NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
FINAL FACT SHEET
AUGUST 2019

Facility Name:	American Samoa Terminal
Permittee Name:	Pacific Energy South West Pacific, Ltd. P.O. Box 488 Pago Pago, AS 96799
Type of Facility:	Petroleum Bulk Storage Terminal & Transfer SIC Code: 5171
Facility Location:	488 Tank Farm Road Pago Pago, AS 96799
Contact Person(s):	Nicholas F. King, Terminal Manager (684) 633-4101
NPDES Permit No.:	AS0020028

I. STATUS OF PERMIT

Pacific Energy South West Pacific Ltd. ("Pacific Energy" or "permittee") has applied for renewal of its National Pollutant Discharge Elimination System ("NPDES") permit pursuant to U.S. Environmental Protection Agency ("USEPA") regulations at Title 40, Code of Federal Regulations ("CFR") § 122.21, to authorize the discharge of treated industrial wastewater and commingled stormwater[1] runoff from the American Samoa Terminal into the adjacent Pago Pago Harbor. The American Samoa Terminal (the "Terminal" or "facility") is owned by the American Samoa Government and operated by Pacific Energy and receives and distributes a variety of fuel types including gasoline, diesel, and A-1 jet fuel. As the American Samoa Environmental Protection Agency ("ASEPA") does not have primary regulatory responsibility for administering the NPDES permitting program, USEPA is issuing the NPDES permit renewal incorporating both federal standards and American Samoa ("AS") water quality standards.

The discharge from the facility was regulated under NPDES Permit No. AS0020028, which became effective on October 1, 2010, and expired on September 30, 2015. Pacific Energy submitted a permit application on December 2, 2015, which USEPA determined was late and incomplete pursuant to 40 CFR § 122.21(d), which requires a new permit application to be submitted at least 180 days prior to the permit expiration date. Thus, USEPA did not

[1]Commingled stormwater is stormwater that mixes with process wastewater generated by industrial activities. When stormwater mixes with process wastewater, it is then all considered to be process wastewater. Commingled stormwater is thus subject to all the same permit conditions applicable to process wastewater and reference to process wastewater in the permit may include commingled stormwater.

administratively continue the 2010 NPDES permit and it expired on September 30, 2015. (40 CFR § 122.6).

On June 28, 2018, Pacific Energy submitted a new permit application which USEPA determined was complete. This fact sheet is based on the information submitted by Pacific Energy in its 2015 and 2018 permit applications and discharge data, along with the appropriate laws and regulations. Pursuant to Section 402 of the Clean Water Act ("CWA"), USEPA is proposing issuance of the NPDES permit renewal to Pacific Energy for the discharge of industrial wastewater, including but not limited to fuel tank bottom water draws, loading rack drainage, tank farm drainage, fuel rack drainage, hose pressure hydro test waters, and commingled stormwater runoff from the Terminal to Pago Pago Harbor.

This permittee has been classified as a minor discharger.

II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

Permit Condition	Previous Permit (2010 – 2015)	Re-issued permit (2019 – 2025)	Reason for change
DMR submittal	Hardcopy accepted	Switch to e-reporting	EPA e-reporting Rule
Updated QA Manual submittal	Develop QA manual	Update QA Manual	EPA received an insufficient Manual
Updated Pollution Prevention Plan submittal	Develop Plan	Develop Plan	EPA did not receive Plan

III. GENERAL DESCRIPTION OF FACILITY

The American Samoa Terminal is located adjacent to Pago Pago Harbor and is comprised of a main petroleum terminal, pipelines, and a fuel dock located on the harbor to the west. The Terminal receives by ship a variety of fuel types including gasoline, low-sulfur diesel, high-sulfur marine diesel, and A-1 jet fuel at the fuel dock, which is located half a mile to the west with three underground pipelines leading to the main petroleum terminal. The Terminal stores fuel for distribution and delivers fuel via pipelines to and from the fuel dock.

The Terminal is located in the village of Utulei and consists of ten functioning tanks for storage and distribution. The capacities of the tanks range from 525,000 gallons to 2.3 million gallons. The tanks are double-bottomed and roofed. The tank farm and fueling areas are bermed, graded, and sized to provide secondary containment.

There are also a loading rack and three oil/water separators at the Terminal. The loading rack is where fuel is loaded into 5,800-gallon tanker trucks through one of four different hoses, depending on fuel type. Fuel pumping at the bottom loading rack progresses at a rate of 600 gallons per minute. In the event of an emergency, fuel spills from the bottom loading rack area into drains which feed into an underground 6,000-gallon tank. The contents of this 6,000-gallon tank are pumped into an open top surge tank that currently acts as a sump for all drainage from the loading rack area.

Pacific Energy also operates an associated satellite tank farm located at the airport, which supplies the airport fuel but is not covered by this permit.

IV. DESCRIPTION OF RECEIVING WATER

Pago Pago Harbor has been designated by the AS Government to be developed into a transshipment center for the South Pacific, according to American Samoa Water Quality Standards ("ASWQS"), 2013 Revision [Administrative Rule No. 001-2013]. Recognizing its unique position as an embayment where water quality has been degraded from the natural condition, the AS Environmental Quality Commission ("EQC") has established a separate set of standards for Pago Pago Harbor. The protected uses listed in ASWQS § 24.0205(e)(1) include:

(i) Recreational and subsistence fishing;
(ii) Boat-launching ramps and designated mooring areas;
(iii) Subsistence food gathering; e.g., shellfish harvesting;
(iv) Aesthetic enjoyment;
(v) Whole and limited body-contact recreation, e.g., swimming, snorkeling, and scuba diving;
(vi) Support and propagation of marine life;
(vii) Industrial water supply;
(viii) Mari-culture development;
(ix) Normal harbor activities; e.g., ship movements, docking, loading and unloading, marine railways, and floating drydocks; and
(x) Scientific investigations.

The Pago Pago Watershed ocean shoreline was listed in 2004 under CWA Section 303(d) as impaired due to enterococci. USEPA approved a TMDL for Pago Pago Inner Harbor for mercury and PCBs in fish tissue in February 2007, but no wasteload allocations were designated for this facility (Tetra Tech, 2006). A TMDL for the pollutant enterococcus in beaches and streams was completed in 2013 and approved by USEPA in 2015, but no wasteload allocations were designated for this facility.

V. DESCRIPTION OF DISCHARGE

The Terminal has three outfalls which discharge to Pago Pago Harbor: Outfalls 001, 002 and 003. These three outfalls drain six areas designated as Areas A, B, C, D, E and F (see Figure 1). Area A drains stormwater runoff from a paved parking lot and other non-operational paved areas, which all flow through Outfall 001. Because stormwater from areas separate from industrial activities are not required to be permitted according to 40 CFR §§ 122.26(a) and (b)(14), Outfall 001 is not covered by this permit. Areas B, C and D are active industrial areas at the tank farm which all flow through the permitted Outfall 002. Area B encompasses the bottom fill loading rack and adjacent paving. Area C includes six jet or diesel fuel storage tanks (Numbers 7, 8, 10, 12, 13 and 14) inside a secondary containment berm. Area D encompasses four gasoline or diesel tanks (Numbers 1, 2, 15 and 16) within a secondary containment berm. Area E is a decommissioned tank farm from which non-contact stormwater runoff is unregulated per 40 CFR §§ 122.26(a) and (b)(14). Area F is the fuel dock which drains through the permitted Outfall 003.

Outfall 002

Outfall 002 has four internal compliance sampling points, referred to as sampling points 002B, 002BX, 002C and 002D. These four points are named according to the area drained – 002B and 002BX drain Area B, 002C drains Area C, and 002D drains Area D. Area B drains the loading rack which may contain washdowns and spills associated with loading fuel into delivery trucks, and commingled stormwater runoff. In the event of an emergency, fuel spills from the loading rack area drain into the underground tank and are pumped to the open top surge tank (sampling point 002BX) that also currently acts as a sump for all drainage from Area B. Drainage from the 002BX sump is not currently treated by an oil/water separator prior to discharge at Outfall 002.

