ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT FACT SHEET – FINAL

Permit: AK0029441 - Petro Star Inc., Kodiak Terminal

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 STAR, INC.,

For wastewater discharges from

KODIAK BULK FUEL TERMINAL

The Alaska Department of Environmental Conservation (Department or DEC) proposes to reissue APDES individual permit AK0029441 – Petro Star Inc., Kodiak Bulk Fuel Terminal (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 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) 465-5180	Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 43335 Kalifornsky Beach Road Soldotna, AK 99615 907-262-5210

TABLE OF CONTENTS

1.0 INTRODUCTION **1**
- **1.1** Applicant 1
- **1.2** Authority 1
- **1.3** Permit History 1

2.0 BACKGROUND **2**
- **2.1** Facility Information 2
- **2.2** Facility Performance and Wastewater Characterization 3
- **2.3** Compliance History 5

3.0 RECEIVING WATERBODY **5**
- **3.1** Water Quality Standards 5
- **3.2** Water Quality Status of Receiving Water 6

4.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS **6**
- **4.1** Basis for Effluent Limits 6
- **4.2** Effluent Limits and Monitoring Requirements 8
- **4.3** Monitoring Requirements 8
- **4.4** Electronic Discharge Monitoring Reports 9
- **4.5** Additional Monitoring 10

5.0 ANTIBACKSLIDING **11**
- **5.1** Technology-Based Backsliding 11

6.0 ANTIDEGRADATION **11**
- **6.1** Legal Basis 11
- **6.2** Receiving Water Status and Tier Determination 12
- **6.3** Tier 1 Analysis of Existing Use Protection 12
- **6.4** Tier 2 Analysis for Lowering Water Quality Not Exceeding Applicable Criteria 13

7.0 OTHER PERMIT CONDITIONS **13**
- **7.1** Standard Conditions 13
- **7.2** Quality Assurance Project Plan 13
- **7.3** Best Management Practices Plan 13

8.0 OTHER LEGAL REQUIREMENTS **14**
- **8.1** Endangered Species Act 14
- **8.2** Essential Fish Habitat 15
- **8.3** Ocean Discharge Criteria Evaluation 15
- **8.4** Permit Expiration 15

9.0 References **16**

TABLES

Table 1: Tank Summary for PSI Kodiak Terminal 2
Table 2: Discharge Flows 4
Table 3: Characterization of Parameters Requiring Monitoring Only 4
Table 4: Characterization of Parameters with Limits 5
Table 5: Statistical Evaluation of TOC in Four Bulk Fuel Permits 7
Table 6: Statistical Evaluation of Oil and Grease in Four Bulk Fuel Permits 7
Table 7: Effluent Limits and Monitoring Requirements Outfalls 001 – 003 9

APPENDIX A

FIGURES

Figure 1: Area Map, PSI Kodiak Terminal 17
Figure 2: Vicinity Map, PSI Kodiak Terminal 18
Figure 3: Schematic, PSI, Kodiak Terminal 19
Figure 4: Tanks and Infrastructure, PSI Kodiak Terminal 20

1.0 INTRODUCTION

On January 4, 2019, the Alaska Department of Environmental Conservation (DEC or Department) received an application from Petro Star Inc. (PSI) for reissuance of Alaska Pollutant Discharge Elimination System (APDES) Individual Permit AK0029441 - PSI, Kodiak Terminal (Permit). This Fact Sheet was developed based on the application and supplemental information obtained through the application process.

1.1 Applicant

This Fact Sheet provides information on the reissuance of the Permit for the following entity:

Permittee:	Petro Star, Inc.
Name of Facility:	Kodiak Terminal
APDES Permit Number:	AK0023248
Location and Mailing Address:	715 Shelikof Street Kodiak, AK 99615
Onsite Facility Contact:	Ms. Lisa Lewis

Outfall Summary

Outfall	Description	Latitude	Longitude
001	Truck Rack	57.784236	-152.424857
002	Tank Farm #1	57.784889	-152.424444
003	Tank Farm #2	57.785083	-152.424611

All discharges are to Saint Paul Harbor, Kodiak Alaska. See Appendix A, Figure A-1.

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 first 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

The previous owners of the Petro Star, Inc., Kodiak Terminal, the United Oil Company of California (UNOCAL), submitted an application to Environmental Protection Agency (EPA) for an NPDES permit authorizing wastewater discharges from the bulk fuel storage facility (facility) in June 1976, which resulted in the first issuance of the Permit on July 12, 1978. EPA administratively extended the permit prior to it expiring on July 12, 1983. At some time after 1983, North Pacific Fuel purchased the Kodiak Terminal from UNOCAL. The Kodiak bulk fuel facility and the associated NPDES permit was acquired by PSI in September 1997. EPA later reissued the permit effective on March 1, 2008 with an expiration date of February 28, 2013.

DEC subsequently reissued the Permit for the first time under the APDES Program with an effective date of August 1, 2014 and an expiration date of July 31, 2019 (2014 Permit). During this reissuance,

DEC removed technology-based effluent limits (TBELs) that had been developed based on the assumption the effluent would resemble ballast water. Characterization data demonstrated this initial assumption was not appropriate and DEC developed new TBELs based the working assumption that the effluent would be more similar to that of contaminated runoff from refineries. DEC will reevaluate this working assumption during this reissuance.

The Department received the current application for reissuance on January 30, 2019. This complete application was submitted more than 180 days prior to the expiration date and DEC administratively extended the existing Permit until it could be reissued.

