

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

August 26, 2009

In Reply Refer To: WTR-7

Taulapapa William Sword, Terminal Engineer
British Petroleum South-West Pacific
P.O. Box PPB
Pago Pago, Tutuila, American Samoa 96799

**Re: April 30, 2009 Clean Water Act Inspection
and Modification of EPA Administrative Order CWA-309(a)-09-011**

Dear Mr. Sword:

Enclosed is the August 21, 2009 report for our April 30, 2009 inspection of the American Samoa Terminal. Please submit a short response to the findings in Sections 1 through 4 of this report to EPA and ASEPA, by **October 30, 2009**. The main findings are summarized below:

- 1** BP impounds all process wastewaters for discharge during storm events. The March 19, 2009 EPA Administrative Order is hereby modified to rescind the self-monitoring in Items 6.d and 7.c of the Order since non-storm related sampling is no longer warranted.
- 2** BP currently is self-monitoring four oil water separators and two harbor outfalls as required by the EPA Order in order to provide the data necessary to reissue the NPDES permit. The reissued permit would be expected to apply effluent limits and water quality standards at the sampling points and frequencies established in the Order.
- 3** The tank farm outfall is not always accessible for representative sampling.
- 4** The source controls and treatment on site appeared to be well-designed and operated. All flows discharge through oil water separators valved normally closed. Further controls to minimize the loss of product into wastewater include properly sized secondary containment, daily level checking, double bottomed product tanks, visual ports, normally closed tank bottom taps and observation tanks, and self-certification to follow a pollution prevention plan. These efforts should result in consistent compliance with the permit.

We appreciate your helpfulness and that of your staff during this inspection. We remain available to ASPA and the Territory of American Samoa to assist in any way. Please do not hesitate to call Greg V. Arthur of my staff at (415) 972-3504, or e-mail arthur.greg@epa.gov.

Sincerely,

Original signed by:

Alexis Strauss
Director, Water Division

cc: Lt. Matt Vojik, ASEPA



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION

NPDES Permittee: British Petroleum South-West Pacific, Limited
(NPDES Permit No. AS0020028)

Facility: American Samoa Terminal
(Utulei Petroleum Terminal, Fuel Dock, and Tank Farm)
P.O. Box 488, Pago Pago, Tutuila Island, American Samoa

Receiving Water: Pago Pago Harbor

Date of Inspection: April 30, 2009

Inspection Participants:

US EPA: Greg V. Arthur, CWA Compliance Office, (415) 972-3504
Carl Goldstein, Envr Protection Specialist, (415) 972-3767

American Samoa Govt: John Gocke, Office of Petroleum Manager, (684) 633-2731
Captain Kava, Office of Petroleum Manager, (684) 633-2731

BP South-West Pacific: Taulapapa William Sword, Terminal Manager, (684) 633-5331
Nick King, Assistant Terminal Manager, (684) 633-5331

Report Prepared By: Greg V. Arthur, Environmental Engineer, USEPA Region 9
August 21, 2009



1.0 Scope and Purpose

On April 30, 2009, EPA conducted an NPDES compliance evaluation inspection of the American Samoa Terminal, which is operated under lease by British Petroleum (“BP”), South-West Pacific, Limited. The purpose was to ensure compliance with the NPDES permit and applicable Federal regulations covering the discharge of non-domestic wastewaters and storm water run-off into waters of the United States. A secondary purpose was to verify implementation of the March 19, 2009 Administrative Order and to further verify the conditions in future NPDES permits. In particular, it was to ensure:

- Classification in the proper Federal category;
- Application of the correct standards at the correct sampling points;
- Application of effective best management practices;
- Consistent compliance with the standards and best management practices; and
- Fulfillment of Federal self-monitoring requirements.

The American Samoa Terminal is one of the dischargers of storm or industrial wastewater to waters of the United States whose compliance was assessed as part of the evaluations of the NPDES permitted discharges in American Samoa conducted in the past year. Inspection participants are listed on the title page of this report. Arthur conducted the inspection on April 30, 2009.

1.1 Background

The American Samoa Government owns the American Samoa Terminal. The US Navy constructed the terminal and turned over ownership after World War II. BP South-West Pacific operates these assets under lease. BP receives by ship, the product supplies of gasoline, low-sulfur diesel, high-sulfur marine diesel, and jet fuel A-1 at the fuel dock, which is located a little over a half-mile to the west with pipelines leading to the petroleum terminal. Fueling of vessels also occurs at the fuel dock. The terminal itself consists of ten tanks for storage and delivery. The tanks are double-bottomed and roofed. The tank farm and fueling areas are bermed, graded and sized to provide secondary containment.

