

**Covered Source Permit Review Summary (Renewal)**

**Application File No.:** 0367-04

**Permit No.:** 0367-01-C

**Applicant:** Tesoro Hawaii Corporation

**Facility Title:** Sand Island Terminal  
Petroleum Bulk Loading Terminal  
2 Sand Island Access Road  
Honolulu, Hawaii 96819  
UTM 615625E 2357860N

**Mailing Address:** Tesoro Hawaii Corporation  
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Honolulu, HI 96817

**Responsible Official:** Wade K. Nakashima  
Manager, Supply and Distribution  
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**Point of Contact:** Ms. Rose Chu  
Environmental Compliance Administrator  
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**Application Date:** August 23, 2006

**Proposed Project:**

SICC 5171 (Petroleum Bulk Stations and Terminals)

This is a renewal application for Covered Source Permit No. 0367-01-C which expires on August 27, 2007. There are no proposed changes to the existing permit and facility.

Tesoro's Sand Island Petroleum Bulk Terminal is located at 2 Sand Island Access Road just before the bridge to Sand Island. The terminal has two storage tanks; a fixed roof tank in low sulfur diesel service ( tank no. 11) and a transmix tank with internal floating roof (tank no. 10) which is subject to NSPS Subpart K. There is also a petroleum truck loading rack which is used for diesel and transmix loading. The transmix (mixture of gasoline and diesel) arrives at the terminal by pipeline and generally leaves the terminal by pipeline also (either to barge loading at Pier 34, or directly back to the refinery). Transmix is produced when cleaning the lines after changing products in the pipelines following deliveries made to other terminals. The petroleum truck loading rack was modified since the initial Title V permit application with an additional loading arm to load transmix into tanker trucks for transfer back to the refinery for additional flexibility. (The use of the flex hoses and pump were eliminated for safety reasons and to reduce spillage).

**Equipment:**

1. Tank no. 10 - 21,000 barrel internal floating roof tank - transmix (mixture of gasoline and diesel) storage
2. Petroleum tank truck loading rack (bottom loading), no vapor recovery, two loading arms (one for transmix, one for diesel)

**Air Pollution Controls:**

Petroleum storage tank no. 10 is equipped with an internal floating roof complying with NSPS Subpart K.

**Applicable Requirements:**

Hawaii Administrative Rules (HAR)

Title 11, Chapter 59 Ambient Air Quality Standards  
Title 11, Chapter 60.1 Air Pollution Control  
    Subchapter 1 General Requirements  
    Subchapter 2 General Prohibition  
        HAR 11-60.1-31 Applicability  
        HAR 11-60.1-39 Storage of volatile organic compounds  
    Subchapter 5 Covered Sources  
    Subchapter 6 Fees for Covered Sources, Noncovered Sources, and Agricultural Burning  
        HAR 11-60.1-111 Definitions  
        HAR 11-60.1-112 General Fee Provisions for Covered Sources  
        HAR 11-60.1-113 Application Fees for Covered Sources  
        HAR 11-60.1-114 Annual Fees for Covered Sources  
        HAR 11-60.1-115 Basis of Annual Fees for Covered Sources  
    Subchapter 8 Standards of Performance for Stationary Sources  
        HAR 11-60.1-161 New Source Performance Standards

Federal Requirements

40 CFR Part 60 Standards of Performance for New Stationary Sources (NSPS)  
    Subpart A General Provisions  
    Subpart K Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978

**Non-applicable Requirements:**

Hawaii Administrative Rules (HAR)

Title 11, Chapter 60.1 Air Pollution Control  
    Subchapter 7 Prevention of Significant Deterioration Review  
    Subchapter 9 Hazardous Air Pollutant Sources

Federal Requirements

- 40 CFR Part 52.21 Prevention of Significant Deterioration of Air Quality
- 40 CFR Part 60 Standards of Performance for New Stationary Sources (NSPS)
  - Subpart XX Standards of Performance for Bulk Gasoline Terminals
- 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards)
  - Subpart R National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)

**Prevention of Significant Deterioration (PSD):**

This source is not a major stationary source nor are there modifications proposed that constitute a major stationary source that is subject to PSD review. Therefore, PSD is not applicable.

**Best Available Control Technology (BACT):**

A Best Available Control Technology (BACT) analysis is applicable only to new covered sources and significant modifications to covered sources that have the potential to emit or a net emissions increase above significant levels as defined in HAR §11-60.1-1. There are no proposed modifications to this existing source for this renewal application. Therefore, a BACT analysis is not applicable.

**Consolidated Emissions Reporting Rule (CERR):**

40 CFR Part 51, Subpart A - Emission Inventory Reporting Requirements, determines CER based on the emissions of criteria air pollutants from Type B point sources (as defined in 40 CFR Part 51, Subpart A), that emit at the CER triggering level as shown in the table below:

Pollutant	Type B CER Triggering Level <sup>1</sup> (tpy)	In-house Total Facility Triggering Level <sup>2</sup> (tpy)	Total Facility Emissions <sup>2</sup> (tpy)	Total Facility Emissions <sup>3</sup> (tpy)
VOC	≥100	≥25	56.48	2.04

<sup>1</sup> Based on actual emissions  
<sup>2</sup> Based on potential emissions  
<sup>3</sup> Based on actual emissions (2005)

This facility emits less than the Type B CER (VOC) triggering levels. Therefore, CER requirements are not applicable.