2.0 BACKGROUND

2.1 Facility Information

The PSI Kodiak Terminal is a bulk petroleum storage facility located on the northern shore of St. Paul Harbor, in the city of Kodiak, Alaska. The City of Kodiak is located on the northeastern end of Kodiak Island, approximately 250 miles south-southwest of Anchorage. Travel to and from the community is via commercial or private aircraft, the Alaska Marine Highway System, and other private marine craft only. The facility receives diesel fuel and gasoline from barges and distributes product via tanker trucks to local land-based users. In addition, the facility refuels vessels moored to their 200-foot dock located on St. Paul Harbor. The total fuel storage capacity of the terminal is approximately 2.24 million gallons (mg).

Facility components include bulk fuel storage tanks surrounded by secondary containment areas (SCAs), a truck loading rack, a mooring area/dock, pipelines and valves, and associated equipment. 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. Accumulated rain or snowmelt water is periodically discharged from the SCAs to preserve containment volume necessary to capture fuel in the case of a release. The discharge of SCA water is to the nearby marine waters of St. Paul Harbor. Table1 summarizes the tanks, products, nominal tank capacity, and SCA volume for each tank and SCA. See subsequent sections for more detail on the SCA infrastructure and operation.

Table 1: Tank Summary for PSI Kodiak Terminal [1]

SCA (Outfall #)	Tank # (Former #)	Product	Shell Capacity (mg)	SCA Volume (mg)
Truck Rack (001) [2]	---	All	---	0.0087
Lower (002)	4 (1998)	Gasoline	0.217	0.556
	5 (3574)	#1 Diesel	0.110	
	6 (3575)	#2 Diesel	0.070	
	7 (3576)	Gasoline	0.070	
	8 (2016)	#1 Diesel	0.500	
	9 (1989)	#1 Diesel	0.035	
Upper (003)	1 (3572)	#2 Diesel	0.500	0.658
	2 (3571)	#2 Diesel	0.500	
	3 (3573)	#1 Diesel	0.221	

Notes:
1. Information taken from the *North Pacific Fuel, Kodiak Terminal Oil Discharge Prevention and Contingency Plan 2019*.
2. Outfall 001 may include contaminated SCA water from Upper and Lower SCAs by the Truck Rack Oil-Water Separator.

2.1.1 Outfall 001 – Truck Loading Rack

Outfall 001 discharges rain and snowmelt accumulations from the truck rack and surrounding parking lot as well as contaminated storm water from any of the SCAs, after receiving treatment to insure the removal of contaminants. Flows entering the treatment system are first directed to a 3000 gallon primary holding tank that also serves as an oil/water separator (OWS). An automatic float switch in the primary tank triggers a pump that transfers the water to a Pan America OS 12F coalescing separator for additional treatment and is subsequently discharged into a 3,000-gallon secondary holding tank with a manual valve that controls the discharge to Outfall 001. The treated water in the secondary holding tank is visually monitored for sheen and residue daily prior to being discharged to Saint Paul Harbor. If observed, a sheen must be removed prior to discharge. Each discharge is accomplished by manually opening the discharge valve on the secondary tank to allow commencement of discharge. Upon completion of the discharge, the valve is manually closed until the next discharge event.

2.1.2 Outfall 002 – Lower Tank Farm SCA

Outfall 002 discharges rain and snowmelt water accumulations from the Tank Farm #1 SCA for the bulk fuel tanks listed in Table 1. Tank 8 was installed in 2016 during the term of the 2014 Permit and is connected to the lower tank farm SCA via interconnected spillway. Rain or snowmelt water contained within the SCA is visually checked for presence of oil. If no presence of sheen is evident in the SCA, the contained water is manually released and discharged directly to St. Paul Harbor. If any presence of sheen is observed, the contained water is routed to the Truck Rack OWS where it is treated and discharged through Outfall 001.

2.1.3 Outfall 003 – Upper Tank Farm SCA

Outfall 003 discharges rain and snowmelt water accumulations in the Upper Tank Farm SCA for the three bulk fuel tanks listed in Table 1. As with Outfall 002, rain or snowmelt water contained within an SCA that drains to Outfall 003 is visually checked for presence of oil. If no presence of sheen is evident in the SCA, the contained water is manually released and discharged directly to St. Paul Harbor. If any presence of sheen is observed, the contained water is routed to the Truck Rack OWS where it is treated and discharged through Outfall 001.

2.2 Facility Performance and Wastewater Characterization

Discharge flows from designated outfalls at the facility are intermittent and vary depending on the size of each collection area and amount of precipitation received since the last discharge event. Table 1 summarizes annual total discharges (mg) and average monthly flows reported in gallons per day (gpd) under the 2014 Permit from August 2014 thru August 2018.