On March 10, 2003, US EPA issued a revised NPDES permit No. AS0020028 to BP South-West Pacific for two outfall discharges from the terminal to the harbor and for a fourth outfall discharge from the fuel dock to the harbor. The current permit expired on March 9, 2008 and was administratively extended to remain in effect because BP submitted its permit application more than 180 days before the permit expired.

On March 19, 2009, EPA issued a Finding of Violation for a failure to monitor as required under the NPDES permit, and an Administrative Order requiring a modified self-monitoring program. The Order specifically required BP South-West Pacific to (1) establish accessible sampling stations at the four oil water separators, (2) conduct self-monitoring, first weekly and then quarterly, of storm water drainage through the oil water separators, (3) conduct additional self-monitoring to account for all of the process wastewater discharges unrelated to storm events, and (4) document and report all discharges of process wastewaters unrelated



to storm events. The first three months of self-monitoring establishes a sample record for the four oil water separators and the final harbor outfall necessary to reissue the NPDES permit. The remaining self-monitoring is expected to match the requirements in a reissued permit involving daily observations for oily sheen on the harbor, quarterly sampling for oil and grease, turbidity, and pH from the four oil water separators, and monthly summaries of process wastewater discharges unrelated to storms. Modifications of the Administrative Order are expected to be issued concurrently with this report.

See Section 2.0 for further description of requirements of the NPDES permit, the March 19, 2009 Administrative Order, and Modifications to the Administrative Order.

1.2 Facility Description

The American Samoa Terminal operations consists of a main terminal, pipelines, and tank farm, a satellite fuel dock located on the harbor to the west, and a tank farm and pipelines at the airport. See the photo documentation of this inspection in Section 1.5 of this report. Also see the layouts of the petroleum terminal and the fueling dock in Figures 1.2.1 and 1.2.2.

