

Covered Source Permit Review Summary

Application No.: Renewal Application No. 0220-13
Minor Modification Application No. 0220-15

Permit No.: 0220-01-C

Applicant: Aloha Petroleum, Ltd.

Facility: TFM Barbers Point Sales Terminal
91-119 Hanua St., Kapolei, Oahu

Mailing Address: Aloha Petroleum, Ltd.
91-119 Hanua St.
Kapolei, Hawaii 96707

Responsible Official: Mr. David Belknap
Terminal Manager
(808) 673-4296

Point of Contact: Mr. David Belknap
Terminal Manager
(808) 673-4296

Application Dates: Renewal application received on August 1, 2011
Minor modification application received on October 11, 2013

Proposed Project:

SICC 5171 (Petroleum Bulk Stations and Terminals)

Renewal Application No. 0220-13 and Minor Modification Application No. 0220-15

The Aloha Petroleum TFM Barbers Point Sales Terminal currently operates nine (9) above-ground storage tanks with capacities greater than 40,000 gallons. Each of these tanks (tanks nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204 and BT-301) are internal floating roof tanks permitted for gasoline product storage. The bottom-loading petroleum tank truck loading rack is a two-lane load rack currently equipped with four (4) loading stations, each with five (5) loading arms, and each arm has the capability to load a single product at a maximum pumping rate of 600 gpm. Ethanol and other fuel additives are blended directly into the gasoline at the load rack. Emissions from the load rack operations, in the form of product vapors that are displaced during truck loading activities, are controlled by a John Zink Company carbon adsorption vapor recovery unit (VRU). There are no changes proposed in the renewal application. The minor modification application proposes to remove from the permit the John Zink Company vapor combustion unit (VCU) previously permitted as a secondary control system. As both control systems are currently subject to the same VOC emission limitation of 10 mg/l of gasoline loaded, the removal of the VCU will not increase permitted emission from the facility; the only effect will be to eliminate the combustion emissions of NO_x, CO, SO₂, and PM₁₀ associated with the operation of the VCU. The VCU will be installed at the Aloha Hilo West terminal (CSP No. 0072-01-C). There will be no change to the Continuous Emissions Monitoring System (CEMS) installed at the VRU.

This modification is considered a minor modification since it:

- (1) Does not increase the emissions of any air pollutant above the permitted emission limits;
- (2) Does not result in or increase the emissions of any air pollutant not limited by permit to levels equal to or above:
 - (A) 500 pounds per year of a hazardous air pollutant, except lead;
 - (B) 300 pounds per year of lead;
 - (C) twenty-five (25) percent of significant amounts of emission as defined in section 11-60.1-1, paragraph (1) in the definition of “significant”; or
 - (D) two (2) tons per year of each regulated air pollutant not already identified above;
- (3) Does not violate any applicable requirement;
- (4) Does not involve significant changes to existing monitoring requirements or any relaxation or significant change to existing reporting or recordkeeping requirements in the permit. Any change to the existing monitoring, reporting, or recordkeeping requirements that reduces the enforceability of the permit is considered a significant change;
- (5) Does not require or change a case-by-case determination of an emission limitation or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
- (6) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement, and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - (A) A federally enforceable emissions cap assumed to avoid classification as a modification pursuant to any provision of Title I of the Act or subchapter 7; and
 - (B) An alternative emissions limit approved pursuant to regulations promulgated pursuant to Section 112(i)(5) of the Act or subchapter 9; and
- (7) Is not a modification pursuant to any provision of Title I of the Act.

The renewal application fee of \$3,000.00 and the minor modification application fee of \$200.00 was submitted by the applicant and processed.

Equipment Description:

1. Petroleum storage tanks

Tank Number	Capacity (bbls)	Construction	Permitted Service
50101	50,000	Internal Floating Roof	Gasoline
50102	50,000	Internal Floating Roof	Gasoline
50103	50,000	Internal Floating Roof	Gasoline
50205	50,000	Internal Floating Roof	Gasoline
35201	35,000	Internal Floating Roof	Gasoline
60202	60,000	Internal Floating Roof	Gasoline
68203	68,000	Internal Floating Roof	Gasoline

68204	68,000	Internal Floating Roof	Gasoline
BT-301	5,000	Internal Floating Roof	Gasoline

2. One (1) bottom-loading two-lane petroleum tank truck load rack with four (4) loading stations, each with five (5) loading arms; with one (1) John Zink Company carbon adsorption vapor recovery unit, model no. AAT-609-12-7-12.

