstrate compliance with both the TAH and TAqH criteria, the permittee may submit a written request to DEC to reduce the monitoring frequency to semi-annual. The permittee must have written approval from DEC prior to reducing the monitoring frequency for TAH and TAqH.

#### **4.2.1 Reporting TAH and TAqH Results**

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

### **4.3 Electronic Discharge Monitoring Reports**

#### **4.3.1 E-Reporting Rule, Phase I (DMRs)**

The permittee must submit a DMR for each month by the 28th day of the following month. DMRs shall be submitted electronically through NetDMR per Phase I of the E-Reporting Rule (40 CFR 127). Authorized persons may access permit information by logging into the NetDMR Portal <https://cdxnodengn.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. full Whole Effluent Toxicity (WET) reports, mixing zone receiving water data, etc.), shall be included as an attachment to the NetDMR submittal. DEC has established an eE-Reporting Information website <https://dec.alaska.gov/water/compliance/electronic-reporting-rule/> that contains general information about this new reporting format. Training materials and webinars for NetDMR can be found at <https://netdmr.zendesk.com/home>.

#### **4.3.2 E-Reporting Rule, Phase II (Other Reporting)**

Phase II of the E-Reporting Rule specifies that permittees 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 term of the Permit. Permittees should monitor DEC’s E-Reporting website, noted above in Section 4.3.1, for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports required by the Permit may be submitted in accordance with Permit Appendix A – Standard Conditions.

### **4.4 Additional Monitoring**

#### **4.4.1 Additional Monitoring Upon DEC Request**

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

#### **4.4.2 Optional Additional Monitoring by Permittee**

The permittee also has the option of taking more frequent samples than required under the Permit. These additional samples must be used for averaging if they are conducted using

the Department approved test methods (generally found in 18 AAC 70 and 40 CFR 136 [adopted by reference in 18 AAC 83.010]). The results of any additional monitoring must be included in the calculation and reporting of the data on eDMRs is required by the Permit and Standard Conditions Part 3.2 and 3.3 (Permit Appendix A).

#### 4.4.3 Sufficiently Sensitive Methods

Monitoring for effluent limitations must use methods with method detection limits that are less than the effluent limitations or are sufficiently sensitive. Monitoring effluent or receiving water for the purpose of comparing to water quality criteria must use methods that are less than the applicable criteria or are sufficiently sensitive. Per 40 CFR 122.21(a)(3), a method approved under 40 CFR 136 is sufficiently sensitive when:

- (A) The method ML is at or below the level of the applicable water quality criterion for the measured parameter, or
- (B) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge (e.g., not applicable to effluent or receiving water monitored for characterization), or
- (C) The method has the lowest ML of the analytical methods approved under 40 CFR 136 for the measured pollutant or pollutant parameter (e.g., the receiving water concentration or the criteria for a given pollutant or pollutant parameter is at or near the method with the lowest ML).

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

## 5 ANTIBACKSLIDING

18 AAC 83.480 requires that “effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the June 30, 2014 issued permit.”

18 AAC 83.480(c) also 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.”

Effluent limitations may be relaxed as allowed under 18 AAC 83.480, CWA 402(o) and CWA 303(d)(4). 18 AAC 83.480(b) allows relaxed limitations in renewed, reissued, or modified permits when there have been material and substantial alterations or additions to the permitted facility that justify the relaxation or if the Department determines that technical mistakes were made.

CWA 303(d)(4)(A) states that, for waterbodies where the water quality does not meet applicable WQS, effluent limitations may be revised under two conditions; the revised effluent limitation must ensure the attainment of the water quality standard (based on the waterbody’s TMDL or the waste load allocation) or the designated use which is not being attained is removed in accordance with the WQS regulations.

CWA 303(d)(4)(B) 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. Even if the requirements of CWA 303(d)(4) or 18 AAC 83.480(b) are satisfied, 18 AAC 83.480(c) prohibits relaxed limits that would result in violations of WQS or ELGs (if applicable).

State regulation 18 AAC 83.480(b) only applies to effluent limitations established on the basis of CWA Section 402(a)(1)(B), and modification of such limitations based on effluent guidelines that were issued under CWA Section 304(b). Accordingly, 18 AAC 83.480(b) applies to the relaxation of previously established case-by-case TBELs developed using BPJ. To determine if backsliding is allowable, the regulation provides five regulatory criteria in 18 AAC 83.480(b)(1-5) that must be evaluated and satisfied.

