

Modification to a Covered Source Permit
Review Summary

Application File No.: Minor Modification No. 0072-07
Significant Modification No. 0072-08

Permit No.: 0072-01-C

Applicant: Aloha Petroleum, Ltd.

Facility: Hilo West Terminal
661 Kalaniana'ole Avenue, Hilo, Hawaii

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Responsible Official: Mr. Kelvin Chun
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Application Dates: Minor Modification application received on February 21, 2012
Significant Modification application received on May 1, 2012

SICC: 5171 (Petroleum Bulk Stations and Terminals)

Background:

The Aloha Petroleum Hilo West Terminal (purchased from Equilon Enterprises LLC dba Shell Oil Products US in November 2010) currently operates nine above-ground storage tanks, seven of which have a capacity greater than 40,000 gallons. The facility currently has five internal floating roof tanks (Tank nos. 1, 4, 6, 7, and 8) and four fixed roof tanks (Tank nos. 3, 5, Slop and Additive). Aloha proposes to convert one of the existing fixed roof tanks (Tank no. 5) to an internal floating roof tank. The tank will initially be used to store ethanol, but may store gasoline in the future. The current ethanol storage tank (Tank no. 4) will be used to store diesel. Tank no. 4 will remain an internal floating roof tank. There are no underground storage tanks at the facility and the vertical fixed cone roof tanks are exempt from permitting.

The bottom-loading petroleum tank truck loading rack at the Aloha Petroleum Hilo West Terminal is a one-lane load rack currently equipped with four (4) loading arms, three (3) for gasoline and one (1) for ethanol. The load rack operates on a continuous basis (24 hrs/day, 365 days/year). Each arm loads at approximately 350 gallons per minute. Aloha proposes to convert one of the gasoline

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loading arms to load distillate products such as diesel or Jet A. The existing load arm and meter stack will be used, but a new 15 hp pump will be installed. The load rate will remain 350 gallons per minute. The proposed modification will result in an emissions decrease on an hourly basis, as the maximum number of gasoline/ethanol loading arms that can operate simultaneously will decrease by one. The terminal will continue to comply with the current facility throughput limit of 62,000,000 gallons (1,476,190 barrels) per rolling twelve month (12-month) period for gasoline and ethanol combined. (This is to remain under PSD and MACT triggers). The current permit does not contain an annual diesel throughput limitation. Aloha proposes to have an annual limit of 7,500,000 gallons (178,571 barrels) per rolling twelve month (12-month) period for distillate loading.

Proposed Project:

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Aloha Petroleum requested to correct an error in the existing permit regarding the tank truck load rack by specifying four (4) product arms and associated appurtenances versus three (3) product arms and associated appurtenances in the existing permit.

Significant Modification No. 0072-08

The Aloha Petroleum Hilo West Terminal currently only loads gasoline and ethanol. Aloha proposes to make some modifications at the terminal to allow the storage and loading of distillate fuels such as diesel or Jet A. The proposed modifications are as follows:

- Tank no. 4 (currently in ethanol service) would be used to store distillate fuels.
- An internal floating roof would be installed on Tank no. 5 (currently an out-of-service fixed roof tank) and the tank would be used to store ethanol.
- One of the gasoline loading arms at the truck loading rack would be replaced with a diesel loading arm.
- Aloha proposes to have an annual limit of 7,500,000 gallons (178,571 barrels) per rolling twelve month (12-month) period for distillate loading.

Equipment:

1. Petroleum storage tanks:
 - a. Tank no. 1 - 10,000 barrel internal floating roof tank;
 - b. Tank no. 4 – 5,500 barrel internal floating roof tank;
 - c. Tank no. 5 – 2,400 barrel internal floating roof tank;
 - d. Tank no. 6 - 5,600 barrel internal floating roof tank;
 - e. Tank no. 7 - 12,700 barrel internal floating roof tank; and
 - f. Tank no. 8 - 25,000 barrel internal floating roof tank.
2. One (1) bottom loading petroleum tank truck loading rack with four product arms (three (3) for gasoline or ethanol, one for distillate product).