Figure 1.2.1
American Samoa Terminal, Utulei Petroleum Terminal - Layout

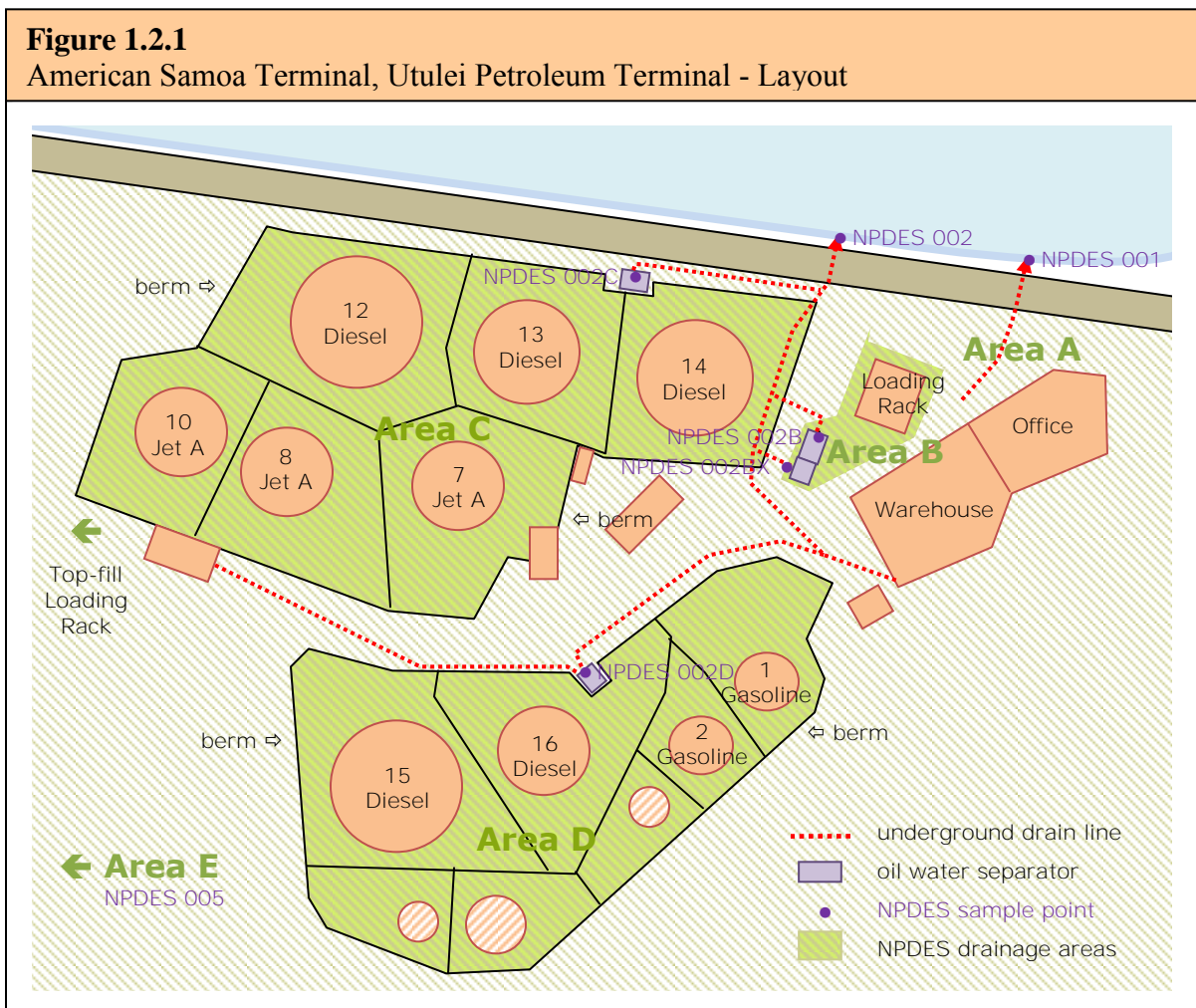
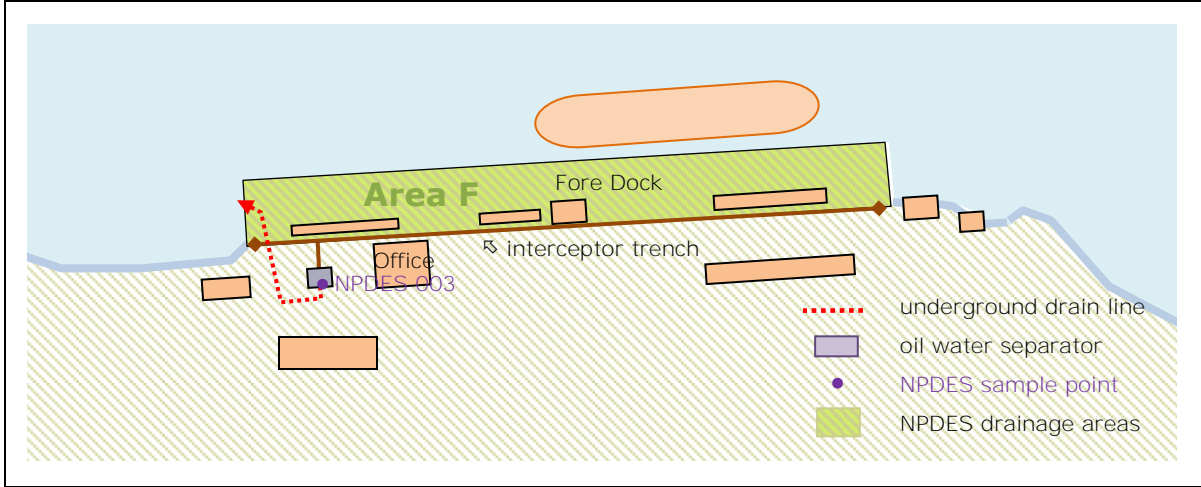




Figure 1.2.2
 American Samoa Terminal, Fuel Dock – Layout



Petroleum Terminal – The operations at the petroleum terminal involve the loading of tanker trucks, fuel storage for distribution, and the pipeline delivery to and from the fuel dock. There are three drainage areas currently regulated under the NPDES permit for discharge to the harbor. Area B encompasses the bottom fill loading dock and adjacent paving. Area C encompasses six tanks within the concrete berming. Area D encompasses four tanks within the concrete berming and the now decommissioned top fill loading rack. The NPDES permit formerly regulated Area A which encompassed the parking lot and paving around the office, and Area E which encompassed two out-of-service tanks within earthen berms to the west.

Tank#	Capacity (gals)	Contents	Tank Design	Drainage
1	525,000	gasoline	fixed external / floating internal roof	NPDES 002D
2	525,000	gasoline	fixed external / floating internal roof	NPDES 002D
7	1,041,348	jet A1	fixed roof / cone down bottom	NPDES 002C
8	1,041,348	jet A1	fixed roof / cone down bottom	NPDES 002C
10	1,041,348	jet A1	fixed roof / cone down bottom	NPDES 002C
12	2,280,306	diesel	fixed roof	NPDES 002C
13	1,008,504	diesel	fixed roof	NPDES 002C
14	2,280,306	diesel	fixed roof	NPDES 002C
15	2,236,710	diesel	fixed roof	NPDES 002D
16	1,004,430	diesel	fixed roof	NPDES 002D

Fueling Dock – This inspection did not cover the fueling dock, however BP South-West Pacific took pictures for the purposes of this report. The operations at the fueling dock involve the unloading of oil tankers and the fueling of marine vessels. There is one drainage area regulated under the NPDES permit for discharge to the harbor. Area F encompasses the fore dock which houses the delivery hose reels and valving within separate and dedicated secondary containment berms. The fore dock is sloped to drain to an uncovered interceptor ditch that leads to an oil water separator for discharge under the NPDES permit to the harbor.