Table 2: Discharge Flows

Outfall	Year	Total Annual Discharges (mg)	Discharge Events	Daily Flow Ranges (gpd) (Low-High; Average)
Outfall 001	2014	0.080	29	2,346 – 2,900; 2,743
	2015	0.171	60	2,455 – 2,955; 2,857
	2016	0.169	58	2,763 – 2,889; 2,915
	2017	0.120	41	0.0 – 3,025; 2,916
	2018	0.136	46	0.0 – 2,993; 2,948
Outfall 002	2014	0.180	18	4,900 – 9,993; 13,200
	2015	0.466	42	200 – 14,125; 11,085
	2016	0.495	49	0.0 – 14,571; 10,105
	2017	0.193	19	0.0 – 14,457; 10,149
	2018	0.220	23	0.0 – 12,640; 9,580
Outfall 003	2014	0.203	18	4,650 – 14,730; 11,287
	2015	0.414	42	600 – 15,188; 9,851
	2016	0.433	48	0.0 – 12,600; 9,023
	2017	0.189	26	0.0 – 12,936; 7,276
	2018	0.236	28	0.0 – 12,071; 8,436

2.2.1 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 previously issued permit but did not have corresponding effluent limits, include total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH). Table 2 provides a summary of observed ranges and averages of monitoring results in units of micrograms per liter (µg/L) and a comparison to water quality criteria where applicable. Table 3 also shows that TAH and TAqH values recorded for all outfalls, were very low for outfalls 002 and 003 and did not result in any exceedances of the criteria. Results for Outfall 001 reflect an exceedance during one discharge event that was traced to maintenance issues associated with the OWS and is considered an upset condition that is not representative of typical effluent characteristics for Outfall 001.

Table 3: Characterization of Parameters Requiring Monitoring Only

Parameter (units)	Water Quality Criteria	Observed Range [1] (Low-High; Average)		
		Outfall 001	Outfall 002	Outfall 003
Annual Flow (mg)	---	0.080 – 0.171; 0.135	0.180 – 0.496; 0.311	0.203 – 0.433; 0.295
TAH (µg/L)	10	2.63 – **252.9**; **17.2**	< 3.4 – < 3.4; < 3.4)	< 3.4 – < 3.4; < 3.4
TAqH (µg/L)	15	2.90 – **253.8**; **17.4**	0.022 – < 3.56; < 3.33	< 3.45 – < 3.56; < 3.55

Notes:

1. Values that exceed water quality criteria are shown in bold.

Because the contained water is from precipitation and meets water quality criteria, the discharges appear to meet the definition of storm water, except for the upset condition for Outfall 001. Based on this characterization data, a mixing zone does not appear to be necessary and, after removing the outlier on Outfall 001, there is no reasonable potential for TAH and TAqH to exceed, or contribute to an exceedance, of water quality criteria for any of the outfalls.

2.2.2 Characterization of Discharge Parameters with Limits

DEC examined limited parameters by reviewing DMR data from August 2014 through November 2018 and compared it to numeric limits under the Permit; narrative limitations (i.e. sheen observations) were not included. The parameters reviewed include pH, oil and grease, and TOC. Table 4 provides a summary of observed ranges and averages of compliance monitoring results for each outfall and compares the results to existing permit limits.

Table 4: Characterization of Parameters with Limits

Parameter (Units)	Existing Limit		Observed Range [1] (Low-High, Average)		
	MDL	AML	Outfall 001	Outfall 002	Outfall 003
pH [2] (su)	6.5 < pH < 8.5		6.55 – 8.33; 7.31	6.61 – 8.40; 7.50	6.54– 8.42; 7.44
Oil and Grease (mg/L)	15	NA	< 4.0 – 7.0, 4.88	< 3.0 – 6.0; 4.31	< 3.0 – 6.0; 4.30
TOC (mg/L)	110	NA	< 1.8 – 18.0; 6.64	< 1.2 – 15.0; 5.56	1.1 – 11.0; 5.20

Notes:

1. Values that exceed limits are shown in bold.
2. Median values are used instead of average values for pH.

Table 4 shows that the reported values for oil and grease and TOC were low and did not result in an exceedance of limits for any parameter at Outfalls 001, 002 and 003. For these three discharges, the assumption that the contained water is storm water appears further justified based on the reported low concentrations of oil and grease and TOC. In addition, the low results for TOC and oil and grease suggest the previously established TBELs for oil and grease and TOC may not be appropriate for controlling the effluent quality and supports re-evaluation.

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 shows no limit exceedances during this time period.

2.3.2 Reporting Violations

There have been no non-reporting violations during the period of review.

3.0 RECEIVING WATERBODY

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 by July 1, 1977. Per 18 AAC 83.435, APDES permits must include conditions to ensure compliance with 18 AAC 70 – Alaska Water Quality Standards (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 discharge.

3.2 Water Quality Status of Receiving Water

Any part of a waterbody for which 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.

St. Paul Harbor is not included in *Alaska's Final 2014/2016 Integrated Water Quality Monitoring and Assessment Report*, November 2, 2018 (*2014/2016 Integrated Report*) as being impaired. Accordingly, no TMDL has been developed for the receiving water.

4.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

4.1 Basis for Effluent Limits

The Department prohibits the discharge of pollutants to waters of the US (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 Water Quality Standards (WQS), (3) and comply with other state requirements that may be more stringent.

The CWA requires that the limits for a particular parameter to be the more stringent of either TBELs 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 water body 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. WQBEL limits for all three authorized outfalls include sheen/residue and pH.

4.1.1 Technology Based Effluent Limits

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. 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 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 PSI Permit. However, one outfall from the U.S. Coast Guard 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 PSI Permit; Outfall 002 from the USCG Kodiak facility was excluded because there were elevated levels of TOC that were determined to not be related to hydrocarbon sources. Table 5 shows the summary of the statistics used to reevaluate the applicability of the existing TOC TBEL and Table 6 the summary for the applicability of the oil and grease TBEL.