Air Pollution Controls:

Emissions from the petroleum storage tanks and petroleum tank truck load rack are controlled by the design characteristics of the tanks and load rack. The petroleum storage tanks have internal floating roofs with primary seals and the petroleum tank truck load rack is bottom loading.

Operational Limits:

The petroleum storage tanks do not have a throughput limits. The maximum combined throughput limit for the petroleum tank truck loading rack is 62,000,000 gallons (1,476,190 barrels) per rolling 12-month (12-month) period for gasoline and ethanol. • Aloha Petroleum proposes to have a maximum combined throughput limit of 7,500,000 gallons (178,571 barrels) per rolling 12-month (12-month) period for distillate product loading.

Applicable Requirements:

Hawaii Administrative Rules (HAR)

Chapter 11-59, Ambient Air Quality Standards

Chapter 11-60.1

Subchapter 1, General Requirements

Subchapter 2, General Prohibitions

11-60.1-31 Applicability

11-60.1-39 Storage of Volatile Organic Compounds

Subchapter 5, Covered Sources

Subchapter 6, Fees for Covered Sources, Noncovered Sources, and Agricultural Burning

11-60.1-111 Definitions

11-60.1-112 General Fee Provisions for Covered Sources

11-60.1-113 Application Fees for Covered Sources

11-60.1-114 Annual Fees for Covered Sources

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

NESHAP/MACT:

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 - is applicable to all tanks in gasoline service (Tank nos. 1, 4, 5, 6, 7, 8), the petroleum tank truck load rack, and fugitive components in gasoline service. Per Table 2 of Subpart BBBBBB, the

gasoline load rack has a total throughput of less than 250,000 gallons per day and as an existing facility, is required to be in compliance no later than January 10, 2011. Per the requirements in Table 2 of Subpart BBBBBB, the facility is in compliance as it uses submerged filling with a submerged fill pipe (no more than 6 inches from the bottom of the cargo tank) and keeps records of all throughputs that are available upon request.

NSPS:

40 CFR Part 60, 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 - is applicable to Tank no. 5 due to the proposed conversion of Tank no. 5 to an internal floating roof tank storing gasoline or ethanol.

Non-Applicable Requirements:

NESHAP/MACT:

40 CFR Part 63, Subpart R - National Emission Standards for Hazardous Air Pollutants for Gasoline Distribution Facilities - is not applicable to the facility because the facility is not a major source of HAPs.

NSPS:

40 CFR Part 60, New Source Performance Standards (NSPS) Subparts K, Ka, and Kb - Standards of Performance for Storage Vessels for Petroleum Liquids - are not applicable to the facility (except as noted for Tank no. 5 above) because the construction dates are before the subparts were promulgated. The addition of floating roofs to Tank nos. 1, 4, 6, and 7 do not trigger a modification because the tanks were capable of storing gasoline prior to the addition of the floating roofs. For the same reason, Tank no. 8 did not trigger applicability when the product stored was switch from aviation fuel to gasoline in 1984.

40 CFR Part 60, New Source Performance Standards (NSPS) Subpart XX - Standards of Performance for Bulk Gasoline Terminals - is not applicable because of the construction date of the tank truck load rack. Although the initial construction date is not known, it is assumed that the load rack was in place when the storage tanks were built. The load rack was converted from a top-loading to bottom-loading in 1991. The conversion is not considered a modification because the cost of the conversion was less than half the cost of building a new loading rack. The proposed conversion of a gasoline loading arm to a diesel loading arm also does not trigger Subpart XX.

Best Available Control Technology (BACT):

A Best Available Control Technology (BACT) analysis is required for new or modified sources that have the potential to emit or increase emissions above significant amounts as defined in

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HAR §11-60.1. Since this is not a new source nor are any modifications proposed that have the potential to cause a significant net increase in air emissions, a BACT analysis is not required.

This project will cause a small increase in VOC emissions from the loading (distillate load arm) and storage (Tank no. 4) of diesel or other distillates products, and an insignificant decrease in VOC emissions from the change in storage of gasoline or ethanol to a smaller tank (Tank no. 4 to Tank no. 5)

Source	Pre-project VOC emissions (tpy)	Post-project emissions (tpy)	Increase (tpy)	Significant Level (tpy)	Significant?
Truck Load Rack (distillate loading)	0	0.09	0.09		
Distillate Storage (Tank no. 4)	0	0.03	0.03		
Total	0*	0.12	0.12	40	no

*Pre-project VOC emissions for loading distillate is zero as the facility is not currently capable of loading Jet A or diesel.