## **5.1 Technology-Based Backsliding**

Data from August 2014 through November 2018 show oil and grease and TOC to be either nondetectable or consistently at very low concentrations indicating no correlation with TAH or TAqH. As a result, limits and monitoring requirements for oil and grease and TOC have been discontinued at the outfall in the Permit. The Department has determined there is limited value in collecting monitoring data for the subject parameters if it does not support a future Reasonable Potential Analysis (RPA). Further, the Department finds that the receiving waters are not impaired and that the level of water quality is maintained and protected; therefore, the removal of monitoring requirements for oil and grease and TOC from the outfall will not negatively affect the receiving water and is consistent with the State's Antidegradation Policy. The Department finds the changes outlined above are consistent with CWA 402(o) and CWA 303(d)(4) as well as 18 AAC 83.480.

## **6 ANTIDEGRADATION**

### **6.1 Legal Basis**

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. Alaska's current Antidegradation Policy and implementation methods are presented in 18 AAC 70.015 *Antidegradation Policy* and in 18 AAC 70.016 *Antidegradation implementation methods for discharges authorized under the federal Clean Water Act* (implementation methods). The policy and implementation methods have been amended through April 6, 2018; are consistent with 40 CFR 131.12; and were approved by EPA on July 26, 2018.

### **6.2 Receiving Water Status and Tier Determination**

Per the implementation methods, the Department determines a Tier 1 or Tier 2 classification and protection level on a parameter by parameter basis. The implementation methods also describe a Tier 3 protection level applying to designated waters, although no Tier 3 waters have been designated in Alaska at this time.

The marine waters of Wrangell Harbor, covered under the Permit, are not listed as impaired (Categories 4 or 5) in the *2014/2016 Integrated Report*. Therefore, no parameters have been identified where only the Tier 1 protection level applies. Accordingly, this antidegradation analysis conservatively assumes that the Tier 2 protection level applies to all parameters, consistent with 18 AAC 70.016(c)(1).

Per 18 AAC 70.015(a)(2), if the quality of water exceeds levels necessary to support propagation of fish, shellfish, wildlife, and recreation in and on the water, that quality must be maintained and protected, unless the Department authorizes a reduction in water quality.

Prior to authorizing a reduction of water quality, the Department must first analyze and confirm the findings under 18 AAC 70.015(a)(2)(A-D) are met. The analysis must be conducted with implementation procedures in 18 AAC 70.016(b)(5)(A-C) for Tier 1 protection, and under 18 AAC 70.016(c)(7)(A-F) for Tier 2 protection. These analyses and associated findings are summarized below.

### **6.3 Tier 1 Analysis of Existing Use Protection**

The summary below presents the Department's analyses and findings for the Tier 1 analysis of existing use protections per 18 AAC 70.016(b)(5) finding that:

***(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;***

The Department reviewed water quality data and information on existing uses in the vicinity of Outfall 001 and secondary containment discharges submitted by the applicant. The Department finds the information reviewed as sufficient to identify existing uses and water quality necessary for Tier 1 protection.

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

Per 18 AAC 70.020 and 18 AAC 70.050, marine waters are protected for all uses. Therefore, the most stringent water quality criteria 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) have been applied where appropriate. The Permit includes WQBELs that are based on meeting water quality criteria at the point of discharge. Because the criteria are developed such that meeting the criteria protects the uses of the waterbody and all applicable criteria are met at the point of discharge, then the uses of the waterbody as a whole are being maintained and protected.

***(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).***

The Permit will require that the discharges shall not cause or contribute to a violation of WQS. As previously stated the marine waters of Wrangell Harbor covered under this Permit are not listed as impaired; therefore, no parameters were identified as already exceeding the applicable criteria in 18 AAC 70.020(b) or 18 AAC 70.030.

The Department concludes 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 required under 18 AAC 70.016(b)(5) are met.

## **6.4 Tier 2 Analysis for Lowering Water Quality Not Exceeding Applicable Criteria**

### **6.4.1 Scope of Tier 2 Analysis**

Per 18 AAC 70.016(c)(2), an antidegradation analysis is only required for those waterbodies needing Tier 2 protection and which have any new or existing discharges that are being expanded based on permitted increases in loading, concentration, or other changes in effluent characteristics that could result in comparative lower water quality or pose new adverse environmental impacts. Additionally, per 18 AAC 70.016(c)(3), DEC is not required to conduct an antidegradation analysis for a discharge the applicant is not proposing to expand.