Table 5: Statistical Evaluation of TOC in Four Bulk Fuel Permits

Statistical Parameter	Petro Star Inc. AK0029441			All Four Permits
	001	002	003	
Maximum	18.00	15.00	11.00	23.4
Minimum	< 1.80	< 1.20	1.10	< 0.05
Average	6.64	5.65	5.20	3.53
Standard Deviation	3.66	2.9	2.33	3.45
Coefficient of Variation	0.55	0.51	0.45	0.98
Data Set	49	44	45	435
Detected Data	43	33	28	391
Percent Detected	88%	75%	62%	90 %

Table 6: Statistical Evaluation of Oil and Grease in Four Bulk Fuel Permits

Statistical Parameter	Petro Star Inc. AK0029441			All Four Permits
	001	002	003	
Maximum	7.00	3.00	6.00	8.48
Minimum	< 4.00	< 3.00	< 3.00	<1.00
Average	4.88	4.31	4.30	2.73
Standard Deviation	0.88	0.82	0.78	1.66
Coefficient of Variation	0.18	0.19	0.18	0.61
Data Set	47	42	43	483
Detected Data	33	13	10	83
Percent Detected	70%	31%	23%	17%

None of the discharges evaluated during this reissuance had results for TOC that indicate the TBELs are applicable; the calculated average concentrations for the three outfalls were < 6% of the 110 mg/L TBEL for TOC (See Table 5). For all three outfalls, the calculated average for oil and grease was < 30% of the 15 mg/L TBEL for oil and grease with 58% of the sample results reported below detection. (See Table 6). Hence, the effluent does not appear to be impacted by hydrocarbons and the oil and grease and TOC limits do not appear applicable; the effluent characteristics generally resemble 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 the comparison of statistical parameters in Table 5 and Table 6, oil and grease and TOC do not appear to be applicable TBELs for the three outfalls based on the observed averages compared to the 15 mg/L limit for oil and grease and the 110 mg/L limit for TOC, as well as the low occurrence of detectable concentrations. The effluent characteristics resemble that of

storm water. 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.

4.1.2 Water Quality Based Effluent Limits (WQBELs)

Per 18 AAC 70.020(b)(A)(i), pH must be less than 6.5 or greater than 8.5 at all times ($6.5 \leq pH \leq 8.5$). Similar to the existing Permit, DEC sets the WQBEL for pH to be equal to the quality criterion based 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 secondary containment 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 routine quarterly testing) prior to the discharge of treated secondary containment water. If a spill or a sheen is observed in the SCA, the permittee must conduct monthly monitoring for TAH and TAqH until four consecutive results are below water quality criteria. After four consecutive sample results are below criteria, quarterly monitoring becomes reinstated as the frequency.

Similar to petroleum hydrocarbons, the Alaska water quality standards[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 discharges authorized by the Permit.

4.2 Effluent Limits and Monitoring Requirements

Per 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 as required in 40 CFR 136 are required for analyzing collected samples. When appropriate, DEC requires development and implementation of specific best management practices (BMPs) as described in Sections 7.3.1 and 7.3.2.

4.3 Monitoring Requirements

During term of the Permit, the permittee must monitor effluent from Outfall 001, Outfall 002, and Outfall 003 as described in Table 7.

Table 7: Effluent Limits and Monitoring Requirements Outfalls 001 – 003

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

Notes:

1. Flow volumes and visual observations for sheen must be measured daily when discharges occur and recorded in a daily log. Report total monthly flow volumes 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 for details for reporting TAH and TAqH results below detection.
3. Monitoring for TAH and TAqH must be conducted quarterly initially. After four consecutive monitoring events that 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.

4.3.1 Reporting TAH and TAqH Results

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

4.4 Electronic Discharge Monitoring Reports

4.4.1 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 (http://cdxnodengn.epa.gov/oeca-netdmr-web/action/login). DMRs submitted in compliance with the E-Reporting Rule are not required to be submitted as described in 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 WET reports, mixing zone receiving water data, etc.), shall be included as an attachment to the NetDMR submittal. DEC has established an e-Reporting Information website (http://dec.alaska.gov/water/Compliance/EReportingRule.htm) that contains general information about this new reporting format. Training materials and webinars for NetDMR can be found at https://netdmr.zendesk.com/home.

4.4.2 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 (http://dec.alaska.gov/water/Compliance/EReportingRule.htm) 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.

4.5 Additional Monitoring

4.5.1 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 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.

4.5.2 Optional Additional Monitoring by Permittee

The permittee 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 (e.g., calculation of averages) on eDMRs as required by the Permit and Standard Conditions Part 3.2 and 3.3 (Permit Appendix A).

4.5.3 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(e)(3)(i), a method approved under 40 CFR 136 is sufficiently sensitive when:

> (A) The method minimum level (ML) is at or below the level of the applicable water quality criterion for the measured parameter, or
> (B) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge (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 for a single analyte is not applicable to TAH and TAqH due to the summation of multiple of 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.

5.0 ANTIBACKSLIDING

Per 18 AAC 83.480, "effluent limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the 2012 Permit." Per 18 AAC 83.480, 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(b), CWA Section 402(o) and CWA Section 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 Section 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 WQS (based on the waterbody TMDL or the waste load allocation) or the designated use which is not being attained is removed in accordance with the WQS regulations.

CWA Section 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 Section 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

TBELs for TOC and oil and grease have been discontinued at all outfalls due to analytical data from August 2014 through November 2018 being consistently and significantly well below limits and indicating no correlation with hydrocarbon sources (See Section 4.1.1). The basis for removing these TBELs is based on obtaining new data since the first imposition of the limits that indicate assigning the TBELs based on similarity with contaminated runoff from refineries was a technical error. The Department finds the changes outlined above are consistent with 40 CFR 122.44(l) and 18 AAC 83.480 and does not result in a violation of WQS.