Although CER for the facility is not triggered, the Clean Air Branch requests annual emissions reporting from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels. Annual emissions from these facilities are used within the Department and are not inputted into the AIRS database. Since the total emissions of VOC within the facility is greater than 25 tons per year, annual emissions reporting for the facility will be required for in-house recordkeeping purposes. Also, annual emissions reporting is required for covered sources.

**Compliance Assurance Monitoring (CAM):**

40 CFR Part 64

Applicability of the CAM rule is determined on a pollutant specific basis for each affected emission unit. Each determination is based upon a series of evaluation criteria. In order for an emission unit to be subject to CAM, each emission unit must:

- Be located at a major source per Title V of the Clean Air Act Amendments of 1990;
- Be subject to federally enforceable applicability requirements;
- Be fitted with an “active” air pollution control device;
- Have pre-control device potential emissions that exceed applicable major source thresholds;
- Not be subject to certain regulations that specifically exempt it from CAM.

Emission units are any part or activity of a stationary source that emits or has the potential to emit any air pollutant.

These emission units are not subject to CAM since this facility is not a major source required to obtain a Part 70 permit.

**Synthetic Minor Source:**

This facility is a synthetic minor source as the facility would be classified as a major source without operational limitations, however, is classified as a non-major source through the use of throughput limitations on the petroleum truck loading rack when loading transmix.

**Insignificant Activities:**

Tank no. 11 (13,000 barrel fixed roof tank - diesel storage) is considered an insignificant activity per HAR §11-60.1-82(f)(7) since the total VOC emissions are less than 1.0 tpy and HAP (hexane) emissions are less than 0.1 tpy. Also, the petroleum tank truck loading rack (when loading diesel) is an insignificant activity for the same reasons. In addition, tank no. 11 is not subject to 40 CFR Part 60 Subpart K because the maximum true vapor pressure is less than 1.0 psia (0.0115 psia).

**Alternative Operating Scenarios:**

The transmix is normally returned to the refinery via barge or pipeline, however, the petroleum tank truck loading rack may be used to load transmix into tanker trucks for transfer back to the refinery.

**Project Emissions:**

**Facility Emissions - Potential**

Source	VOC (tpy)	Benzene (tpy)	Ethylbenzene (tpy)	Toluene (tpy)	Xylenes (o-,p-,m-) (tpy)	Hexane (tpy)	Total HAPs (tpy)
Tank no. 10 (transmix)	6.66	0.03	0.01	0.10	0.02	0.04	0.19
Tank no. 11 (diesel)	0.61	0.01	0.00	0.02	0.01	0.00	0.04
Petroleum Tank Truck Loading Rack (transmix and diesel)	49.21	0.18	0.03	0.71	0.12	0.28	1.32
<b>Total</b>	<b>56.48</b>	<b>0.22</b>	<b>0.04</b>	<b>0.83</b>	<b>0.15</b>	<b>0.32</b>	<b>1.55</b>

Transmix Emissions

1. Tank emissions Tank no. 10 emissions were calculated using EPA's TANKS 4.0 program. Calculations were based on an allowable throughput limit of 235,000 barrels per year and a mixture of 100% gasoline (TVP of 11.0 psia).
2. Loading rack emissions The emissions from the loading rack were calculated using AP-42, 1/95, Section 5.2, equation (1):  $L_L = 12.46 \text{ SPM} / T$ . Calculations were based on a maximum throughput of 235,000 barrel per year and mixture of 100% gasoline (TVP of 11.0 psia).

Diesel Emissions

1. Tank emissions Tank no. 11 is a fixed roof tank and is in low sulfur diesel service. Emissions are based on using a throughput of 658,800 barrels per year.
2. Loading rack emissions Emissions are based on using the same throughput as tank no. 11 (658,000 barrels).

Equipment Leak Emissions

1. Emissions from equipment leaks were considered to be insignificant.

**Facility Emissions - Actual (2005)**

Source	VOC (tpy)	Total HAPs (tpy)
Tank no. 10 (transmix)	1.53	0.14
Tank no. 11 (diesel)	0.23	0.02
Petroleum Tank Truck Loading Rack (transmix and diesel)	0.28	0.03
<b>Total</b>	<b>2.04</b>	<b>0.19</b>

**Ambient Air Quality Impact Assessment:**

The only emissions are fugitive VOCs from the petroleum storage tanks and the petroleum tank truck loading rack and any HAPs associated with these VOCs. An ambient air quality impact assessment was not performed for the following reasons: 1) VOCs do not have an ambient air quality standard, and 2) the Department of Health air modeling guidance generally exempts an applicant from performing an ambient air quality impact assessment for fugitive sources (storage tanks, pipe leaks, etc.).

**Significant Permit Conditions:**

There are no new significant permit conditions for this permit renewal.

**Conclusion and Recommendations:**

Recommend issuing the renewal for the subject covered source permit as there are no significant changes to the permit. A 30-day public comment period and 45-day EPA review period are also required.

Reviewer: Darin Lum  
Date: 7/07