Given this fact sheet is the basis for reissuing the Permit authorizing three discharges, DEC reviewed the information provided by the applicant to determine if any of the discharges require a Tier 2 evaluation. The review indicates the information provided is sufficient and credible per 18 AAC 70.016(c)(4) and does not identify there is an expanded limit or introduction of a new discharge. Based on this analysis, there is no increase in limited loadings, concentrations, or other effluent changes that would result in a comparative lower water quality or pose new adverse environmental impacts to trigger Tier 2 analysis. Accordingly, a Tier 2 analysis has not been performed.

## **7 OTHER PERMIT CONDITIONS**

### **7.1 Standard Conditions**

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.

### **7.2 Quality Assurance Project Plan (QAPP)**

The permittee is required to develop and implement a facility-specific Quality Assurance Project Plan (QAPP) that ensures all monitoring data associated with the Permit are accurate and to explain data anomalies if they occur. The permittee is required to develop and implement procedures in a QAPP that documents standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples; laboratory analysis (e.g., most sensitive methods); and data reporting. If a QAPP has already been developed and implemented, the permittee must review and revise the existing QAPP to ensure it includes the necessary content. The permittee must submit a letter to the Department within 90 days of the effective date of the Permit certifying that the QAPP has been revised and implemented. The QAPP shall be retained onsite and made available to the Department upon request.

### **7.3 Best Management Practices Plan**

A BMP Plan presents operating and housekeeping measures intended to minimize or prevent the generation and potential release of pollutants from a facility to the waters of the U.S. during normal operations and additional activities. Per 18 AAC 83.475(4), “A permit must include best management practices to control or abate the discharge of pollutants and hazardous in a permit when the practices are reasonably necessary to achieve effluent limitations and standards...”

Within 90 days of the effective date of the Permit, the permittee must review, revise as necessary, implement the BMP Plan to address current activities at the terminal and submit written certification of the review, revision and implementation to DEC.

In each subsequent year of the Permit, the permittee must establish a committee to review and revise the BMP Plan as necessary to address any modifications or changes to operational practices at the terminal and to continue to meet the objectives and specific requirements of the Permit. The permittee must submit written certification to DEC that the BMP Plan review committee has reviewed the BMP Plan, and modified if necessary, by January 31<sup>st</sup> of each year the Permit remains in effect.

### **7.3.1 Outfall 001 Specific BMP Plan Requirements**

In addition to implementing and updating a BMP Plan that achieves the overall objectives and specific requirements to prevent or minimize the generation and release of pollutants from the facility, the permittee must develop and implement a specific BMP for Outfall 001 that ensures accurate reporting of pH using field instrumentation. At a minimum, the specific BMP must include standard operating, calibration, and maintenance procedures for the field instrument to improve accuracy and repeatability of pH measurements.

## **8 OTHER LEGAL REQUIREMENTS**

### **8.1 Endangered Species Act**

Per Section 7 of the Endangered Species Act (ESA), federal agencies are required to consult with the National Oceanic and Atmospheric Administration (NOAA), the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) if their actions could beneficially or adversely affect any threatened or endangered species. As a state agency, DEC is not required to consult under Section 7 regarding wastewater discharge permitting actions. However, this does not absolve DEC from complying with Section 9 and 10 of the ESA. DEC consulted the NOAA Endangered Species and Critical Habitat Interactive map located online at <https://www.fisheries.noaa.gov/alaska/consultations/section-7-consultations-alaska> and accessed the Alaska ESA Species interactive map to identify ESA species of concern in the waters adjacent to the facility. DEC determined that there are no endangered species expected to occur in the area. DEC also accessed the FWS Information, Planning, and Conservation System website at <https://ecos.fws.gov/ipac/location> and again determined that there are no endangered species expected to occur in the area. DEC sent an email to NOAA and FWS for confirmation on March 22, 2019.

### **8.2 Essential Fish Habitat**

Essential fish habitat (EFH) includes 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. Although DEC as a state agency is not required to consult with these federal agencies regarding permitting actions, DEC again consulted the aforementioned websites and interactive maps to determine EFH in proximity of the discharge location. The following salmon species were determined to have essential habitat in the general area:

Chum Salmon

Coho Salmon

Chinook Salmon

### 8.3 Ocean Discharge Criteria Evaluation

CWA Section 403(a), Ocean Discharge Criteria, prohibits the issuance of a permit under CWA Section 402 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 on the territorial seas must comply with the requirements of Section 403, which include development of an Ocean Discharge Criteria Evaluation (ODCE).