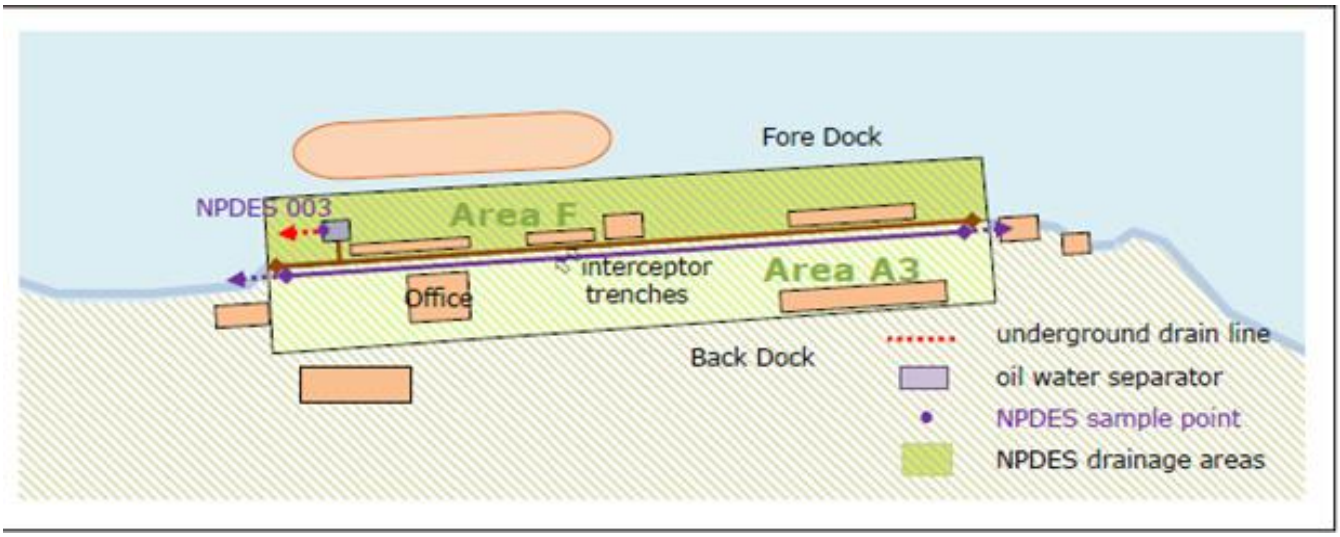
Areas C and D drain released tank bottom water draws, spills, and commingled stormwater runoff from within the tank farm's secondary containment berms. Tank bottom water draws are conducted daily in Area C and weekly in Area D as a part of regular operations at the Terminal, where water condensate that separates in the fuel storage tanks is drained out of the bottom of each tank and onto the ground. This water is contaminated with residual fuel. Drainage from Area C is treated at oil/water separator 002C, and drainage from Area D is treated at oil/water separator 002D, prior to discharge at Outfall 002.

Figure 1. American Samoa Terminal - Layout

Outfall 003

Area F drains the fuel dock, which may contain spills, hose pressure test waters, and commingled stormwater, to Outfall 003 (see Figure 2). Hose pressure testing (also known as "hydrotesting") involved pressurizing fuel hoses with water to test for leaks and only occurs at the fuel dock. Hydrotesting water, mixed with any residual fuel product inside the hose, is drained onto the dock and flows through an interceptor trench to an oil/water separator prior to discharge at Outfall 003. The fore dock houses the delivery hose reels and valving within separate secondary containment berms and is sloped to drain to the interceptor trench. During rains, stormwater commingles with residual fuel products on the dock surface and flows through the interceptor trench to the oil/water separator.

Figure 2. American Samoa Terminal, Fuel Dock – Layout



A. Application Discharge Data

As part of the application for permit renewal, the permittee provided data from an analysis of the facility's treated wastewater discharge, shown in Table 1. (*These discharge data are from either the December 2015 and/or June 2018 permit applications. ND = not detected, NA = not available)

Table 1. Application Discharge Data*

Parameter	Units	Previous Permit Effluent Limitations			Discharge Monitoring Data			Monitoring Requirements	
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Average Weekly	Highest Maximum Daily	Monitoring Frequency	Sample Type
Outfall 002									
Flow	MGD	Monitoring Only			--	--	0.000178 or 178 gpd	1/Week	Estimate
Oil & Grease	mg/l	--	--	15	--	--	1.90	1/Month	Grab
pH	std unit	Not <6.5 SU, Not >8.6 SU			7.5	7.5	7.5	1/Week	Grab
Turbidity	NTU	--	--	0.75	0.41	0.41	0.41	1/Week	Grab
Lead	µg/l	6.9	--	14	73.8	73.8	73.8	1/Month	Grab
Benzene	µg/l	Monitoring Only			--	--	ND	1/Month	Grab
Ethylbenzene	µg/l	2,100	--	4,221	--	--	1.14	1/Month	Grab
Toluene	µg/l	Monitoring Only			--	--	1.08	1/Month	Grab
Xylene	µg/l	Monitoring Only			--	--	ND	1/Month	Grab
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only			--	--	NA	1/Quarter	Grab
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only			--	--	NA	1/Year	Grab
Zinc	µg/l	47	--	95	--	--	0.18	1/Month	Grab
Ammonia	mg/L	Monitoring Only			--	--	NA		Grab
Total Nitrogen	µg/l	163	--	328	--	--	0.562	1/Month	Grab
Total Phosphorus	µg/l	24.5	--	49.1	--	--	0.10	1/Month	Grab
Biochemical Oxygen Demand (5-day)	mg/L	Monitoring Only			--	--	NA	1/Month	Grab
Chemical Oxygen Demand	mg/L	Monitoring Only			--	--	13.9	1/Month	Grab
Total Suspended Solids	mg/L	Monitoring Only			--	--	14.3	1/Month	Grab
Total Dissolved Solids	mg/L	Monitoring Only			--	--	NA	1/Month	Grab
Salinity	ppt	Monitoring Only			--	--	NA	1/Month	Discrete
Temperature	ºC	Monitoring Only			--	--	NA	1/Month	Discrete
Outfall 003									
Flow	MGD	Monitoring Only			--	--	0.0002 or 200 gpd	1/Week	Estimate
Oil & Grease	mg/l	--	--	15	--	--	1.90	1/Month	Grab
pH	std unit	Not <6.5 SU, Not >8.6 SU					NA	1/Week	Grab
Turbidity	NTU	--	--	0.75	--	--	NA	1/Week	Grab
Lead	µg/l	6.9	--	14	--	--	ND	1/Month	Grab
Benzene	µg/l	Monitoring Only			--	--	ND	1/Month	Grab
Ethylbenzene	µg/l	2,100	--	4,221	--	--	ND	1/Month	Grab
Toluene	µg/l	Monitoring Only			--	--	ND	1/Month	Grab
Xylene	µg/l	Monitoring Only			--	--	1.24	1/Month	Grab
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only			--	--	NA	1/Quarter	Grab
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only			--	--	NA	1/Year	Grab

B. Discharge Monitoring Report ("DMR") Review from October 2012 to September 2018

Pacific Energy did not regularly submit DMRs for the period from October 2012 to September 2015, instead submitting them all at once on July 27, 2017. The DMRs submitted contained no monitoring data, instead stating only "No Discharge, Analysis Not Conducted/No Sample" or "No Discharge, Operation Shutdown." Pacific Energy did not submit DMRs between October 2015 and September 2018.

Parameter	Units	2010 Permit Effluent Limitations			Discharge Monitoring Data			Monitoring Requirements	
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Average Weekly	Highest Maximum Daily	Monitoring Frequency	Sample Type
Outfall 002									
Flow	MGD	Monitoring Only			--	--	Not reported	1/Week	Estimate
Oil & Grease	mg/l	--	--	15	--	--	Not reported	1/Month	Grab
pH	std unit	Not <6.5 SU, Not >8.6 SU			--	--	Not reported	1/Week	Grab
Turbidity	NTU	--	--	0.75	--	--	Not reported	1/Week	Grab
Lead	µg/l	6.9	--	14	--	--	Not reported	1/Month	Grab
Benzene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Ethylbenzene	µg/l	2,100	--	4,221	--	--	Not reported	1/Month	Grab
Toluene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Xylene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only			--	--	Not reported	1/Quarter	Grab
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only			--	--	Not reported	1/Year	Grab
Zinc	µg/l	47	--	95	--	--	Not reported	1/Month	Grab
Ammonia	mg/L	Monitoring Only			--	--	Not reported		Grab
Total Nitrogen	µg/l	163	--	328	--	--	Not reported	1/Month	Grab
Total Phosphorus	µg/l	24.5	--	49.1	--	--	Not reported	1/Month	Grab
Biochemical Oxygen Demand (5-day)	mg/L	Monitoring Only			--	--	Not reported	1/Month	Grab
Chemical Oxygen Demand	mg/L	Monitoring Only			--	--	Not reported	1/Month	Grab
Total Suspended Solids	mg/L	Monitoring Only			--	--	Not reported	1/Month	Grab
Total Dissolved Solids	mg/L	Monitoring Only			--	--	Not reported	1/Month	Grab
Salinity	ppt	Monitoring Only			--	--	Not reported	1/Month	Discrete
Temperature	°C	Monitoring Only			--	--	Not reported	1/Month	Discrete
Outfall 003									
Flow	gpd	Monitoring Only			--	--	Not reported	1/Week	Estimate
Oil & Grease	mg/l	--	--	15	--	--	Not reported	1/Month	Grab
pH	std unit	Not <6.5 SU, Not >8.6 SU			--	--	Not reported	1/Week	Grab
Turbidity	NTU	--	--	0.75	--	--	Not reported	1/Week	Grab
Lead	µg/l	6.9	--	14	--	--	Not reported	1/Month	Grab
Benzene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Ethylbenzene	µg/l	2,100	--	4,221	--	--	Not reported	1/Month	Grab
Toluene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Xylene	µg/l	Monitoring Only			--	--	Not reported	1/Month	Grab
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only			--	--	Not reported	1/Quarter	Grab
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only			--	--	Not reported	1/Year	Grab