6.0 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* (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 at this time no Tier 3 waters have been designated in Alaska.

The marine waters of Saint Paul 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, environmental monitoring studies, and information on existing uses in the vicinity of the discharge 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 discharge shall not cause or contribute to a violation of WQS. As previously stated the marine waters of Saint Paul 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.

7.0 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

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 31st of each year the Permit remains in effect.

7.3.1 Specific BMP Plan Requirements for Storm Water

The permittee must develop and implement BMPs to eliminate contamination to the extent practicable in storm water at PSI using storm water pollution prevention practices. For the Permit, the term "storm water" is given the meaning of "storm water" associated with industrial activity as defined in 40 CFR 122.26(b)(14). The BMP must specify monitoring storm water discharges to meet the minimum monitoring requirements of 40 CFR 122(i)(4)(i, ii, and iii). If the evaluation required by 40 CFR 122.44(i)(4)(i) identifies that additional measures are necessary to reduce pollutant loading, then the storm water pollution prevention practices shall be amended within six months to appropriately reduce pollutant loading. If the permittee obtains a "No Exposure Certification" from DEC for the entire facility, the permittee becomes excluded from this specific BMP requirement. The "No Exposure Certification" must be kept on file and made available to DEC upon request.

7.3.2 Outfall 001 Specific BMP Plan Requirements

In addition to implementing and updating a BMP Plan that achieves the overall objectives, the permittee must develop specific BMPs to implement preventative maintenance and other procedures related to the treatment system performance affecting compliance on Outfall 001. These BMPs include, but may not be limited to, operation and maintenance of the treatment system, preventing contamination from illicit chemical sources from infrastructure maintenance, and ensuring commingling of contaminated sources (i.e., contaminated water from the Upper and Lower SCAs) does not overwhelm the treatment capabilities of the system that can lead to exceedances of TAH or TAqH.

8.0 OTHER LEGAL REQUIREMENTS

8.1 Endangered Species Act

The Endangered Species Act (ESA) requires federal agencies to consult with 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 with these federal agencies regarding permitting actions. DEC did however voluntarily send an email to both the FWS and NOAA on June 4, 2019 notifying the agencies of current permit development activities and requesting critical habitat listings in the vicinity of the terminal and has not received a response from either agency.

DEC consulted the NOAA Marine Mammal Species Range and Critical Habitat Interactive map located online at https://alaskafisheries.noaa.gov/esa-consultations and accessed the ESA Species interactive map to identify ESA species of concern in the waters adjacent to the facility.

DEC also accessed the FWS Information, Planning, and Conservation System website at https://ecos.fws.gov/ipac/location. The Department used this website to gain an approximate

determination that the greater area surrounding the facility that the location overlaps critical habitat for the Northern Sea Otter (*Enhydra lutirs kenyoni*).

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. As a State agency, DEC is not required to consult with these federal agencies regarding EFH; DEC did however voluntarily send an email request to FWS on March 22, 2019 notifying the agency of current permit development activities and requesting critical habitat listings in the vicinity of the terminal and has not received a response.

DEC additionally accessed EFH information at NOAA's Alaska Essential Fish Habitat (EFH Mapper located at https://www.fisheries.noaa.gov/resource/map/alaska-essential-fish-habitat-efh-mapper. The tool identified habitat areas of particular concern in the vicinity of the discharge and reported EFH for 19 species of rockfish (*Sebastes ssp*.), two species of flounder (*Athesresthes spp.*), two species of skate (*Bathyraja spp.*), five species of salmon (*Oncorhynchus spp.*), the Alaska plaice (*Pleuronectes quadrituberculatus*), six species of sole, (*Solea* spp., *Lepidopsetta spp*., and *Glyptocephalus spp.*), the Atka mackerel (*Pleurogrammus monoterygius*), two species of sculpin (*Myoxocephalus spp.*, and *Hemitripterus spp.*), Pacific cod (*Gadus macrocephalus*), the giant octopus (*Enteroctopus dofleini*), Pacific ocean perch (*Sebastes alutus*), two species of pollock (*Theragra chalcogramma* and *Gadus chalcogrammus*), sablefish (*Anoplopoma fimbria*), Yellow Irish lord (*Hemilepidotus jordani*) and finally, the Weathervane scallop (*Patinopecten caurinus*).

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.

An Ocean Discharge Criteria Evaluation (ODCE) is not required for the reissued permit. 40 CFR 125, Subpart M requires an ODCE for a point source that occurs seaward of the baseline of the territorial sea. Because Petro Star Inc., Kodiak Terminal is located landward of the baseline, development of an ODCE is not required.

8.4 Permit Expiration

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

9.0 References

1. Alaska Department of Environmental Conservation, *Alaska's Final 2014/2016 Integrated Water Quality Monitoring and Assessment Report*.
2. Alaska Department of Commerce, Community, and Economic Development. Division of Economic Development. *2009 Alaska Economic Performance Report*. February 2011.
3. 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.
4. Alaska Department of Environmental Conservation. *Alaska's Final 2010 Integrated Water Quality Monitoring and Assessment Report*.
5. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through June 26, 2003.
6. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through July 1, 2008.
7. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through April 8, 2012.
8. Alaska Department of Environmental Conservation. *18 ACC 70. Water Quality Standards*, as amended through February 19, 2016.
9. Alaska Department of Environmental Conservation. *18 AAC 83. Alaska Pollutant Discharge Elimination System Program*. As amended Through October 23, 2008.
10. Alaska Department of Environmental Conservation. 18 ACC 72. Wastewater Disposal, as amended through December 23, 2009.
11. Alaska Department of Environmental Conservation. *Interim Antidegradation Implementation Methods*. Division of Water. Policy and Procedure No. 05.03.103. July 14, 2010.
12. North Pacific Fuel-Kodiak Terminal. Oil Discharge Prevention and Contingency Plan., 4th Revision May 2019.
13. 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.
14. 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.
15. United States Fish and Wildlife Service, 2013. *List of Endangered, Threatened, Proposed Candidate and Delisted Species*, May 24, 20