The Permit requires compliance with Alaska WQS. Consistent with 40 CFR 125.122(b), adopted by reference at 18 AAC 83.010(C)(8), discharges in compliance with Alaska WQS shall be presumed not to cause unreasonable degradation of the marine environment. EPA made the connection between the similar protections provided by ODCE requirements and WQS when promulgating ocean discharge criteria rules in 1980, as stated, “the similarity between the objectives and requirements of [state WQS] and those of CWA Section 403 warrants a presumption that discharges in compliance with these [standards] also satisfy CWA Section 403.” (Ocean Discharge Criteria, 45 Federal Register 65943.). As such, given the Permit requires compliance with Alaska WQS, unreasonable degradation to the marine environment is not expected and further analysis under 40 CFR 125.122 is not warranted for this permitting action.

### 8.4 Permit Expiration

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

## 9 REFERENCES

1. Alaska Department of Environmental Conservation, *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report*.
2. Alaska Department of Environmental Conservation, 2003. *Alaska Water Quality Criteria Manual for Toxics and Other Deleterious Organic and Inorganic Substances*, as amended through December 12, 2008.
3. Alaska Department of Environmental Conservation. *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report*.
4. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through June 26, 2006.
5. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through July 1, 2008.
6. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through April 8, 2012.
7. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through April 6, 2018.
8. Alaska Department of Environmental Conservation. *18 AAC 83. Alaska Pollutant Discharge Elimination System Program*. As amended Through October 23, 2008.
9. Alaska Department of Environmental Conservation. *18 ACC 72. Wastewater Disposal*, as amended through December 23, 2009.
10. Alaska Department of Environmental Conservation. *Interim Antidegradation Implementation Methods*. Division of Water. Policy and Procedure No. 05.03.103. July 14, 2010.
11. U.S. EPA, *Technical Support Document for Water Quality-based Toxics Control*. Office of Water, EPA/505/2-90-001, PB91-127415. Washington D.C., March 1991.
12. U.S. EPA, *Interim Guidance for Performance-Based Reduction of NPDES Monitoring Frequencies*. Office of Water, EPA 833-B-96-001, Washington D.C., April 1998.
13. United States Fish and Wildlife Service, 2013. *List of Endangered, Threatened, Proposed Candidate and Delisted Species*, May 24, 2013.