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

The CWA requires point source dischargers to control the amount of pollutants that are discharged to waters of the United States. The control of pollutants is established through effluent limitations and other requirements in NPDES permits. When determining effluent limitations, USEPA must consider limitations based on the technology used to treat the pollutant(s) (i.e., technology-based effluent limits) and limitations that are protective of water quality standards (i.e., water quality-based effluent limits).

A. Applicable Federal Technology-Based Effluent Limitations

1. Effluent Limitations Guidelines

USEPA has established national standards based on the performance of treatment and control technologies for wastewater discharges to surface waters for certain industrial categories. Effluent limitations guidelines represent the greatest pollutant reductions that are economically achievable for an industry and are based on Best Practicable Control Technology ("BPT"), Best Conventional Pollutant Control Technology ("BCT"), and Best Available Technology Economically Achievable ("BAT"). (Sections 304(b)(l), 304(b)(4), and 304(b)(2) of the CWA respectively.)

There are no Effluent Limit Guidelines ("ELGs") for petroleum bulk storage terminals (SIC 5171). USEPA considered the need for ELGs for petroleum bulk storage terminals in the *Technical Support Document for the 2004 Effluent Guidelines Program Plan* but concluded that regulation of this industry category under individual permits was adequate (USEPA, 2004). Refer to Part VI.B.3 for a list of typical pollutants of concern for this type of facility.

In accordance with 40 CFR § 122.44(a), the proposed permit includes technology-based effluent limits for oil and grease based on effluent data and the nature of the discharge, consistent with the previous permit. The proposed permit includes monitoring requirements for conventional pollutants, such as biochemical oxygen demand ("BOD"), chemical oxygen demand ("COD"), total suspended solids ("TSS"), and total dissolved solids ("TDS") at sampling points 002C and 002D, as they are commonly found in tank bottom water draws (USEPA, 2004).

2. Oil & Grease

Oil & Grease is commonly found in wastewater and commingled stormwater from petroleum bulk storage facilities. The proposed permit contains a technology-based daily maximum effluent limit of 15 mg/L for oil & grease. The effluent limit for oil and grease is based on USEPA's Best Professional Judgment ("BPJ") related to the development of technology-based effluent limits since (1) there are no applicable ELGs and performance standards for oil and grease, and (2) similar industrial facilities have shown that 15 mg/L can be easily achieved by an oil/water separator. Section 402(a)(l) of the CWA provides for the establishment of BPJ-based effluent limits when ELGs and performance standards are not available for a pollutant of concern. The limit is consistent with similar facilities that treat oily wastewater and stormwater. Consistent with the previous permit, the proposed permit requires a daily maximum effluent limitation of 15 mg/L at sampling points 002B, 002BX, 002C, 002D and 003. Additional monitoring requirements are included to assess compliance with the narrative water quality standards discussed in Part VII below.

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations, or WQBELs, are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an exceedance of any State or Territory water quality standard. (40 CFR § 122.44(d)(1)).

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria within a State or Territory water quality standard, USEPA shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water (40 CFR § 122.44 (d)(1)(ii)).

USEPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* ("TSD") (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers' Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses, and impairments of receiving water
2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

1. Applicable Standards, Designated Uses, and Impairments of Receiving Water

The American Samoa Environmental Quality Commission's 2013 Revisions to ASWQS for Pago Pago Harbor establish water quality standards for the designated uses listed above in Section III (Description of Receiving Water.) In 2008, the coastal waters of the Pago Pago Watershed were listed under CWA Section 303(d) as impaired for enterococcus, mercury, and PCBs. As stated above, in 2007, USEPA approved a TMDL for Pago Pago Inner Harbor for mercury and PCBs in fish tissue, but no wasteload allocations were designated for this facility. USEPA approved a TMDL for enterococcus in 2015 but no wasteload allocations were designated for this facility.

2. Dilution in the receiving water

Section 24.0207 of the ASWQS require that water quality standards be achieved without mixing zones unless the permittee applies and is approved for a mixing zone. The permittee does not have an approved mixing zone, so dilution is not considered in the calculation of water quality-based effluent limits for the proposed permit.

3. Type of industry

The typical waste streams from petroleum bulk storage terminals include tank bottom water draws, hose pressure hydrotest waters, and commingled stormwater runoff. According to the USEPA's *Technical Support Document for the 2004 Effluent Guidelines Program Plan* (USEPA, 2004), the most common pollutants in tank bottom water draws are oil & grease, total petroleum hydrocarbons, biochemical oxygen demand, chemical oxygen demand, total organic carbon, ammonia, total suspended solids, phenols, total dissolved solids, naphthenic acids, benzene, toluene, ethylbenzene, xylene, and surfactants. Stormwater runoff can become contaminated by coming in contact with spills, leaks, improperly stored materials and wastes, and/or an inadequately cleaned facility. Benzene, toluene, ethylbenzene, and xylene are the more volatile components of petroleum hydrocarbons. These pollutants are usually present in petroleum products but are most associated with petroleum products with lighter ranges of hydrocarbons, such as gasoline. Although lead is being phased out as an additive in gasoline, and leaded gasoline has been banned for on-road vehicles, it may still be used for off-road use, such as marine engines. Additionally, unleaded gasoline contains low levels of lead. Since discharges from Outfalls 002 and 003 come into contact with petroleum products, including gasoline, and because oil/water separators are the only means of treatment, it is reasonable to expect that these pollutants may be discharged to surface waters.

4. History of compliance problems and toxic impacts

USEPA's compliance evaluation inspections in July 2017 and May 2018 found that the facility was discharging without an NPDES permit. After its NPDES permit expired, Pacific Energy did not conduct sampling between September 30, 2015 through the present, as required by USEPA's August 2016 Administrative Order to immediately cease discharge. The 2018 inspection also noted that Pacific Energy did not measure effluent flow from monitoring points 002B/BX, 002C, 002D, and 003. Due to lack of effluent discharge data available during the past 5 years, USEPA has been unable to evaluate toxic impacts at the facility.

5. Existing data on toxic pollutants – Reasonable Potential Analysis

Due to the lack of DMR data available over the past 5 years, the Reasonable Potential ("RP") analysis provided in the 2010 permit fact sheet is being used for this permit cycle. For pollutants with effluent data available, USEPA has conducted a RP analysis based on statistical procedures outlined in USEPA's *Technical Support Document for Water Quality-based Toxics Control* herein after referred to as USEPA's TSD (USEPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentration based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming a coefficient of variation of 0.6 and the 99 percent confidence interval (Sections 3.3.2 and 5.5.2 of USEPA's TSD). USEPA calculated the projected maximum effluent concentration for each pollutant using the following equation, where "Ce" is the reported maximum effluent value and the multiplier factor is obtained from Table 3-1 of the TSD.

Projected maximum concentration = Ce × *reasonable potential multiplier factor*

The projected maximum effluent concentration is compared directly to the applicable water quality criterion to determine the reasonable potential for effluent concentration to exceed the receiving water criterion.