Air Pollution Controls:

1. Tanks nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204 and BT-301 are equipped with an internal floating roof to comply with NSPS Subpart Kb.
2. One (1) John Zink Company carbon adsorption vapor recovery unit, model no. AAT-609-12-7-12.

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 Prohibitions
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
Subchapter 9	Hazardous Air Pollutant Sources
HAR 11-60.1-174	Maximum Achievable Control Technology (MACT) Emission Standards

Federal Requirements

40 CFR Part 60	Standards of Performance for New Stationary Sources (NSPS)
Subpart A	General Provisions
Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984.
Subpart XX	Standards of Performance for Bulk Gasoline Terminals.
40 CFR Part 63	National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT),
Subpart A	General Provisions;

Subpart BBBBBB National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

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
 HAR 11-60.1-174 Maximum Achievable Control Technology (MACT) Emission Standards
 HAR 11-60.1-180 National Emission Standards for Hazardous Air Pollutants

Federal Requirements

40 CFR Part 52.21 Prevention of Significant Deterioration of Air Quality
 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs)
 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)
 Not applicable since this facility is not a major source of HAPs (< 10 TPY for a single HAP, < 25 TPY for total HAPs).

Prevention of Significant Deterioration (PSD):

This source is not a major stationary source nor are there modifications proposed that by itself 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 increase emissions above significant levels as defined in HAR §11-60.1-1. A BACT analysis is not applicable since this is a minor modification to a covered source.

Air Emissions Reporting Requirements (AERR):

40 CFR Part 51, Subpart A – Air Emissions Reporting Requirements, is 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 AERR triggering level as shown in the table below:

Pollutant	Type B AERR Triggering Level ¹ (tpy)	In-house Total Facility Triggering Level ¹ (tpy)	Total Facility Emissions ^{1,2} (tpy)
VOC	≥100	≥25	94.59

¹ Based on potential emissions

² Based on total facility emissions (CSP No. 0220-01-C and NSP No. 0220-04-N)

This facility emits less than the Type B AERR (VOC) triggering levels. Therefore, AERR is not applicable.

Although AERR 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. Since the total emissions of VOC within the facility is greater than twenty-five (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.

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 operational limitations on the throughput for the petroleum tank truck load rack.

Insignificant Activities:

Per HAR 11-60.1-82(f)(7), the following tanks and equipment are considered insignificant activities due to emissions of VOC less than 2 tpy and are not subject to any federal standard.

1. Tank 2000 – 238 bbl horizontal fixed roof additive tank;
2. Tank 2266 – 95 bbl horizontal fixed roof Shell additive tank;
3. Tank 2213 – 190 bbl horizontal fixed roof diesel additive tank;
4. AST 1 – 238 bbl horizontal water storage tank;
5. Pipeline fugitive emissions;
6. Ethanol blending emissions; and
7. Truck off-loading emissions.

Alternate Operating Scenarios:

There are no proposed alternate operating scenarios.

Project Emissions:

The maximum VOC and HAP emissions for tanks nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204 and BT-301 were calculated using EPA's Tanks 4.0.9d program. The twelve-month (12-month) load rack throughput limit of 383,250,000 gallons of petroleum products (gasoline and ethanol combined) was allocated among the storage tanks based on tank capacity. For a conservative approach, all throughput was assumed to be gasoline.

The maximum VOC and HAP emissions from the gasoline load rack are based on the maximum gasoline throughput (383,250,000 gallons/12-months) allowed by the permit assuming a limit of ten (10) mg of VOC per liter of gasoline loaded. All throughput was assumed to be gasoline.

Fugitive components at the terminal were grouped into either gas, light liquid, or heavy liquid streams representing the three categories of streams utilized by EPA in the development of the emission factors which were used to calculate fugitive VOC emissions. For all components, the VOC emission rate calculation methodology is based on the emission factors from the November 1995 EPA document, Protocol for Equipment Leak Emission Estimates.