**Figure 1: Wrangell Bulk Fuel Facility, Vicinity Map**

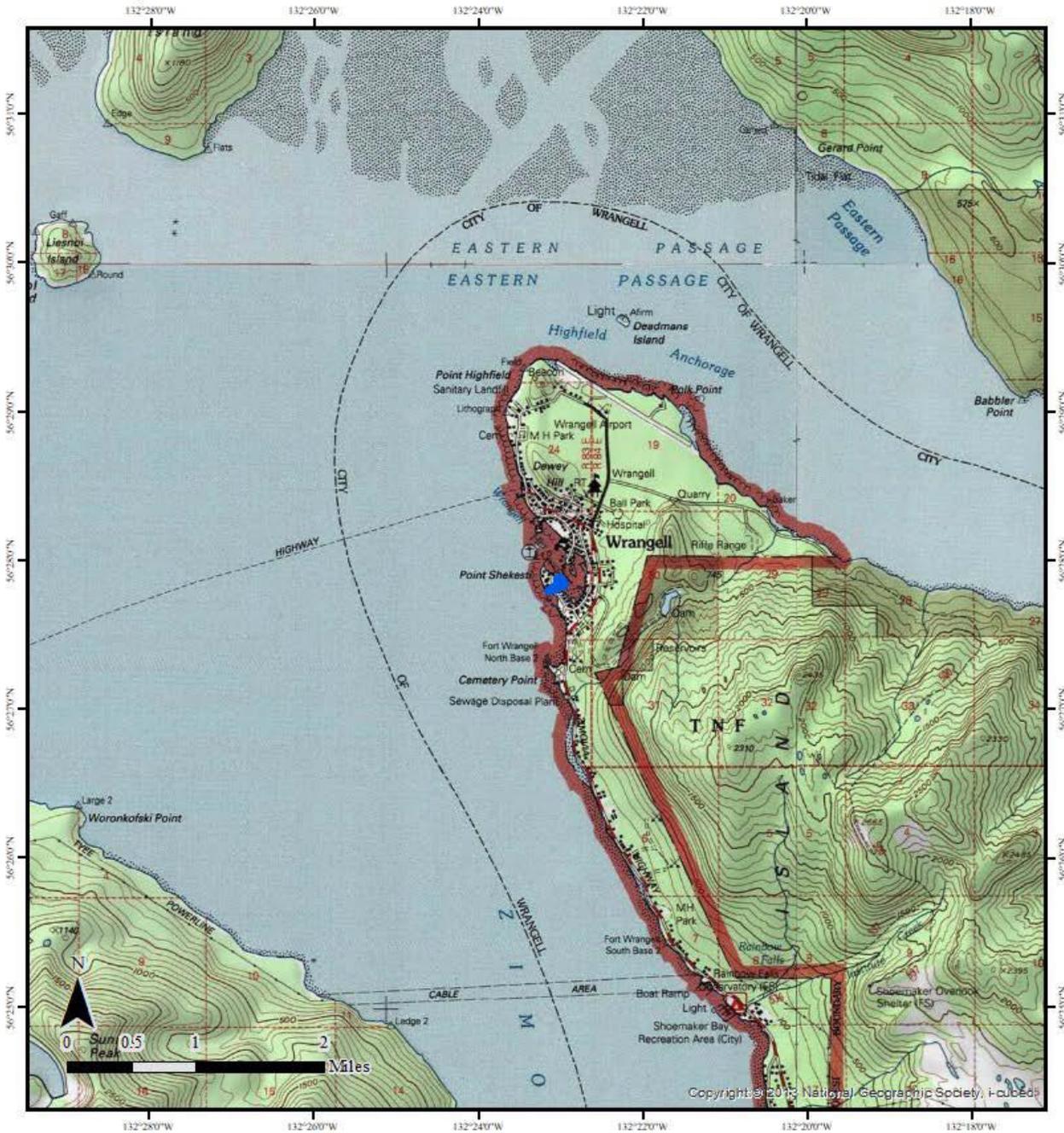
**General Vicinity Map**

Current to: 1/8/2019  
 Author: Integrity Environmental LLC  
<http://www.integrity-environmental.com>



**Wrangell Bulk Fuel Facility**  
 Petro49 Inc.  
 Within: Section 25,  
 Township 62 South, Range 83 East,  
 Copper River Meridian, Alaska.  
 Coordinate System: NAD 1983 Alaska Albers