Table 2. Summary of Reasonable Potential Statistical Analysis [(1)]

Effluent Parameter	Observed Value	*n*	RP Multiplier[(2)]	Projected Maximum Effluent Concentration	Most Stringent Water Quality Criteria [(3)]	Statistical Reasonable Potential?
Turbidity	6.01 NTU	1	13	78.13 NTU	0.75 NTU	**Y**
Lead	73.8 µg/l	1	13	959.4 µg/l	8.1 µg/l	**Y**
Benzene	ND [(4)]	1	--	--	51 µg/l	N
Ethylbenzene	1,140 µg/l	1	13	14,820 µg/l	2,100 µg/l	**Y**
Toluene	1,080 µg/l	1	13	14,040 µg/l	15,000 µg/l	N
Total Nitrogen (as N)	2,910 µg/l	1	13	37,830 µg/l	200 µg/l	**Y**
Total Phosphorus (as P)	190 µg/l	1	13	2,470 µg/l	30 µg/l	**Y**
Zinc	27 µg/l	1	13	351 µg/l	81 µg/l	**Y**

(1) Parameters considered for RP analysis were parameters found in the previous permit. The values were from the 2015 and/or 2018 permit applications.
(2) RP multiplier is based on 95% probability using (n) and on a coefficient of variation (CV) of 0.6. Because of data variability and of small sample size (i.e. n = 4), EPA used a CV of 0.6 for all parameters.
(3) Water quality standards are based on 2013 American Samoa WQS. Lead, benzene, ethylbenzene, toluene, and zinc are included under Section 24.0206(g), which cites USEPA criteria.
(4) Non-Detects are considered zeroes for the purposes of the RP analysis.

C. Rationale for Numeric Effluent Limits and Monitoring

USEPA evaluated the typical pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentrations that have the reasonable potential to cause or contribute to water quality violations, USEPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

1. Flow

Based on information from the 2018 permit application, monthly flow estimates range from approximately 0.26 million gallons per day ("MGD") to 3.1 MGD at Outfall 002, and from approximately 0.01 MGD to 0.76 MGD at Outfall 003. No limits are established for flow, but flow rates must be monitored and reported. Consistent with the previous permit, monitoring for flow at sampling points 002B, 002BX, 002C, 002D and 003 is required weekly at the time of discharge.

2. Oil & Grease

As discussed in Part VI.A, the proposed permit includes a numerical technology-based effluent limit for oil and grease (15 mg/L). In addition, the proposed permit includes narrative water quality-based requirements for oil and grease pursuant to Section 24.0206(b) of ASWQS, as follows: *"[waters] shall be substantially free from visible floating materials, grease, oil, scum, foam, and other floating material attributable to sewage, industrial wastes, or other activities of*

man." The proposed permit requires monthly discharge monitoring for oil & grease at sampling points 002B, 002BX, 002C, 002D, and 003 and weekly visual monitoring for sheen and floatables at the time of discharge at Outfalls 002 and 003, consistent with the previous permit.

3. pH

Section 24.0206(m) of the ASWQS sets forth specific pH requirements for Pago Pago Harbor, and the range must be between 6.5 and 8.6 and within 0.2 pH units of that which would occur naturally. Past discharge data showed pH values ranging between 6.0 and 8.4 at Outfall 002 and between 6.0 and 8.8 at Outfall 003, falling outside of the allowable minimum or maximum pH range. Therefore, consistent with the previous permit, the proposed permit requires the same pH limitations and weekly pH monitoring at sampling points 002B, 002BX, 002C, 002D, and 003.

4. Turbidity

Based on the RP analysis, USEPA determined the discharge has a reasonable potential to cause or contribute to an exceedance of the turbidity water quality standard for Pago Pago Harbor, found in Section 24.0206(m) of the ASWQS, which is 0.75 Nepthleometric Turbidity Units ("NTU"). Therefore, consistent with the previous permit, the proposed permit includes a turbidity maximum daily limit ("MDL") of 0.75 NTU and requires weekly monitoring at sampling points 002B, 002BX, 002C, 002D and 003.

5. Lead

Based on the RP analysis, USEPA determined that the discharge has a reasonable potential to cause or contribute to an exceedance for lead. Section 24.0206(g)(3) of the ASWQS refers to USEPA's federal criteria for toxic pollutants in embayments, open coastal waters and ocean waters: *"Except as may be allowed by the EQC within a Zone of Mixing (§24.0207), the concentration of toxic pollutants shall not exceed the more stringent of the aquatic life criteria for marine waters or the human health concentration criteria for consumption of organisms found in USEPA*'s *National Recommended Water Quality Criteria (EPA-822-R-02-047), November 2002, or the most recent version."* Therefore, the proposed permit contains effluent limits for lead based on the saltwater chronic and acute WQS for the protection of aquatic life from USEPA's *National Recommended Water Quality Criteria* (USEPA, 2002b). The WQBEL calculations are shown in the following table, resulting in a maximum daily limit of 14 µg/L and an average monthly limit ("AML") of 6.9 µg/L. A coefficient of variation of 0.6 (based on n<10) was used to determine each multiplier. Consistent with the previous permit, monitoring for lead at sampling points 002B, 002BX, 002C, 002D and 003 is required monthly.

Table 3. WQBEL Calculations for Lead

	Acute	Chronic [(1)]
Saltwater Aquatic Life Criteria, µg/l	210	8.1
No Dilution Credit Authorized	0	0
Background Concentration, µg/l	0	0
WLA (Dissolved), µg/l	210	8.1
WLA (Total Recoverable) [(2)], µg/l	221	8.5
WLA Multiplier (99^{th} %)	0.321	0.527
LTA, µg/l	70.9	4.48
LTA_{MDL} Multiplier (99^{th} %)	--	3.11
MDL, µg/l	--	14

LTA $_{AML}$ Multiplier (95th %)	--	1.55
AML, µg/l	--	6.9

(1) Derivation of permit limit based on Section 5.4.1 of USEPA's TSD
(2) Conversion factor for dissolved to recoverable found in Appendix A of the National Recommended Water Quality Criteria.
(3) LTA multiplier based on sampling frequency of four times per month per Section 5.5.3 of USEPA'S TSD.

6. Zinc

Based on the RP analysis, USEPA determined that the discharge has a reasonable potential to cause or contribute to an exceedance for zinc. As stated in the previous paragraph, Section 24.0206(g)(3) of the ASWQS refers to USEPA's federal criteria for toxic pollutants in embayments, open coastal waters, and ocean waters. Therefore, the proposed permit contains effluent limits for zinc based on the saltwater chronic and acute WQS for the protection of aquatic life from USEPA's *National Recommended Water Quality Criteria* (USEPA, 2002b). The WQBEL calculations are shown in the following table, resulting in a maximum daily limit of 95 µg/L and an average monthly limit of 47 µg/L. A coefficient of variation of 0.6 (based on n<10) was used to determine each multiplier. Consistent with the previous permit, the proposed permit requires monthly monitoring for zinc at sampling points 002B, 002BX, 002C, 002D and 003.

Table 4. WQBEL Calculations for Zinc

	Acute	Chronic (1)
Saltwater Aquatic Life Criteria, µg/l	90	81
No Dilution Credit Authorized	0	0
Background Concentration, µg/l	0	0
WLA (Dissolved), µg/l	90	81
WLA (Total Recoverable) (2), µg/l	95.1	85.6
WLA Multiplier (99th %)	0.321	0.527
LTA, µg/l	30.5	45.1
LTA $_{MDL}$ Multiplier (99th %)	3.11	--
MDL, µg/l	95	--
LTA $_{AML}$ Multiplier (95th %)	1.55	--
AML, µg/l	47	--

(1) Derivation of permit limit based on Section 5.4.1 of USEPA's TSD
(2) Conversion factor for dissolved to recoverable found in Appendix A of the National Recommended Water Quality Criteria.
(3) LTA multiplier based on sampling frequency of four times per month per Section 5.5.3 of USEPA's TSD.

7. Ethylbenzene

Based on the RP analysis, USEPA determined that the discharge has a reasonable potential to cause or contribute to an exceedance for ethylbenzene. Section 24.0206(g)(3) of the ASWQS refers to USEPA's federal criteria for toxic pollutants in embayments, open coastal waters and ocean waters. Therefore, the proposed permit contains effluent limits for ethylbenzene based on the water quality standards for the protection of human health for consumption of the organisms only from USEPA's *National Recommended Water Quality Criteria* (USEPA, 2002b). The WQBEL calculations are shown in the following table, resulting in an MDL of 4,221 µg/L and an AML of 2,100 µg/L. A coefficient of variation of 0.6 (based on n<10) was used to

determine each multiplier. Consistent with the previous permit, the proposed permit requires monthly monitoring for ethylbenzene at sampling points 002B, 002BX, 002C, 002D and 003.