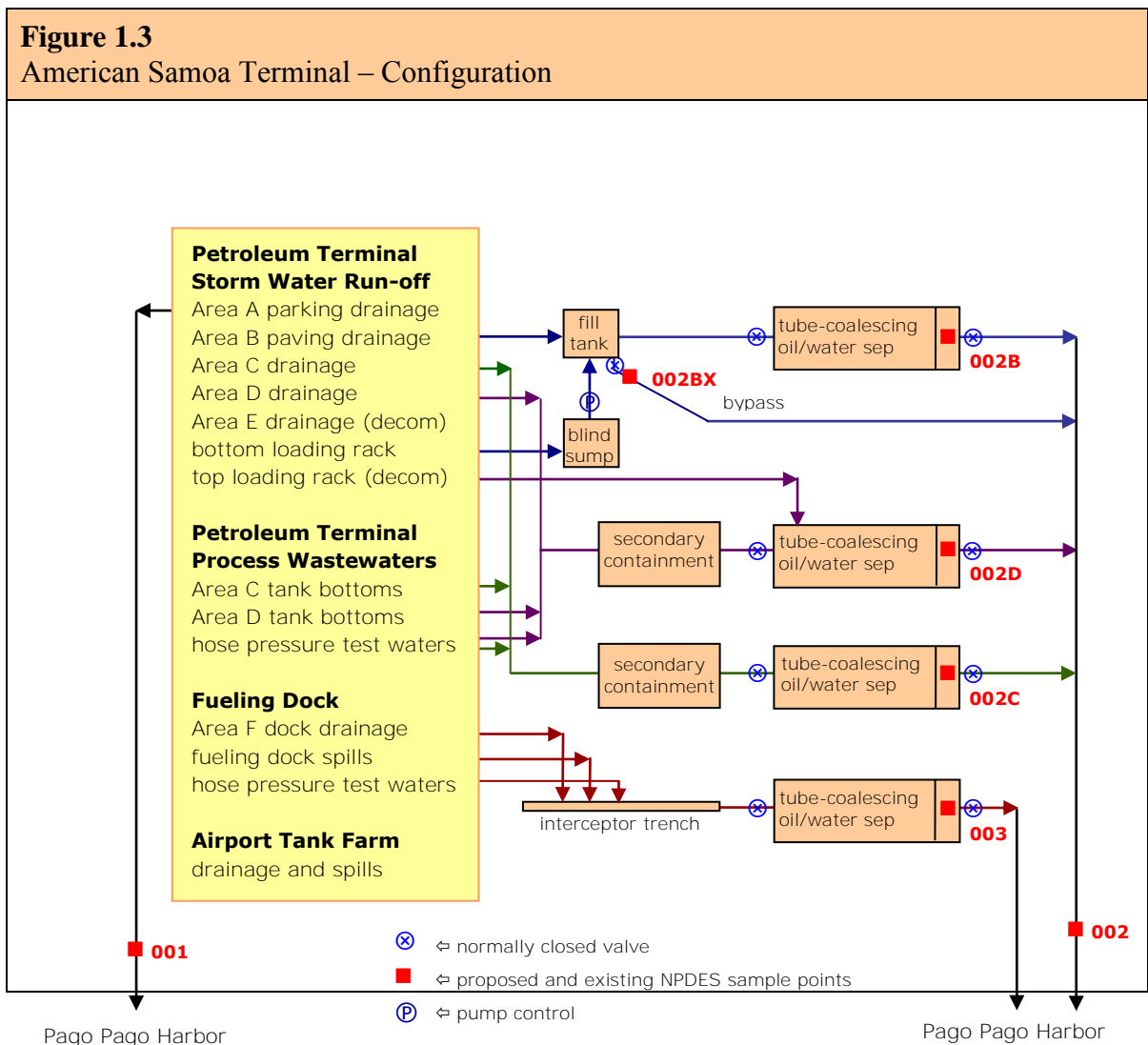


Airport Tank Farm – This inspection also did not cover the airport tank farm. The June 2003 SPCC plan describes the tank farm as consisting of six tanks within secondary containment berms. The NPDES permit does not include any discharge water from the airport tank farm.