Compliance Assurance Monitoring (CAM):

The purpose of Compliance Assurance Monitoring (CAM) is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 Code of Federal Regulations, Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are 100% of the major source level; and (5) not otherwise be exempt from CAM. CAM is not applicable because the units do not use a control device to achieve compliance.

CERR (Consolidated Emission Reporting Rule):

40 CFR Part 51, Subpart A – Emission Inventory Reporting Requirements, determines the annual emissions reporting frequency based on the actual emissions of each pollutant from any individual emission point within the facility that emits at or above the triggering levels. Since the sources at this facility are fugitive sources, CERR does not apply.

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The Department does however require facilities to report their annual emissions if the facility-wide emissions exceed the Department's trigger levels. The Department's trigger level for VOCs is 25 tons per year. Since the facility has the potential to emit more than 25 tons per year VOC, they must report their annual emissions to the Department.

Prevention of Significant Deterioration (PSD):

PSD is not applicable because this facility is not a *new* major stationary source nor does this application propose any *major modifications* to a major stationary source as defined in 40 CFR 52.21. A *major modification* is defined as a project at an existing major source that will result in a significant and a significant net - emissions increase above specified emission thresholds for pollutants subject to regulation.

Synthetic minor:

A synthetic minor is a facility that without limiting conditions, physical or operational, emits above the major source triggering levels as defined by HAR §11-60.1-1 for either criteria pollutant(s) or hazardous air pollutant(s). This facility is a major source and thus, is not a synthetic minor.

Project Emissions:

Source	Post-project emissions (tpy)
Truck Load Rack (distillate loading)	0.09
Distillate Storage (Tank no. 4)	0.03
Total	0.12

Greenhouse Gas (GHG) Emissions:

Starting July 1, 2011, existing PSD facilities (for another regulated NSR pollutant) or (emitting 100,000 tpy CO₂e) making changes that would increase GHG emissions by at least 75,000 tpy CO₂e, are required to obtain PSD permits that address GHG emissions. As the terminal does not operate any stationary combustion sources, GHG emissions are negligible and PSD review for CO₂e is not triggered.

Alternate Operating Scenarios:

The applicant did not list any alternate operating scenarios.

Insignificant Activities:

The applicant identified the following insignificant activities.

- one (1) 2,562 barrel fixed roof tank, tank no. 3, storing diesel fuel no. 2;
- one (1) 143 barrel horizontal tank, tank no. 9A, storing slop;
- one (1) 13 barrel tote tank, tank no. 10, storing additive; and
- one (1) CPI oil water separator.

Air Quality 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 is not required 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:

Significant permit conditions include the following:

- 40 CFR Part 63, Subpart BBBB - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities - is applicable to all tanks in gasoline service (tank nos. 1, 4, 5, 6, 7, 8), the petroleum tank truck load rack, and fugitive components in gasoline service.
- 40 CFR Part 60, 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 - is applicable to tank no. 5 due to the proposed conversion of tank no. 5 to an internal floating roof tank storing gasoline or ethanol.
- Tank no. 5 is listed as a significant petroleum storage tank since an internal floating roof would be installed (currently an out-of-service fixed roof tank) and the tank would be used to store ethanol or gasoline.
- The existing permit was corrected such that the petroleum tank truck load rack has four (4) product loading arms, and one of the gasoline loading arms at the petroleum tank truck load rack would be replaced with a distillate loading arm.
- The petroleum tank truck load rack will have a maximum combined throughput limit of 7,500,000 gallons (178,571 barrels) per rolling twelve month (12-month) period for distillate loading (diesel and Jet A).

Conclusion/Recommendation:

Recommend issuing the modification for Covered Source Permit (CSP) No. 0072-01-C, subject to the significant permit conditions described above, and a 30-day public comment period and a 45-day EPA review period. This permit shall supersede CSP No. 0072-01-C issued on April 29, 2010 in its entirety.

Reviewer: Darin Lum

Date: 6/2012