APPENDIX A - FIGURES

Figure 1: Area Map, PSI Kodiak Terminal

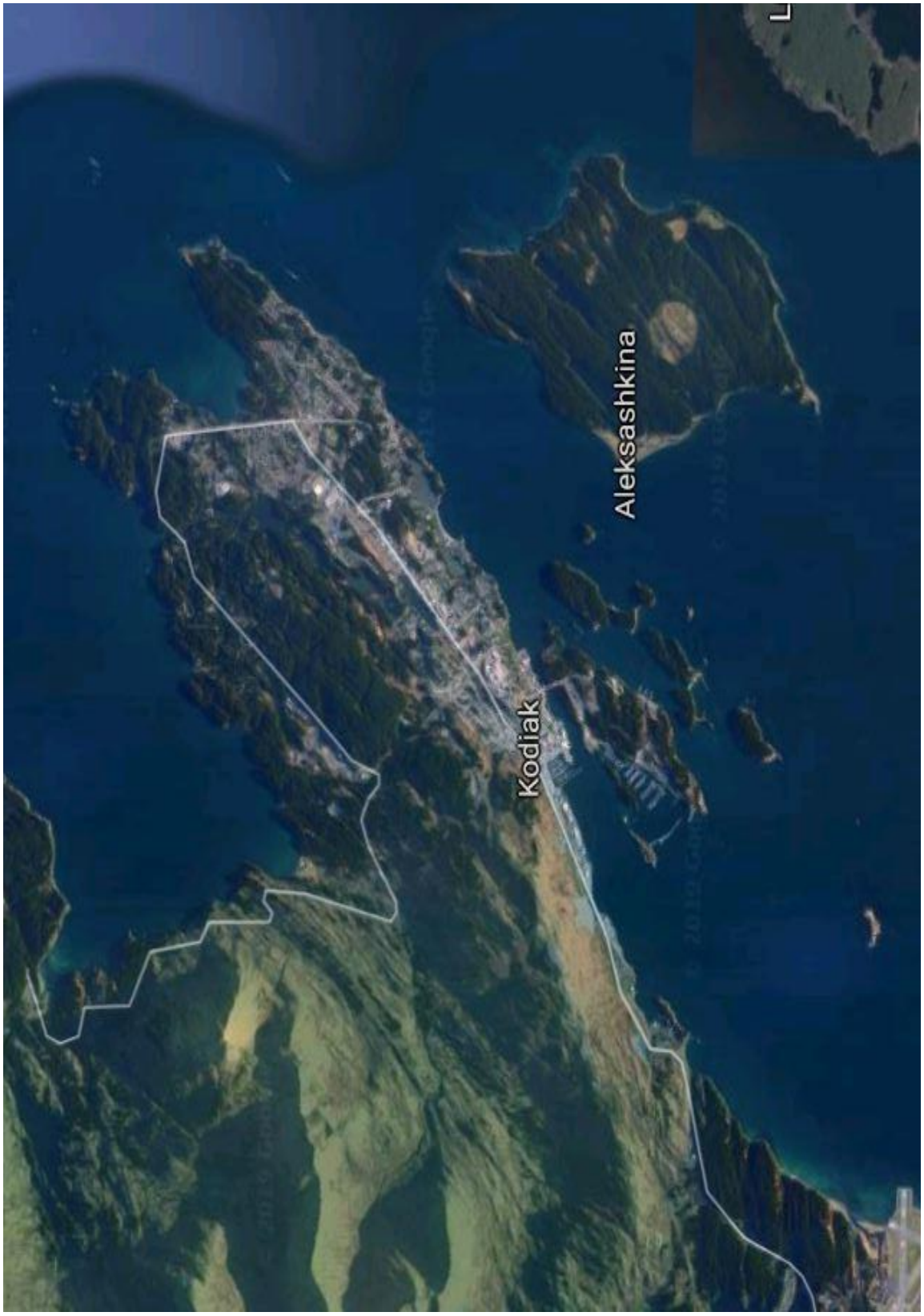

Figure 2: Vicinity