Tank#	Capacity (gals)	Contents	Tank Design	Drainage
A1	25,200	jet A1	horizontal steel / fixed roof	none
A2	25,200	jet A1	horizontal steel / fixed roof	none
A3	25,200	jet A1	horizontal steel / fixed roof	none
A4	25,200	jet A1	horizontal steel / fixed roof	none
A5	20,000	jet A1	horizontal steel / fixed roof	none
A6	20,000	jet A1	horizontal steel / fixed roof	none

1.3 Facility Wastewater Sources, Handling, Control, and Discharge

The BP South-West Pacific operations generate contact and non-contact storm water run-off, tank bottoms condensation, and hose pressure hydrotest waters.



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1.3.1 Wastewater Sources

Tank Bottoms – Condensate and entrained waters within the product tanks are drained daily in Area C and weekly in Area D. The tank bottom taps are each outfitted with a locked and normally closed valve. Each tank bottom tap drains to a small capture tank installed over a bermed catch pan, both also valved as normally closed. The tank bottoms are released, after visual observation and log-out tag-out procedures, from the bermed catch pans to the tank farm pad draining to the Area C and Area D oil water separators. Tank bottoms would be expected to contain steady levels of emulsified and free petroleum distillates. See Photos #1 and #2 in Section 1.5 of this report on page 8.

Loading Rack Drainage – The bottom fill loading rack is used to load tanker trucks. It is underlain by floor drains which lead beyond the rack perimeter to a 6,000 gallon blind sump tank which after visual inspection is pumped to a pre-filler surge tank for the Area B oil water separator. The bottom fill loading rack is covered, and surrounded by berms and raised contouring to minimize storm water run-off into the floor drains. The top fill loading rack is now decommissioned. Spills, wash-downs, and drainages would be expected to contain fluctuating levels of free and emulsified petroleum distillates. See Photos #3 and #4 in Section 1.5 of this report on page 8.

Tank Farm Drainage – The secondary containment around the product tanks captures storm water run-off in contact with the tanks or with spilled product. Storm sewers within containment drain run-off, spills, and released tank bottoms to the Area C and Area D oil water separators. The tank farm drainages would be expected to contain low levels of free and emulsified petroleum distillates. See Photo #2 and in Section 1.5 of this report on page 8.

Fuel Dock Drainage – The fore dock is bermed and sloped to drain to an interceptor trench which leads to the Area F oil water separator. The filler hose reels on the fore dock are also within their own berms with valving as normally closed. Fuel dock drainage would be expected to contain low levels of free and emulsified petroleum distillates. See Photos #5 and #6 in Section 1.5 of this report on page 8.

Hose Pressure Test Water – The filler hoses are pressure tested with water. The hose pressure test tail waters are drained to the oil water separators. Hose pressure test waters would be expected to contain trace levels of free and emulsified petroleum distillates.

1.3.2 Handling, Controls, and Discharge

Source Controls – BP employs operational and design controls to minimize product loss into the storm drainages and then to the harbor. First, all product tanks are surrounded by secondary containment. Second, all product tanks are level checked daily to identify leakage. BP assigns the Stock Officer the responsibility to explain losses. Third, all product tanks are double bottomed. Fourth, all product tanks have ports for visual observation. Fifth, all tank bottom taps are valved normally closed, locked, and drained to visual observation tanks and catch pans also valved normally closed. Sixth, the on-site storm water drainage systems discharge through tube coalescing oil water separators with their inlets, bypasses, and outlets



all valved normally closed. Finally, the four oil water separators are each surrounded by secondary containment. See Photo #7 in Section 1.5 of this report on page 9.

Area A Drainage – Storm water run-off from the parking lot and other non-operational paved areas discharges through a storm water culvert to the harbor, designated in the permit and here as NPDES-001. Area A non-contact drainages no longer require regulation by permit.

Area B Drainage – Spills, washdown, and drainage from the bottom fill loading rack collect into a blind sump tank through floor drains. The sump contents are pumped into a pre-filler surge tank. Storm water run-off from the surrounding paved areas also drain into the surge tank, which is operated to release through an oil water separator. There is normally closed valving into and out of the oil water separator and out through a bypass line. The Area B oil water separator discharges to a storm water culvert leading to the harbor, which is designated in the permit and here as NPDES-002. The oil water separator effluent is designated in this report as NPDES-002B. The oil water separator bypass line is designated in this report as NPDES-002BX. See Photos #7, #8 and #9 in Section 1.5 of this report on page 9.