Table 5. WQBEL Calculations for Ethylbenzene

	Human Health [(1)]
Human Health Criteria, µg/l	2,100
No Dilution Credit Authorized	0
Background Concentration, µg/l	0
WLA (Dissolved), µg/l	n/a
WLA (Total Recoverable), µg/l	2,100
WLA Multiplier (99^{th} %)	n/a
LTA, µg/l	2,100
LTA_{MDL} Multiplier (99^{th} %)	2.1
MDL, µg/l	4,221
LTA_{AML} Multiplier (95^{th} %)	n/a
AML, µg/l	2,100

[(1)] Derivation of permit limit based on Section 5.4.4 of USEPA's TSD

8. Benzene, Toluene and Xylene

Section 24.0206(g)(3) of the ASWQS refers to USEPA's federal criteria for toxic pollutants in embayments, open coastal waters, and ocean waters: *"Except as may be allowed by the EQC within a Zone of Mixing (ASWQS § 24.0207), the concentration of toxic pollutants shall not exceed the more stringent of the aquatic life criteria for marine waters or the human health concentration criteria for consumption of organisms found in USEPA*'s *National Recommended Water Quality Criteria (EPA-822-R-02-047), November 2002, or the most recent version."* The RP analysis showed no potential for the discharge to cause or contribute to an exceedance for these pollutants. However, the proposed permit includes monthly monitoring of benzene, toluene, and xylene at sampling points 002B, 002BX, 002C, 002D and 003 as they are commonly present in refined oil products. This requirement is consistent with the previous permit.

9. Ammonia

Consistent with the previous permit, monthly monitoring of ammonia at sampling points 002C and 002D is included in the proposed permit. Temperature and pH measurements must be taken concurrently with sampling for ammonia.

10. Total Nitrogen as N

Based on the RP analysis, USEPA determined that the discharge has a reasonable potential to cause or contribute to an exceedance for total nitrogen. Section 24.0206(m) of the ASWQS provides requirements specific to Pago Pago Harbor, including not to exceed a value of 200.0 µg/L for total nitrogen as N. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit of 328 µg/L and an average monthly limit of 163 µg/L. A coefficient of variation of 0.6 (based on n<10) was used to determine each multiplier. Consistent with the previous permit, the proposed permit requires monthly monitoring for total nitrogen at sampling points 002B, 002BX, 002C, 002D and 003.

Table 6. WQBEL Calculations for Total Nitrogen

	Pago Pago Harbor (1)
Water Quality Criteria, µg/l	Not to exceed 200.0
No Dilution Credit Authorized	0
Background Concentration, µg/l	0
WLA, µg/l	200.0
WLA Multiplier (99th %)	0.527
LTA, µg/l	105.4
LTA_{MDL} Multiplier (99th %)	3.11
MDL, µg/l	328
LTA_{AML} Multiplier (95th %)	1.55
AML, µg/l	163

(1) Derivation of permit limit based on single, steady-state model of Section 5.4.1 of USEPA's TSD

11. Total Phosphorus as P

Based on the RP analysis, USEPA determined that the discharge has a reasonable potential to cause or contribute to an exceedance for total phosphorus. Section 24.0206(m) of the ASWQS provides requirements specific to Pago Pago Harbor, including not to exceed a value of 30.0 µg/L for total phosphorus as P. The proposed permit contains effluent limits for total phosphorus at sampling points 002B/BX, 002C and 002D based on this standard. The WQBEL calculations are shown in the following table, resulting in a maximum daily limit of 49.1 µg/L and an average monthly limit of 24.5 µg/L. A coefficient of variation of 0.6 (based on n<10) was used to determine each multiplier. Consistent with the previous permit, the proposed permit requires monthly monitoring for total phosphorus at sampling points 002B, 002BX, 002C, 002D and 003.

Table 7. WQBEL Calculations for Total Phosphorus

	Pago Pago Harbor (1)
Water Quality Criteria, µg/l	Not to exceed 30.0
No Dilution Credit Authorized	0
Background Concentration, µg/l	0
WLA, µg/l	30.0
WLA Multiplier (99th %)	0.527
LTA, µg/l	15.8
LTA_{MDL} Multiplier (99th %)	3.11
MDL, µg/l	49.1
LTA_{AML} Multiplier (95th %)	1.55
AML, µg/l	24.5

(1) Derivation of permit limit based on single, steady-state model of Section 5.4.1 of USEPA's TSD

12. BOD, COD, TSS, TDS, and Salinity

Consistent with the previous permit, the proposed permit requires monitoring for BOD, COD, TSS and TDS as these are common pollutants in tank bottom water draws. Thus, monthly monitoring of these pollutants at the time of tank bottom water draw discharge through sampling points 002C and 002D is included in the proposed permit. Monthly salinity monitoring by refractometer is also included to assess the salt levels in the process wastewaters.

Table 8. Proposed Effluent Limits for Outfalls 002 and 003 [1]

Parameter	Units	Maximum Allowable Discharge Limits	
		Average Monthly	Maximum Daily
Outfall 002			
Flow	MGD	-- [2]	Monitoring Only
Oil & Grease	mg/L	--	15
pH	standard units	Not <6.5 SU and not >8.6	
Turbidity	NTU	--	0.75
Lead	µg/l	6.9	14
Benzene	µg/l	Monitoring Only	
Ethylbenzene	µg/l	2,100	4,221
Toluene	µg/l	Monitoring Only	
Xylene	µg/l	Monitoring Only	
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only	
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only	
Zinc	µg/l	47	95
Ammonia	mg/L	Monitoring Only	
Total Nitrogen	µg/l	163	328
Total Phosphorus	µg/l	24.5	49.1
Biochemical Oxygen Demand (5-day)	mg/L	Monitoring Only	
Chemical Oxygen Demand	mg/L	Monitoring Only	
Total Suspended Solids	mg/L	Monitoring Only	
Total Dissolved Solids	mg/L	Monitoring Only	
Salinity	ppt	Monitoring Only	
Temperature	ºC	Monitoring Only	
Outfall 003			
Flow	MGD	-- [2]	Monitoring Only
Oil & Grease	mg/L	--	15
pH	standard units	Not <6.5 SU and not >8.6	
Turbidity	NTU	--	0.75
Lead	µg/l	6.9	14
Benzene	µg/l	Monitoring Only	
Ethylbenzene	µg/l	2,100	4,221
Toluene	µg/l	Monitoring Only	
Xylene	µg/l	Monitoring Only	
Volatile and Semi-Volatile Organics	µg/l	Monitoring Only	
Remaining Priority Toxic Pollutants	µg/l	Monitoring Only	

[1] Monitoring locations, frequency and sample type are specified in Part II of this permit.
[2] Not applicable

Based on the above effluent limits, Tables 8a, 8b and 8c summarize the monitoring requirements by sampling point:

Table 8a. Monitoring Requirements for Sampling Points 002B and 002BX [(1)]

Parameter	Units	Monitoring Frequency	Sample Type
Flow	MGD	Weekly	Estimate [(2)]
Oil & Grease	mg/L	Monthly	Grab
pH	Standards units	Weekly	Grab [(2)]
Turbidity	NTU	Weekly	Grab [(2)]
Lead	µg/l	Monthly	Grab
Zinc	µg/l	Monthly	Grab
Benzene	µg/l	Monthly [(3)]	Grab
Ethylbenzene	µg/l	Monthly [(3)]	Grab
Toluene	µg/l	Monthly [(3)]	Grab
Xylene	µg/l	Monthly [(3)]	Grab
Total Nitrogen	µg/l as N	Monthly	Grab
Total Phosphorus	µg/l as P	Monthly	Grab
Volatile and Semi-volatile Organics [(4)]	µg/l	Quarterly [(5)]	Grab
Remaining Priority Toxic Pollutants	µg/l	Annually	Grab

[(1)] Samples must be taken at a time when process wastewaters are discharged.

[(2)] Flow, pH and turbidity shall be taken as field measurements at the time of sampling.

[(3)] After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, then monitoring frequency for this parameter may be reduced to quarterly upon approval by USEPA.

[(4)] Attachment F provides a list of volatile and semi-volatile organic compounds to be monitored.

[(5)] After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, then monitoring frequency for this parameter may be reduced to semi-annually upon approval by USEPA.

Table 8b. Monitoring Requirements for Sampling Points 002C and 002D [(1)]

Parameter	Units	Monitoring Frequency		Sample Type
Flow	MGD	Weekly		Estimate [(2)]
Oil & Grease	mg/L	Monthly		Grab
pH	Standards units	Weekly		Grab [(2)]
Turbidity	NTU	Weekly		Grab [(2)]
Lead	µg/l	Monthly		Grab
Zinc	µg/l	Monthly		Grab
Benzene	µg/l	Monthly [(3)]		Grab
Ethylbenzene	µg/l	Monthly		Grab
Toluene	µg/l	Monthly [(3)]		Grab
Xylene	µg/l	Monthly [(3)]		Grab
Ammonia	mg/L	Monthly		Grab
Total Nitrogen	µg/l as N	Monthly		Grab
Total Phosphorus	µg/l as P	Monthly		Grab
Biochemical Oxygen Demand (5-day)	mg/L	Monthly [(3)]		
Chemical Oxygen Demand	mg/L	Monthly [(3)]		Grab
Total Suspended Solids	mg/L	Monthly [(3)]		Grab
Total Dissolved Solids	mg/L	Monthly [(3)]		Grab
Salinity	ppt [(4)]	Monthly		Discrete [(2)]
Temperature	°C	Monthly [(5)]		Discrete
Volatile and Semi-volatile Organics [(6)]	µg/l	Quarterly [(7)]		Grab
Remaining Priority Toxic Pollutants	µg/l	Annually		Grab

[(1)] Samples must be taken at a time when process wastewaters are discharged.