 Bulk Facility



**Figure 2: Wrangell Bulk Fuel Facility, Site Map**

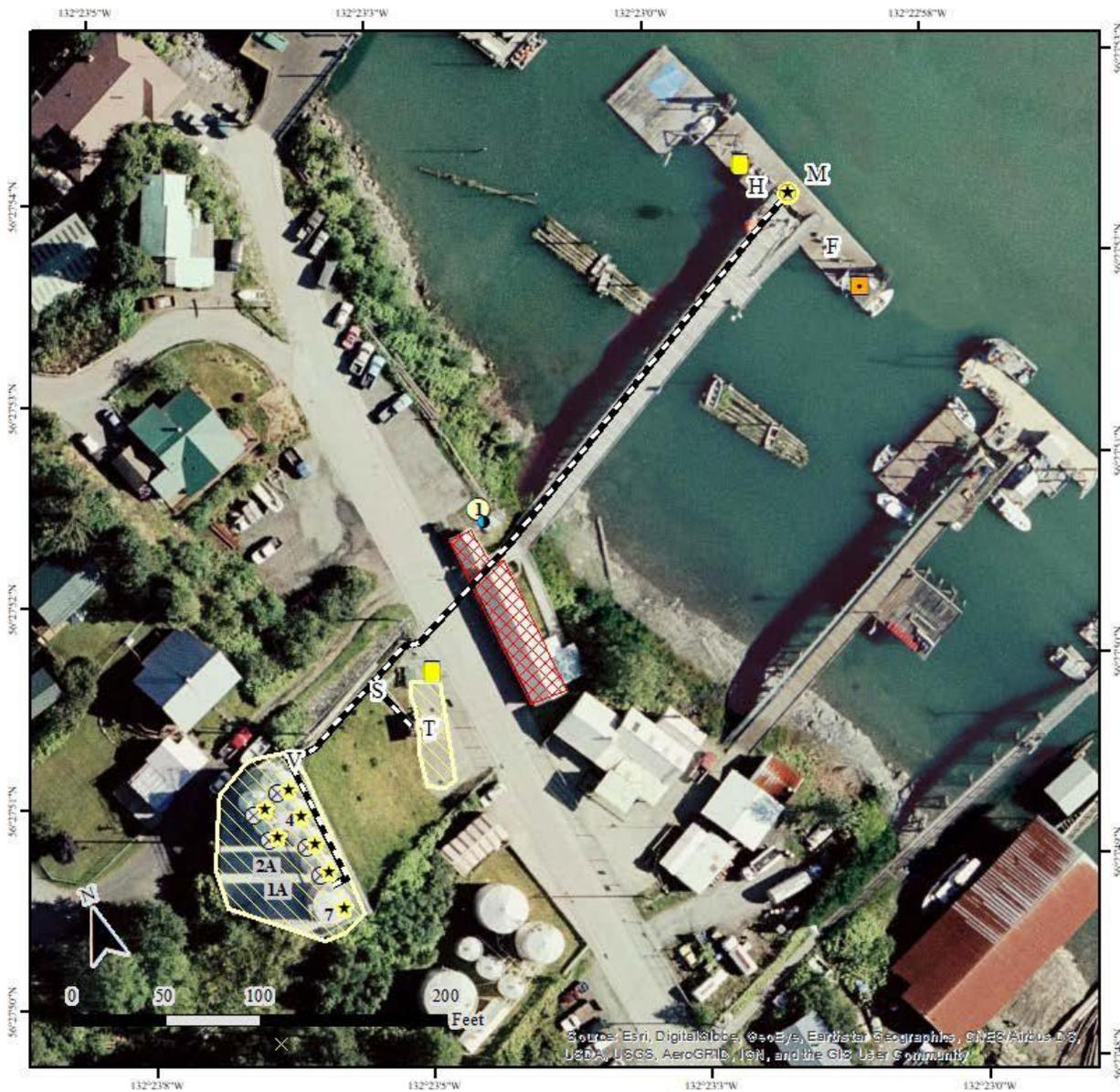
**Upper Tank Farm Site Map**

Current to: 1/18/2019  
 Author: Integrity Environmental LLC  
<http://www.integrity-environmental.com>



**Wrangell Bulk Fuel Facility**  
 Petro49 Inc.  
 Within: Section 25,  
 Township 62 South,  
 Range 83 East,  
 Copper River Meridian, AK.  
 Address: 1427 Peninsula St.  
 Coordinate System:  
 NAD 1983 Alaska Albers

- |                   |                           |                              |
|-------------------|---------------------------|------------------------------|
| ○ Outfall         | ● Tank                    | ■ Spill Equipment            |
| ● OWS             | ⊗ Tank Out of Service     | ▬ Pipeline Corridor          |
| V SCA Valve       | H Float House             | ⊠ Removed Structures         |
| ■ Horizontal Tank | S Shed                    | □ Secondary Containment Area |
| ★ First Valve     | F Float                   |                              |
| ★ Marine Header   | M Moorage                 |                              |
| ■ Drum            | T Tank Truck Loading Rack |                              |