Area C Drainage – Spills, tank bottoms, storm water run-off, and drainage from Area C collect within secondary containment. The flows drain through a tube coalescing oil water separator, with normally closed valving in and out, to a storm water culvert leading to the harbor. The oil water separator effluent is designated in this report as NPDES-002C. See Photo #10 in Section 1.5 of this report on page 9.

Area D Drainage – Spills, tank bottoms, storm water run-off, and drainage from Area D collect within secondary containment. The wastewaters from Area D and the top fill loading rack drain through a tube coalescing oil water separator, with normally closed valving in and out, to a storm water culvert leading to the harbor. The oil water separator effluent is designated in this report as NPDES-002D. See Photo #11 in Section 1.5 of this report on page 9.

Area E Drainage – Storm water run-off from the decommissioned Area E discharges to a stream leading to the harbor. The discharge point was designated in an old permit as NPDES-005 but no longer is referenced since non-contact drainages are unregulated.

Area F Drainage – Spills, storm water run-off, and drainage from the fore dock collect within secondary containment to an interceptor trench. The wastewaters are released through a tube coalescing oil water separator, with normally closed valving in and out, to the harbor. The oil water separator effluent is the NPDES discharge point, designated in the permit and here as NPDES-003. See Photo #12 in Section 1.5 of this report on page 9.

1.4 Facility SIC Code

The American Samoa Terminal is assigned the SIC code for facilities engaged in the wholesale distribution of crude petroleum and petroleum products from bulk liquid storage facilities (SIC 5171).



1.5 Photo Documentation

Twelve of 27 digital photographs taken by BP South-West Pacific for use in this inspection are depicted here. The photos are saved as *samoa-bp-01.jpg* to *samoa-bp-27.jpg*.



Photo #1: Bottom Fill Loading Rack
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09

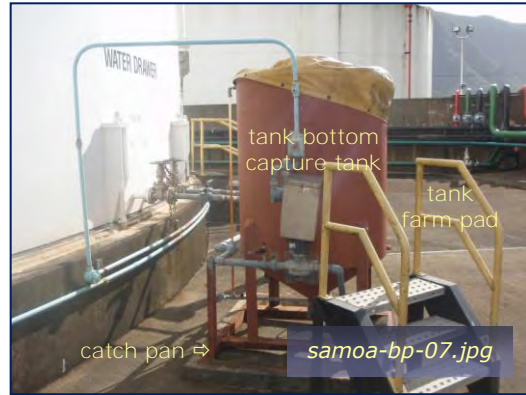


Photo #2: Tank Bottom Draw
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #3: NPDES-002 Outfall
Taken By: Nick King, Assistant Terminal Manager
Date: 07/16/09



Photo #4: NPDES-002 Outfall - Low Tide
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #5: Fueling Dock - looking west
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #6: Fueling Dock - looking east
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09

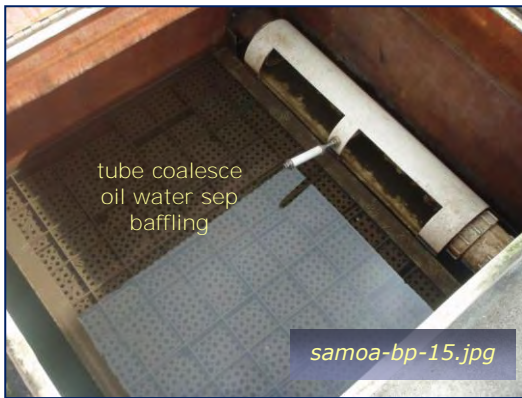


Photo #7: Area B Oil Water Separator
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09

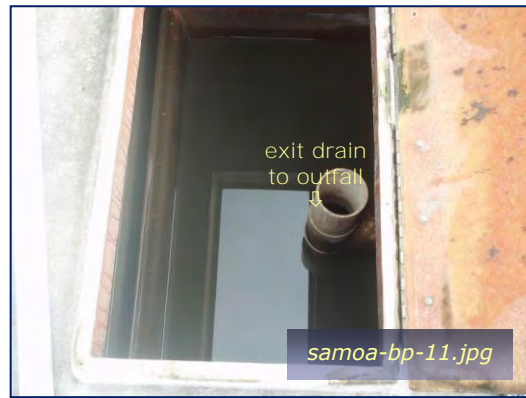


Photo #8: NPDES-002B Discharge Point
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #9: NPDES-002BX Emergency Discharge Point
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #10: NPDES-002C Discharge Point
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #11: NPDES-002D Discharge Point
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