[(2)] Flow, pH, turbidity, and salinity shall be taken as field measurements at the time of sampling. Salinity shall be measured by refractometer.

[(3)] After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, then monitoring frequency for this parameter may be reduced to quarterly upon approval by USEPA.

[(4)] "ppt" is parts per thousand.

[(5)] Temperature and pH shall be measured at the time of ammonia sampling.

[(6)] Attachment F of the proposed permit provides a list of volatile and semi-volatile organic compounds to be monitored.

[(7)] After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water

quality standards, then monitoring frequency for this parameter may be reduced to semi-annually upon approval by EPA.

Table 8c. Monitoring Requirements for Sampling Point 003 (1)

Parameter	Units	Monitoring Frequency	Sample Type
Flow	MGD	Weekly	Estimate (2)
Oil & Grease	mg/L	Monthly	Grab
pH	Standards units	Weekly	Grab (2)
Turbidity	NTU	Weekly	Grab (2)
Lead	µg/l	Monthly	Grab
Zinc	µg/l	Monthly	Grab
Benzene	µg/l	Monthly (3)	Grab
Ethylbenzene	µg/l	Monthly	Grab
Toluene	µg/l	Monthly (3)	Grab
Xylene	µg/l	Monthly (3)	Grab
Volatile and Semi-volatile Organics (4)	µg/l	Quarterly (5)	Grab
Remaining Priority Toxic Pollutants	µg/l	Annually	Grab

(1) *Samples must be taken at a time when process wastewaters are discharged.*

(2) *Flow, pH and turbidity shall be taken as field measurements at the time of sampling.*

(3) *After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, then monitoring frequency for this parameter may be reduced to quarterly upon approval by EPA.*

(4) *Attachment F of the proposed permit provides a list of volatile and semi-volatile organic compounds to be monitored.*

(5) *After two years from the effective date of this permit, if the permittee has performed all monitoring in accordance with the conditions of this permit and results indicate concentrations in the effluent do not demonstrate reasonable potential to exceed water quality standards, then monitoring frequency for this parameter may be reduced to semi-annually upon approval by EPA.*

Note on Monitoring Frequency: For those pollutants common to the industry, but for which there is very little or no monitoring data to assess the reasonable potential to exceed water quality standards, frequent monitoring is required to collect the necessary data for the analysis. Once sufficient data is collected, the monitoring frequency may be reduced. The proposed permit includes provisions to reduce monitoring frequency for specific pollutants upon approval by USEPA.

Weekly visual monitoring of Outfalls 002 and 003 is included in the proposed permit for compliance with the narrative water quality standards.

D. Anti-Backsliding

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute. The proposed permit does not establish any effluent limits less stringent than those in the previous permit and therefore does not allow backsliding.

E. Antidegradation Policy

USEPA's antidegradation policy at 40 CFR § 131.12 and Section 24.0202 of the ASWQS require that existing water uses and the level of water quality necessary to protect the existing uses be maintained. As described in this fact sheet, the proposed permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The proposed permit does not include a mixing zone; therefore, these limits will apply at the end of pipe without consideration of dilution in the receiving water. Due to water quality-based effluent limitations imposed in the permit, the discharge is not expected to adversely affect receiving water bodies or result in any degradation of water quality.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

Section 24.0206 of the ASWQS contains narrative water quality standards applicable to the receiving water. The proposed permit incorporates the following applicable narrative water quality standards.

A. All territorial and ground waters shall be substantially free from:

1. Materials attributable to sewage, industrial wastes, or other activities of man that will produce objectionable color, odor, or taste either of itself or in combinations, or in the biota;
2. Visible floating materials, grease, oil, scum, foam, and other floating material attributable to sewage, industrial wastes, or other activities of man;
3. Materials attributable to sewage, industrial wastes, or other activities of man that will produce visible turbidity or settle to form objectionable deposits;
4. Substances and conditions or combinations thereof attributable to sewage, industrial wastes, or other activities of man which may be toxic to humans, other animals, plants, and aquatic life or produce undesirable aquatic life.

B. The temperature shall not deviate more than 1.5 degrees Fahrenheit from conditions which would occur naturally and shall not fluctuate more than 1 degree Fahrenheit on an hourly basis or exceed 85 degree Fahrenheit due to the influence of other than natural causes.

C. The concentration of toxic pollutants shall not exceed the more stringent of the aquatic life criteria for marine waters or the human health concentration criteria for consumption of organisms found in USEPA's *National Recommended Water Quality Criteria (EPA-822-R-02-047), November 2002*, or the most recent version.

D. The dissolved oxygen concentration of the receiving water shall not be at less than 70% saturation or less than 5.0 mg/L. If the natural level of dissolved oxygen is less than 5.0 mg/L, the natural level shall become the standard.

E. The pH of the receiving water shall not be less than 6.5 or greater than 8.6 pH units. The discharge shall not cause the receiving water pH to change more than 0.2 pH units of that which would occur naturally.

F. The light penetration depth of the receiving water shall not be less than 65.0 feet (not to exceed given value 50% of the time.)

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally, where effluent concentrations of toxic parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Sampling

Samples and measurements taken as required in the proposed permit must be representative of the volume and nature of the monitored discharge. Sample must be taken at times when process wastewaters, such as tank bottom water draws, hose pressure hydro test waters, and commingled stormwater, are discharged through the sampling points.

B. Effluent Monitoring and Reporting

The permittee must conduct effluent monitoring to evaluate compliance with the proposed permit conditions. The permittee must perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR Part 136, unless otherwise specified in the proposed permit. All monitoring data must be reported on monthly DMRs and submitted quarterly as specified in the proposed permit. All DMRs are to be submitted electronically to EPA using NetDMR.

C. Priority Toxic Pollutants Scan

The permittee must conduct **quarterly** monitoring for the volatile and semi-volatile organic compounds listed in Attachment B using EPA Methods 624 and 625. The permittee must also conduct **annual** monitoring for the remaining priority toxics pollutants. This monitoring will ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. Samples must be taken at sampling points 002B, 002BX, 002C, 002D, and 003 when process wastewaters are discharged through the sampling point. The permittee must perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR Part 136, unless otherwise specified in the proposed permit or by USEPA. 40 CFR § 131.36 provides a complete list of Priority Toxic Pollutants.

IX. SPECIAL CONDITIONS

Pollution Prevention Plan

Pursuant to 40 CFR § 122.44(k)(4), USEPA may impose Best Management Practices ("BMPs") which are *"reasonably necessary to achieve effluent limitations and standards or to*

carry out the purposes and intent of the CWA." The pollution prevention requirements or BMPs proposed in the permit operate as technology-based limitations on effluent discharges that reflect the application of Best Available Technology and Best Control Technology. Therefore, the proposed permit requires the permittee to develop and implement a Pollution Prevention Plan with appropriate pollution prevention measures or BMPs designed to prevent pollutants from entering Pago Pago Harbor and other surface waters while performing normal processing operations at the facility.

A. Hazardous Materials and Chemical Control

Section 24.0208(g) of the ASWQS imposes BMPs for the control of hazardous materials and chemicals. The following BMPs, applicable to the discharge, are included in the proposed permit as part of the Pollution Prevention Plan:

(1) Proper storage of hazardous materials. All hazardous materials and chemicals shall be stored within a covered shelter; an impervious berm with a capacity of 110% of the largest container in the shelter shall be placed around the perimeter of the storage area; and appropriate construction measures shall be taken to prevent the runoff of pollutants;

(2) Proper labeling of chemicals;

(3) Proper disposal of hazardous chemicals or materials in conformance with ASEPA guidelines and/or regulations promulgated by the EQC; and,

(4) Proper maintenance of vehicles, equipment, and machinery in confined areas specially designed to control runoff.

B. Spill Prevention Control and Countermeasure ("SPCC") Plan

The permittee must develop (or update) and maintain its SPCC plan in accordance with 40 CFR Part 112. The permittee is also required to submit an updated plan to USEPA. This requirement is included as part of the Pollution Prevention Plan.