**Figure 3: Wrangell Bulk Fuel Facility, Outfall 001**

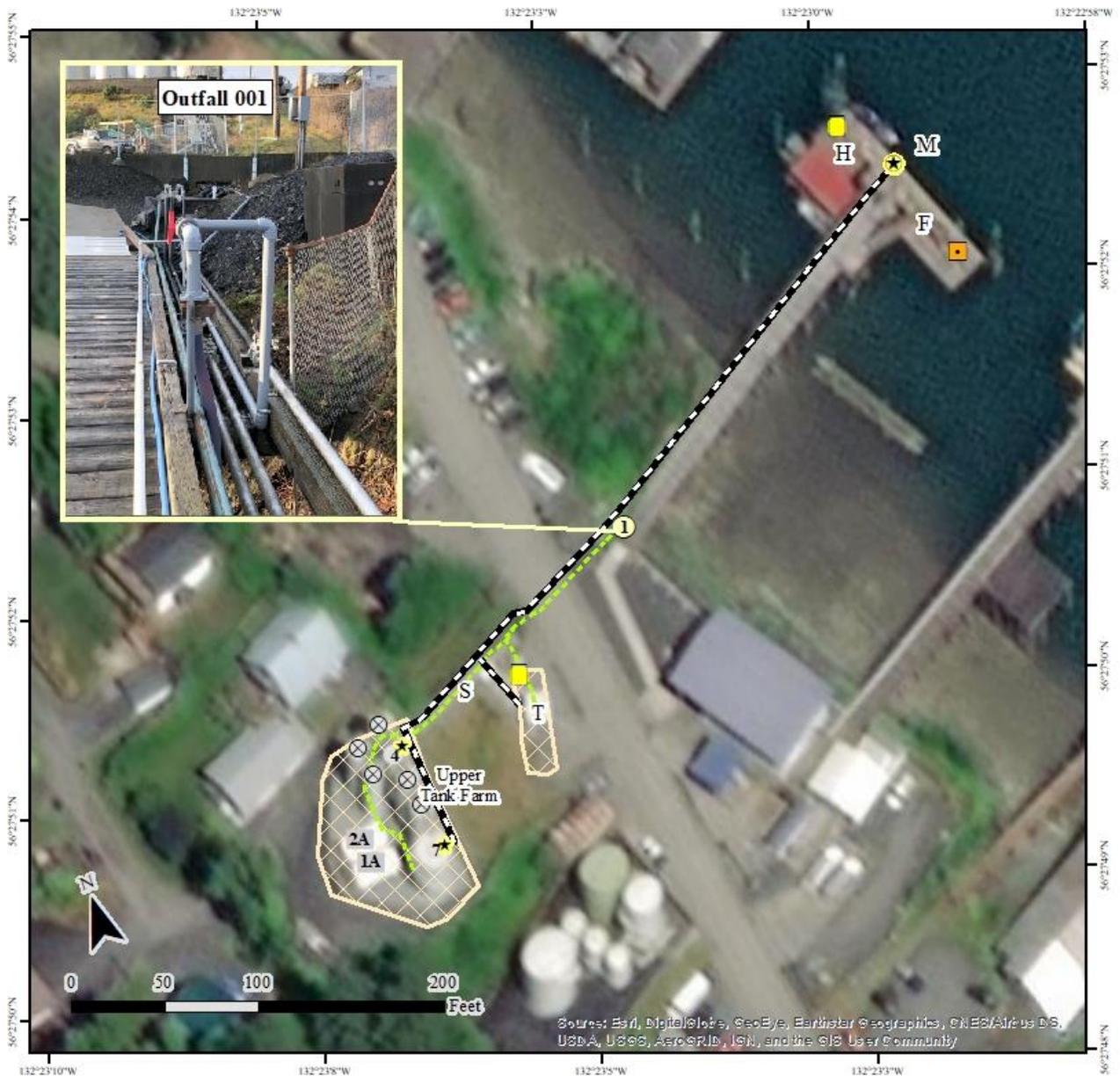
**Upper Tank Farm Site Map**

Current to: 12/6/2019  
 Author: Integrity Environmental LLC  
 http://www.integrity-environmental.com



**Wrangell Bulk Fuel Facility**  
 Petro49 Inc.  
 Within: Section 25,  
 Township 62 South,  
 Range 83 East,  
 Copper River Meridian, AK.  
 Address: 1427 Peninsula St.  
 Coordinate System:  
 NAD 1983 Alaska Albers

- |                       |               |                              |
|-----------------------|---------------|------------------------------|
| ○ Outfall             | H Float House | T Tank Truck Loading Rack    |
| ■ Horizontal Tank     | O Office      | ■ Spill Equipment            |
| ★ First Valve         | S Shed        | --- Drain Pipe               |
| ★ Marine Header       | D Dock        | — Pipeline Corridor          |
| ■ Drum                | F Float       | ▭ Secondary Containment Area |
| ● Tank                | M Moorage     |                              |
| ⊗ Tank Out of Service | W Warehouse   |                              |



**Figure 4: Wrangell Bulk Fuel Facility, Site Drainage**

**Upper Tank Farm Site Drainage**

Current to: 1/18/2019  
 Author: Integrity Environmental LLC  
<http://www.integrity-environmental.com>



**Wrangell Bulk Fuel Facility**  
 Petro49 Inc.  
 Within: Section 25,  
 Township 62 South,  
 Range 83 East,  
 Copper River Meridian, AK.  
 Address: 1427 Peninsula St.  
 Coordinate System:  
 NAD 1983 Alaska Albers

- Outfall
- OWS
- Tank Truck Loading Rack
- Drainage Path
- Removed Structures
- Secondary Containment Areas