Photo #12: NPDES-003 Discharge Point
Taken By: Nick King, Assistant Terminal Manager
Date: 06/22/09



2.0 NPDES Permit Requirements

- *The NPDES permit must apply Federal BAT/NSPS standards to all regulated sources and the American Samoa water quality standards to the discharge to the ocean.*

Summary

The NPDES permit authorizes the discharge of process wastewaters and storm water drainage to the harbor. It establishes discharge limits that apply American Samoa water quality standards for oil and grease, and pH, as well as a few narrative receiving water limits. The NPDES permit should substantially change upon reissuance, with the March 2009 EPA Order previewing the likely permit conditions and where and how they might apply. In particular, the EPA Order requires self-monitoring at the four oil water separators themselves since all contact wastewaters discharge through them, and the tank farm outfall is not always accessible for sampling. Thus, the reissued NPDES permit is expected to (1) set discharge limits for the four oil water separators, (2) apply receiving water requirements for the outfalls to the harbor, and (3) no longer cover the storm water discharges from non-operational areas.

Requirements

- None.

Recommendations

- The permit should apply effluent limits and require self-monitoring to the five contact discharges from the four oil water separators (NPDES-002B, -002BX, -002C, -002D, -003).
- The permit should apply receiving water limits and require self-monitoring to two final outfall discharges of contact wastewater into the harbor (NPDES-002, -003).

2.1 Permit Applicability

NPDES Permit AS0020028 was issued to become effective on March 10, 2003 and to expire on March 9, 2008. It is administratively extended since BP submitted an application for permit renewal on September 7, 2007, more than 180 days before the expiration date. It applies American Samoa water quality standards to process wastewaters and storm water drainages, through two tank farm outfalls and the fuel dock, designated in the permit and this report as the sample points NPDES-001, NPDES-002 and NPDES-003. The reissued NPDES permit would be expected to no longer cover non-contact storm water discharges from the non-operational Area A, which would eliminate the sample point NPDES-001.

2.2 Federal BAT/NSPS Categorical Standards

No Federal categorical standards apply. The Federal standards in 40 CFR 419 apply to petroleum refineries and not fuel tank farms and fueling stations.



2.3 NPDES Permit Conditions

See Sections 2.3, 2.4 and 2.5 of the previous EPA inspection report issued on March 7, 2009 for the detailed descriptions of the current NPDES permit conditions.

Effluent Limits - The NPDES permit applies two effluent limits (*oil and grease @ 15.0 mg/l, pH @ 6.0 to 8.6 s.u.*) to the wastewater discharges to the harbor. The effluent limits are applied to two outfalls and the fueling dock, designated in this report as the sample points NPDES-001, NPDES-002 and NPDES-003. The EPA Order now requires additional self-monitoring of the discharges from the four oil water separators. It is expected that the reissued NPDES permit would apply the effluent limits to the four oil water separators since all process-related contact wastewaters discharge through them. The effluent limits oil and grease, and pH would thus apply to NPDES-002B, NPDES-002C, NPDES-002D, NPDES-003, and to the emergency bypass NPDES-002BX.

Receiving Water Limits - The NPDES permit also applies narrative receiving water limits for the discharge into the harbor, but does not require self-monitoring. Among the various provisions are prohibitions against (1) visible oily sheen, (2) oil deposits, (3) biota damage, (4) objectionable odors or taste in the harbor or biota, (5) undesirable aquatic life, or (6) toxicity. The EPA Order requires daily visual monitoring for oily sheen at both harbor outfalls NPDES-002 and NPDES-003. The reissued NPDES permit would be expected to require the same visual self-monitoring.

Pollution Prevention Plan - The NPDES permit requires the development and implementation of a pollution prevention plan. The July 2003 plan for the American Samoa Terminal established a number of site-specific best management practices (“BMPs”) pertinent to the water quality of discharges from the facility. The reissued NPDES permit would be expected to continue to require implementation of the BMPs.

Self-Monitoring Requirements - The NPDES permit does not limit self-monitoring to storm water drainages but it does imply that sampling needs to occur in response to storm events since the flow estimates are based on the amount of rainfall. The self-monitoring during storm events was found to also account for the tank bottoms and hose test waters that are generated irrespective of storm events. These process wastewaters are impounded by the containment and oil water separators until BP needs to discharge storm water drainage through the oil water separators to the harbor. See Figure 1.3 on page 5.