XI. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Consideration of Environmental Justice Impact

USEPA conducted a screening level evaluation of vulnerabilities in the community posed to local residents near the vicinity of the permitted facility using USEPA's EJSCREEN tool. The purpose of the screening is to identify areas disproportionately burdened by pollutant loadings and to consider demographic characteristics of the population living in the vicinity of the discharge when drafting permit conditions. On October 26, 2018, USEPA conducted the analysis and found that the area is too small or sparsely populated to generate an EJSCREEN report.

B. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act ("ESA") of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of a listed endangered, threatened or candidate species, or result in the destruction or adverse modification of its habitat.

Since the issuance of NPDES permits by USEPA is a federal action, consideration of a permitted discharge and its effect on any listed species or their critical habitat is appropriate. On

July 3, 2018, USEPA sent a request for ESA species listing and technical assistance to the U.S. Fish and Wildlife Service's Pacific Island Office ("USFWS" or "the Service"). In a letter dated August 17, 2018, USFWS responded as follows:

> *"There is no federally designated terrestrial critical habitat within the immediate vicinity of the proposed project. Our data indicate that there are no federal listed terrestrial species that may occur or transit through the vicinity of the proposed project area.*
>
> *Sea turtles - The Service consults on sea turtles and their use of terrestrial habitats (beaches where nesting and/or basking is known to occur), whereas the National Marine Fisheries Service (NMFS) consults on sea turtles and their use of off-shore and open ocean habitats. We recommend that you consult with NMFS regarding the potential impacts from the proposed project to sea turtles in near-shore and open ocean habitats."*

On July 3, 2018, USEPA sent a request for ESA species listing to NMFS/National Oceanic and Atmospheric Agency ("NOAA") and received an electronic mail response on the same day, as follows:

> *"ESA listed species of concern within Pago Pago Harbor include the Central South Pacific DPS of green sea turtles, the Hawksbill sea turtle, the Indo-West Pacific DPS of scalloped hammerhead sharks, and the pacific coral species Acropora globiceps, A. jacquelinae, A. retusa, A. speciosa, Isopora crateriformis and Euphyllia paradivisa*.
>
> *Discharges of process wastewater such as tank bottom water draws and hose pressure hydrotest waters, and storm water to Pago Pago Harbor could be potentially harmful to these species depending upon quantities, chemical makeup of the discharges, and duration of events."*

Green Sea Turtles

Green sea turtles have been sighted in the waters around American Samoa and are recorded as having established critical habitat in American Samoa. They are only known to nest in American Samoa at Rose Atoll and a tagging study showed they migrate long distances, such as to Fiji. However, primary habitat for sea turtles includes beaches for nesting, open ocean convergence zones, and coastal areas for benthic feeding. Sea turtles are highly migratory species.

The facility discharges process wastewater from the tank farm when necessary. These discharges flow through oil/water separators before discharging through Outfall 002 at the edge of Pago Pago Harbor. The facility's other Outfall 003 is located at the fuel dock, which discharges mostly hose pressure test waters and commingled stormwater from another oil/water separator. Both outfalls drain directly into the harbor, and at low tide, discharges cascade onto rip rap for 2 to 5 feet before reaching the water. Thus, discharges from Outfall 002 and Outfall 003 are not expected to affect sea turtles' primary habitat. If a member of the species were to enter the near vicinity of the discharge and react negatively to any component of the wastewater, the species is sufficiently mobile to depart, or traverse, the maximum affected area within 1-3 minutes. This leaves little time for harmful effects to occur. Discharges from the facility are required to meet the ASWQS for the protection of support and propagation of marine life, based on the applicable beneficial use designation for Pago Pago Harbor. The proposed permit includes water quality-based effluent limits for turbidity, lead, ethylbenzene, total nitrogen, total phosphorus, and zinc,

and monitoring for various pollutants known to be present in tank bottom water draws. Therefore, USEPA determines that discharge from the facility under the proposed permit will have "No Effect" on green sea turtles.

Hawksbill Sea Turtle

Hawksbill turtles have been sighted in the waters around American Samoa and are recorded as having established critical habitat in American Samoa. They are shy, tropical reef dwelling species that feed on jellyfish, sea urchins, and their favorite food of sea sponges. They may also eat algae that grows on reefs. The Hawksbill turtle takes in ocean water while feeding but gets rid of the extra salt by shedding salty tears. It is a mobile species, reaching speeds of up to 15 miles per hour. Hawksbill turtle populations have declined dramatically in the Pacific islands. Illegal international trade of items made from this species is one of the worst threats to its survival.

Hawksbill turtles use different habitats at different stages of their life cycle but are most commonly associated with healthy coral reefs. Post-hatchlings (oceanic stage juveniles) are believed to occupy the pelagic environment, taking shelter in floating algal mats and drift lines of flotsam and jetsam in the Atlantic.

USEPA has determined that the Hawksbill turtle likely has little or no contact with the facility discharge near the harbor, beyond the possibility of incidental contact. The facility in this permit discharges next to the harbor and is not expected to affect these types of habitat. Therefore, EPA determines that discharge from the facility under the proposed permit will have "No Effect" on the Hawkbill turtle.

Scalloped Hammerhead Shark

The Scalloped Hammerhead shark is listed as Threatened in American Samoa, specifically the Distinct Population Segment ("DPS") associated with the Indo-West Pacific. Other population segments may be in greater jeopardy (i.e. listed as endangered). The largest threats to Scalloped Hammerhead sharks are targeted fisheries, shark fin trade, and bycatch. Critical habitat has not been identified around American Samoa. The petroleum terminal operation is not known to target sharks of any species.

USEPA is not aware of any scientific information or studies documenting negative effects on Scalloped Hammerhead sharks from these types of ocean discharges and believes that they have no nexus with the facility discharge, beyond the possibility of incidental contact. Discharges from the facility are required to meet the ASWQS for the protection of support and propagation of marine life, based on the applicable beneficial use designation for Pago Pago Harbor. Therefore, USEPA determines that discharge from the facility under the proposed permit will have "No effect" on the Scalloped Hammerhead shark.

Corals (Acropora globiceps, Acropora jacquelineae, Acropora retusa, Acropora speciosa, Euphyllia paradivisa, and Isopora crateriformis)

NMFS listed these 6 species as "Threatened" in October 2014, and all are known to occur in the waters surrounding American Samoa. Top threats to corals include ocean warming, ocean acidification, dredging, coastal development, coastal point source pollution, agricultural and land use practices, disease, predation, reef fishing, aquarium trade, physical damage from boats and anchors, marine debris, and aquatic invasive species.

Deep coral species (greater than 12-meter habitat depth)

Of the 6 species of coral listed as threatened in American Samoa, three are reported to occur exclusively at depths greater than 12 meters (*Acropora jacquelinae, Acropora speciosa,* and *Euphyllia paradivisa*). *Euphyllia paradivisa* favors depths up to 25 meters, while *Acropora jacquelineae* spans 10 to 35 meters depth and *Acropora speciosa* 12 to 40 meters. The facility's Outfall 002 is located at the edge of Pago Pago Harbor while Outfall 003 is located at the fuel dock. Both outfalls drain directly into the harbor, and at low tide, discharges cascade onto rip rap for 2 to 5 feet (0.6 to 1.5 meter) before reaching the water. Discharges from these outfalls are not expected to affect the types of habitat occupied by these corals. The discharge would have more than a 10-meter depth separation and is thus unlikely to directly affect any of the listed species. Moreover, discharges from the facility are required to meet the ASWQS for the protection of support and propagation of marine life, based on the applicable beneficial use designation for Pago Pago Harbor. Therefore, USEPA determines that discharge from the facility under the proposed permit will have "No Effect" on the above listed threatened corals.

Shallow coral species (not greater than 12-meter habitat depth)

The other three corals listed as threatened under the ESA are reported to occur exclusively at depths less than 12 meters (*Acropora globiceps, Acropora retusa,* and *Isopora crateriformis*) and may warrant closer consideration. *Acropora globiceps* is a species of acroporid coral found in the oceanic central and western Pacific Ocean and occurs on the slopes of reefs, the flats of reefs, in tropical shallow reefs, and at depths of around 8 meters. *Acropora retusa* occurs on upper reef slopes, reef flats, and adjacent habitats in depths of around 8 meters. *Isopora crateriformis* occurs in shallow, high-wave energy environments, including reef flats and lower reef crests, and it also occurs in adjacent habitats such as upper reef slopes. It has been reported from low tide to at least 12 meters deep and may occur in mesophotic depths (<50 meters). Both facility outfalls are located at the dock or edge of the harbor near the petroleum terminal and would not be on the slopes of reefs or reef flats. These outfalls drain directly into the harbor, and at low tide, discharges cascade onto rip rap for 2 to 5 feet (0.6 to 1.5 meter) before reaching the water. These discharges would have more than 7 to 10 meters depth separation and are not expected to affect these types of habitat. Discharges from the facility are required to meet the ASWQS for the protection of support and propagation of marine life, based on the applicable beneficial use designation for Pago Pago Harbor. Therefore, USEPA determines that discharge from the facility under the proposed permit will have "No Effect" on the above listed threatened corals.