Map, PSI Kodiak Terminal

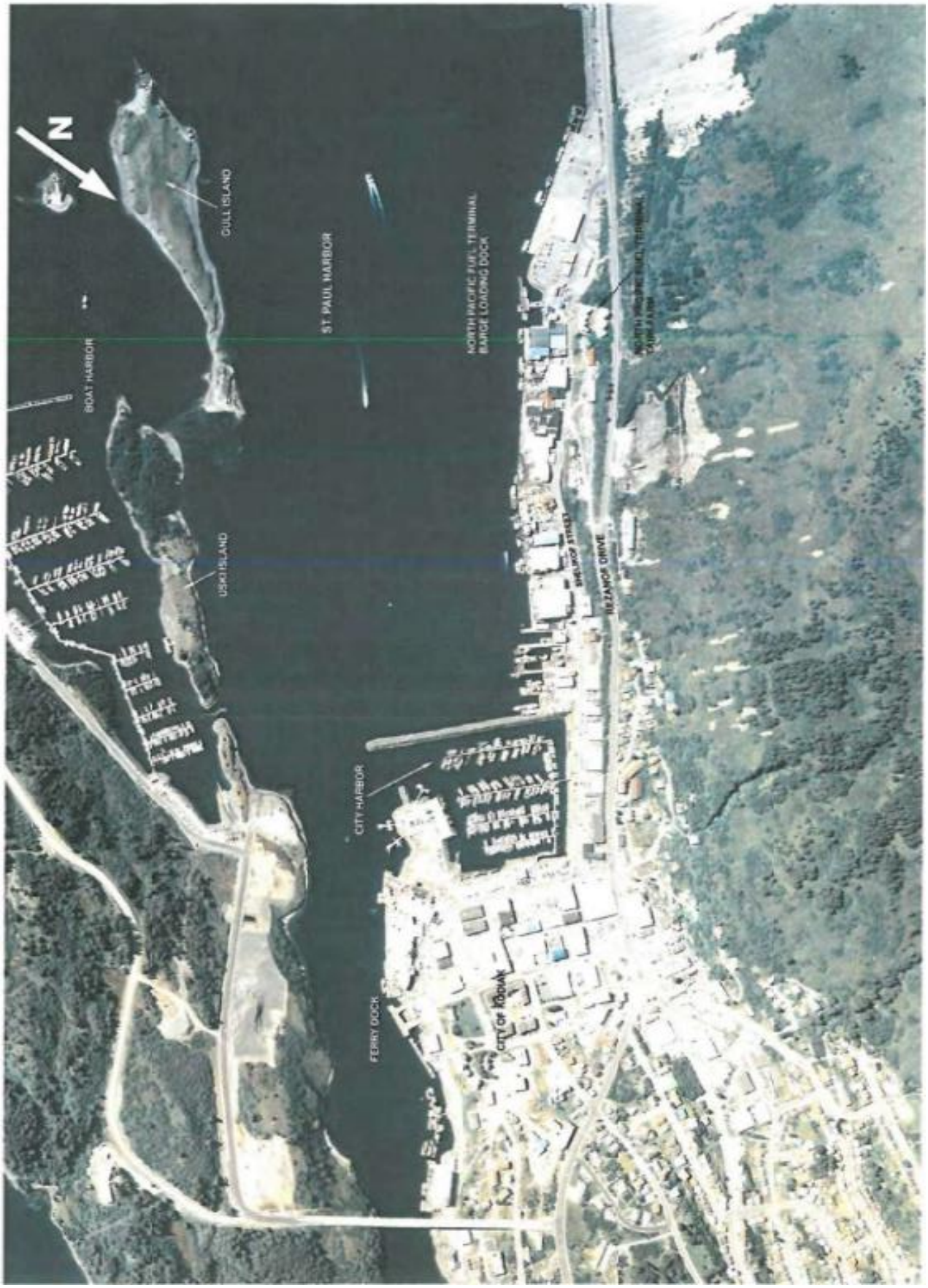

Figure 3: Schematic, PSI, Kodiak Terminal