3.0 Compliance with NPDES Permit Requirements

- *Industrial and storm water discharges are authorized into the harbor from just two tank farm outfalls and the fuel dock oil water separator. [NPDES Permit §I.A and I.B]*
- *Industrial waste and storm water discharges must comply with the NPDES permit discharge limitations set forth as the application both of Federal standards and American Samoa water quality standards. [NPDES Permit §I.A and I.B]*
- *Industrial waste and storm water discharges must not result in adverse impacts in the receiving waters as defined by narrative standards. [NPDES Permit §I.C through I.G]*
- *The facility must develop and implement BMPs designed to control pollutants entering surface waters. [NPDES Permit §I.C, I.D, and I.E]*

Summary

Compliance Status - It cannot yet be determined that BP South-West Pacific consistently complies with its NPDES permit nor with the expected conditions of the reissued permit. The EPA Order was issued because BP did not fully conduct the self-monitoring required by its NPDES permit. The EPA Order required three months of supplemental self-monitoring to provide the data necessary to reissue the permit. The supplemental sampling schedule in Item 7 of the EPA Order required weekly sampling of the oil water separators, daily observations of the harbor for sheen, and a single priority pollutant scan of the tank farm outfall to the harbor. This data currently is not yet available. As a result, the conclusions regarding compliance will be made as part of the NPDES permit reissuance process.

Water Pollution Control - Nevertheless, there are good aspects of water pollution control found in effect. Foremost, all contact wastewaters discharge through four tube coalescing oil water separators, each designed to remove petroleum distillates found in fueling station wastewaters. BP also is clean and well run, employing many operational and design controls to minimize product loss into the wastewaters, including adequately sized secondary containment, daily level checking, double bottomed product tanks with visual ports, normally closed tank bottom taps, and tank bottom visual observation tanks. BP also consistently certifies to following its pollution prevention plan. The treatment in-place and the built-in source controls should be able to ensure consistent compliance with the NPDES permit, but such a determination cannot be made until completion of the self-monitoring under the EPA Order.

See Section 3.1 of the previous EPA inspection report issued on March 7, 2009 for a summary of the 2004-2008 sampling conducted as required under the current NPDES permit.

Requirements

- None.

Recommendations

- None.



4.0 Compliance with Self-Monitoring Requirements

- *The facility must self-monitor its discharges to the harbor at least once per month, as well as conduct visual inspections of the BMPs. [NPDES Permit §I.A, I.B, and I.E]*
- *Samples must be representative of the sampling period. Sampling must be representative of the conditions occurring during the reporting period. [40 CFR 122.41(j)]*

The sample record for BP South-West Pacific was incomplete, in part because the overall tank farm outfall is not always accessible for sampling. As a result, the EPA Order required establishment of compliance sample points at each of the four oil water separators. Item 6 of the EPA Order then set a baseline sampling schedule that differs from the NPDES permit, in particular by replacing the monthly sampling of the tank farm outfall with quarterly sampling of the four oil water separators. The EPA Order also required additional sampling of non-storm related discharges. However, during this inspection, EPA found that BP impounds all of tank bottoms and hose pressure test waters within containment for eventual discharge only during storm events. As a result, the EPA Order will be modified to reflect the fact that additional non-storm related sampling is no longer warranted. The next NPDES permit is expected to mirror the modified self-monitoring requirements of the EPA Order.

See Section 4.1 of the previous EPA inspection report issued on March 7, 2009 for a list of 2004-2008 sample results that BP did not obtain as required under the NPDES permit.

Requirements

- All storm related and non-storm related discharges to the harbor must be sampled at least once during each three-month permit reporting period.

Recommendations

Table 4.0 Self-Monitoring – Modified EPA Order and Recommended Permit Requirements							
Self-monitoring Frequency	NPDES 001	NPDES 002	NPDES 002B/BX	NPDES 002C	NPDES 002D	NPDES 003	Sample Type
oily sheen	-	daily	-	-	-	daily	visual
flow (mgd) ①	-	-	quarterly	quarterly	quarterly	quarterly	estimate
oil+grease (mg/l)	-	-	quarterly	quarterly	quarterly	quarterly	grab
priority pollutant scan	-	④	-	-	-	-	various
pH-min/max (s.u.)	-	-	quarterly	quarterly	quarterly	quarterly	field grab
turbidity (NTU)	-	-	quarterly	quarterly	quarterly	quarterly	field grab
process wastewaters ②	-	-	quarterly	quarterly	quarterly	quarterly	report
pollut'n prevent plan ③	-	-	quarterly	quarterly	quarterly	quarterly	certify
① Estimations involve the 24-hour rainfall amount, surface area, soil adsorption factor. ② List dates and volumes of all process wastewater discharges unrelated to storm events. ③ Self-certification to have followed the approved pollution prevention plan. ④ Once per life-of-permit pollutant scans in order to identify changes in discharge quality.							