USEPA has determined that discharge in compliance with the proposed NPDES permit for the American Samoa Terminal will not affect listed species, or their critical habitat in Pago Pago Harbor. If, in the future, USEPA obtains information or is provided information that indicates that there could be adverse impacts to federally listed species, USEPA will contact the appropriate agency or agencies and initiate consultation, to ensure that such impacts are minimized or mitigated. USEPA believes that a "No Effect" determination is appropriate for the listed endangered or threatened species. USEPA will provide USFWS and NMFS/NOAA with copies of the draft fact sheet and the draft permit during the public comment period.

C. Impact to Coastal Zones

The Coastal Zone Management Act ("CZMA") requires that federal activities and licenses, including federally permitted activities, must be consistent with an approved state Coastal

Management Plan (CZMA Sections 307(c)(1) through (3)). Section 307(c) of the CZMA and implementing regulations at 40 CFR Part 930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the permittee certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

The American Samoa Department of Commerce administers American Samoa's Coastal Management Program. EPA will provide the American Samoa Department of Commerce with copies of the draft fact sheet and the draft permit during the public notice period.

D. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act ("MSA") set forth a number of new mandates for the NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires federal agencies to make a determination on Federal actions that may adversely impact Essential Fish Habitat ("EFH") in marine environments.

The proposed permit requires compliance with technology-based effluent limits, and numerical and narrative ASWQS designed to be compatible with the protection and propagation of fish, shellfish, and wildlife. USEPA believes that the discharge in compliance with this permit is not likely to adversely affect essential fish habitat and is proposing to issue the permit.

USEPA has provided NMFS with a copy of the draft fact sheet and the draft permit during the public notice period. In addition, USEPA held a conference call with Ms. Fatima Sauafea-Leau of NOAA on July 17, 2019, to discuss the proposed permit and the EFH consultation process. USEPA received a concurrence from NMFS via email on August 30, 2019 stating it is clear that implementation of the NPDES permit-required, effluent monitoring limits and monitoring and reporting requirements are suitable to ensure that adverse effects to EFH would be no more than minimal; and, additional conservation recommendations are unnecessary, thus satisfying the requirements of Section 305(b)(D)(2) of the (MSA;16 U.S.C. 1855(b)).

A reopener clause has been included in the permit should new information become available to indicate that the requirements of the permit need to be modified.

E. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act ("NHPA") requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR § 800.3(a)(1), USEPA is making a determination that issuing this proposed NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require USEPA to undertake additional consulting on this permit issuance.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR § 122 and § 124, this permit may be modified by USEPA to include effluent limits, monitoring, or other conditions to implement new regulations, including USEPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards; or new permit conditions for species pursuant to ESA and EFH requirements.

B. Standard Provisions

The permit requires the permittee to comply with USEPA Region 9's *Standard Federal NPDES Permit Conditions* found at Attachment A.

XII. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR § 124.10)

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application. EPA provided a public notice on May 29, 2019.

B. Public Comment Period (40 CFR § 124.10)

Notice of the draft permit will be placed on USEPA Region 9 website at: https://www.epa.gov/aboutepa/public-notices-meetings-and-events-pacific-southwest, with a minimum of 30 days provided for interested parties to respond in writing to USEPA. After the closing of the public comment period, USEPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued. The public comment period was extended for 7 days from June 30 to July 5, 2019, in response to a request from the permittee. USEPA received comments from the permittee via email on July 5, 2019.

C. Public Hearing (40 CFR § 124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if USEPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

D. Water Quality Certification Requirements (40 CFR § 124.53 and § 124.54)

As American Samoa has approved water quality standards, USEPA is requesting certification from ASEPA that the proposed permit will meet all applicable water quality standards. USEPA is forwarding the draft permit and fact sheet to ASEPA and requesting

certification under Section 401 of the Clean Water Act. Such certification shall be in writing and include the conditions necessary to assure compliance with referenced applicable provisions of Sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Territory law. EPA received the 401water quality certification on August 14, 2019.

XIV. CONTACT INFORMATION

Comments, submittals, and additional information relating to this proposed NPDES permit may be directed to Linh Tran, NPDES Permits Office, at:

Phone: (415) 972-3511
Email: Tran.Linh@epa.gov

Or Mail:

Linh Tran
U.S. EPA Region 9 (WTR 2-3)
75 Hawthorne Street
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XV. REFERENCES

American Samoa Environmental Quality Commission (ASEQC). Water Quality Standards, 2014 Revision. Administrative Rule No; 001-2013. American Samoa Code Annotated, Title 24. [Online] https://www.epa.gov/sites/production/files/2014-12/documents/aswqs.pdf

National History Guide to American Samoa: A collection of articles. National Park of American Samoa. Department of Marine and Wildlife Resources. Pago Pago, American Samoa. [Online] http://www.nps.gov/archive/npsa/book/index.htm

NOAA National Marine Fisheries Service. Pacific Islands Office. Protected Resources Division. [Online] http://www.fpir.noaa.gov/PRD/prd _index.html

Tetra Tech (under contract to USEPA). 2006. Total Maximum Daily Loads for Mercury and PCBs, and Arsenic Analysis for Pago Pago Inner Harbor, Territory of American Samoa. [Online] http://www.botany.hawaii.edu/basch/uhnpscesu/pdfs/sam/TetraTech2006AS.pdf

USEPA. 1991. *Technical Support Document for Water Quality-based Toxics Control*. Office of Water, EPA. EPA/505/2-90-001.

USEPA. 2010. *U.S. EPA NPDES Permit Writers' Manual*. Office of Water, EPA. EPA-833-K-10-001.

USEPA.2002b. National Recommended Water Quality Criteria. Office of Water, USEPA. EPA822- R-02-047.

USEPA. 2004. Technical Support Document for the 2004 Effluent Guidelines Program Plan. Office of Water, USEPA. EPA-821-R-04-014.

USEPA. 2010. *Fact Sheet, Pacific Energy (formerly BP Southwest Pacific Inc.), NPDES Permit No. AS0020028*. Environmental Protection Agency, Region 9.

USEPA. 2013. *National Recommended Water Quality Criteria*. Office of Water, EPA. Aquatic Life Criteria Table. https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table#table

USEPA. 2015. *National Recommended Water Quality Criteria*. Office of Water, EPA. Human Health Criteria Table. https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table

USEPA. 2015. Update of Human Health Ambient Water Quality Criteria: Benzene 71-43-2. Office of Water, EPA. EPA 820-R-15-009. June 2015.EPA. 2004. *Technical Support Document for the 2004 Effluent Guidelines Program Plan*. Office of Water, EPA. EPA-821-R-04-014.

USEPA. 2008 March 31 inspection; report prepared by CWA Compliance Office on March 9, 2009.

USEPA. 2009 April 30 inspection; report prepared by CWA Compliance Office on August 21, 2009.

USEPA. 2010 September 27 inspection; report prepared by CWA Compliance Office on February 25, 2011.

USEPA. 2017 July 28 inspection; report prepared by Water Enforcement Section on December 5, 2017.

USEPA. 2018 May 3 inspection; report prepared by Water Enforcement Section on July 6, 2018.

NOAA Fisheries, Pacific Islands Regional Office. Mail correspondence from EPA to NOAA, dated July 3, 2018. Electronic mail correspondence from NOAA, Randy McIntosh to EPA, Elizabeth Sablad, dated July 3, 2018.

U.S. Fish & Wildlife Service, Pacific Islands Office. Mail correspondence from EPA to USFWS, dated July 3, 2018. Mail correspondence from USFWS to EPA, Elizabeth Sablad, dated August 17, 2018. Electronic mail correspondence from USFWS to EPA dated August 22, 2018.

NOAA Fisheries, Pacific Islands Regional Office, American Samoa Field Office, Habitat Conservation Division. Electronic mail correspondence inquiring about the essential fish habitat review from EPA to NOAA, dated August 22, 2019. Electronic mail correspondence from NOAA, Fatima Sauafea-Le'au to EPA, Linh Tran, dated August 30, 2019.