Facility Potential Emissions

Source	VOC (tpy)	Total HAPs (tpy)
Tank No. 50101	6.01	0.177
Tank No. 50102	6.01	0.177
Tank No. 50103	6.01	0.177
Tank No. 50205	6.01	0.177
Tank No. 35201	5.15	0.151
Tank No. 60202	6.38	0.188
Tank No. 68203	8.51	0.249
Tank No. 68204	8.51	0.249
Tank No. BT-301	3.73	0.105
Tank Truck Load Rack	15.99	0.438
Truck Loading Fugitives	17.59	0.482
Pipeline Fugitives	0.77	0.198
Total Facility Emissions	90.69	2.769

Notes:

1. Maximum total throughput (383,250,000 gallons/12-months) is distributed among the permitted tanks at the facility based on relative tank capacity.
2. EPA's Tanks 4.0.9d program was used to calculate tank emissions. All products were assumed to be gasoline for worst case emissions scenario.
3. Load rack emission rate uses a vapor recovery operational standard of 10 mg/l.
4. Load rack throughput based on permit throughput limit of 383,250,000 gallons of petroleum products per any rolling twelve (12) month period. All products were assumed to be gasoline for worst case emissions scenario.
5. Speciation data obtained from Tanks 4.0.9d data, vapor speciation is the average of all months.

TFM Barbers Point Sales Terminal – Total Facility Emissions

Pollutant	Petroleum Storage Tanks and Load Rack (CSP No. 0220-01-C) (tpy)	Petroleum Storage Tanks (NSP No. 0220-04-N) (tpy)	Total Emissions (tpy)
VOC	90.69	3.9	94.59

Ambient Air Quality Impact Assessment:

The only emissions are fugitive VOCs from the petroleum storage tanks and 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:

- Attachment IIA, Special Condition No. B.1

1. Tank Nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204, and BT-301

The storage tanks are subject to the provisions of the following federal regulations:

- a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions; and
- b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.

- Attachment IIA, Special Condition No. B.2

2. Tank Nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204, and BT-301

The storage tanks are subject to the provisions of the following federal regulations when storing gasoline:

- a. 40 Code of Federal Regulations (CFR) Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions; and
- b. 40 CFR Part 63, Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

- Attachment IIA, Special Condition No. C.1

1. General (Tank Nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204, and BT-301)

Tank Nos. 50101, 50102, 50103, 50205, 35201, 60202, 68203, 68204, and BT-301 are subject to the control requirements specified in 40 CFR Part 60, Subpart Kb, and are deemed in compliance with 40 CFR Part 63, Subpart BBBBBB, if requirements of Attachment IIA and 40 CFR Part 60, Subpart Kb, are met. The permittee shall report this determination in the Notification of Compliance Status report pursuant to Attachment IIA, Special Condition No. E.8.

- Attachment IIB, Special Condition No. B.1

1. The petroleum tank truck load rack and associated appurtenances are subject to the provisions of the following federal regulations when loading gasoline:
 - a. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
 - b. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart XX, Standards of Performance for Bulk Gasoline Terminals;
 - c. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories, Subpart A, General Provisions; and
 - d. 40 CFR Part 63, Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

- Attachment IIB, Special Condition No. C.1

1. The maximum throughput of the petroleum tank truck load rack shall not exceed 383,250,000 gallons (9,125,000 barrels) of petroleum products per any rolling twelve-month (12-month) period.

- Attachment IIB, Special Condition No. C.5.b

- b. The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks shall not exceed ten (10) milligrams of total organic compounds per liter of gasoline loaded.

- Attachment IIB, Special Condition No. D.10

10. The permittee shall install, calibrate, certify, operate, and maintain, according to the manufacturer's specifications, a continuous emissions monitoring system (CEMS) while gasoline vapors are displaced to the vapor recovery unit. The CEMS shall be installed in the exhaust stream of the vapor recovery unit's carbon adsorption system and be capable of measuring and recording organic compound concentrations.

- Attachment IIC

Incorporated into the permit the leak inspection and repair requirements of 40 CFR Part 63, Subpart BBBBBB for equipment in gasoline service.

Conclusion and Recommendations:

Recommend issuance of the renewal and minor modification of Covered Source Permit No. 0220-01-C, subject to the significant permit conditions above. A 30-day public comment period and a forty-five day (45-day) EPA review period are also required.

Reviewer: Darin Lum
Date: 8/2015