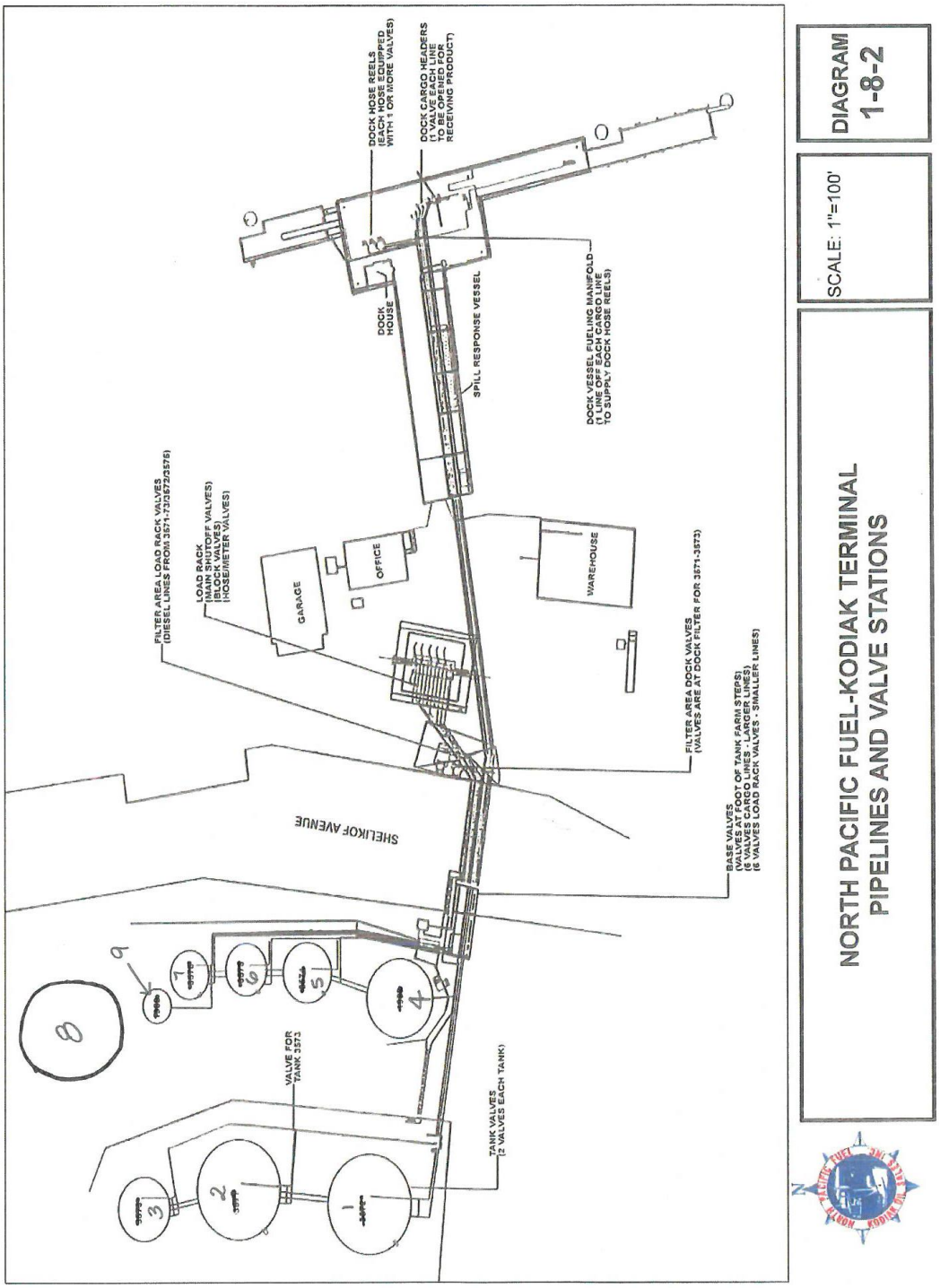
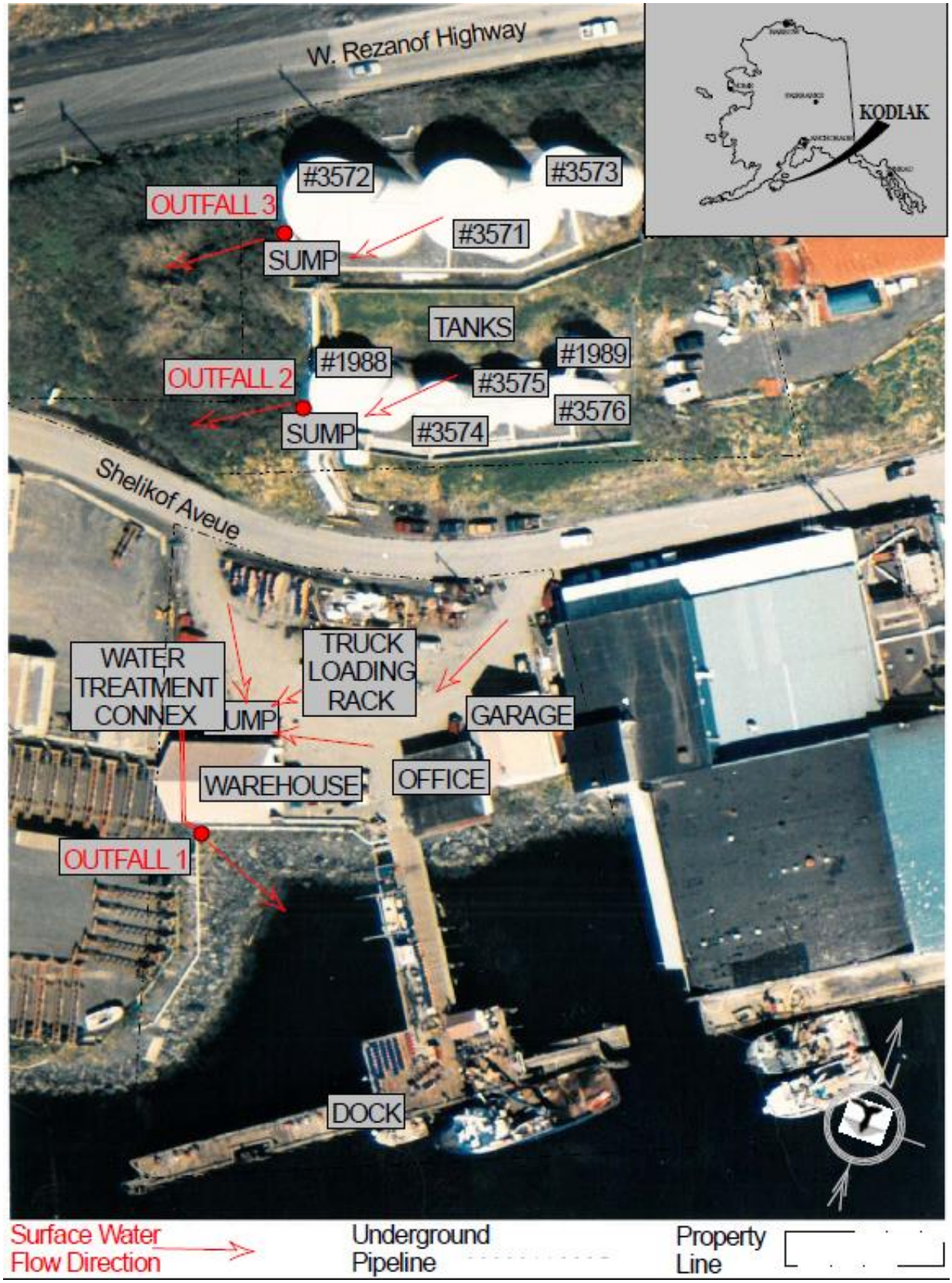
Figure 4: Tanks and Infrastructure, PSI Kodiak Terminal