PROPOSED

COVERED SOURCE PERMIT REVIEW - 0072-01-C

Permit Renewal and Modification
Application Nos. 0072-03 and 0072-04
Equilon Enterprises, LLC - Hilo Terminal
4 Internal Floating Roof Storage Tanks & Tank Truck Load Rack

Facility: Equilon Enterprises LLC
Hilo Distribution Plant
661 Kalanianaole Avenue, Hilo, Hawaii

Responsible Official: Tom E. Minton
Regional Manager
20945 S. Wilmington Ave.
Carson, CA 90810
(310) 816-2331

POC: Chris Davies
Senior Project Engineer
20945 S. Wilmington Ave.
Carson, CA 90810
(310) 816-2016

SICC: 5171

Background:
Equilon Enterprises LLC owns and operates a gasoline distribution facility in Hilo located at 661 Kalanianaole Avenue. The Hilo Distribution Plant has three fixed roof storage tanks, four internal floating roof petroleum storage tanks and one tank truck load rack.

Of the seven above ground storage tanks, three of the tanks, tank nos. 3, 4, and 5, are exempt from permitting due to the low vapor pressure to the liquids being stored; tank no. 3 stores fuel oil #2 and tank nos. 4 and 5 store contact water. The remaining tanks, tank nos. 1, 6, 7, and 8, store mogas and are subject to permitting. Internal floating roofs were installed on these tanks and in the original permit application, the applicant stated the tanks nos. 1, 6, and 7 were subject to NSPS subpart K and tank no. 8 was subject to NSPS subpart Ka. After the permit was issued,

the applicant determined that the tanks were not subject to the NSPS subparts for the following reasons. Tank nos. 1, 6, and 7 were constructed as fixed roof tanks in 1932, 1950, and 1967 respectively. In 1974, internal floating roofs were installed on these tanks. The installation of the internal floating roofs is not considered a modification provided the tanks were designed to store gasoline prior to the installation. Per the applicant, tank nos. 1, 6, and 7 were designed and did store gasoline prior to the installation of the internal floating roofs. As such, these tanks are not subject to Subpart K. NSPS Subpart K was promulgated in 1973.

Internal floating roof tank no. 8 was constructed in 1970 and stored jet fuel until 1984. In 1984, tank no. 8 began to store gasoline and thus may be subject to subpart Ka. Since the tank was designed and could store gasoline when it was built, changing the product stored does not constitute a modification. Thus, the tank is not subject to subpart Ka. During a site visit in November 2005, the tank construction dates were verified by the identification plates on each tank.

The applicant applied for and received a permit to add two additional loading arms and a VRU to the existing load rack - CSP No. 0072-02-C, issued on September 19, 1997. The applicant however, never modified the load rack and CSP No. 0072-02-C is invalid. The existing load rack will be added to this operating permit. The load rack has one-lane with three-arms. Each arm is capable of loading 350 gallons per minute, but only two of the arms can be operated simultaneously. To remain under PSD and MACT triggers, the applicant is proposing a throughput limit of 62 million gallons per rolling 12-months.

Equipment:

1. Petroleum storage tanks:
   a. Tank No. 1 - 10,000 barrel internal floating roof tank;
   b. Tank No. 6 - 5,600 barrel internal floating roof tank;
   c. Tank No. 7 - 12,700 barrel internal floating roof tank; and
   d. Tank No. 8 - 25,000 barrel internal floating roof tank.

2. One bottom loading petroleum tank truck loading rack with three product arms.

Air Pollution Controls:

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

Operational Limits:

The storage tanks do not have a throughput limit. The throughput limit for the loading rack is 62 million gallons per rolling 12-month period.

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

Non-Applicable Requirements:

BACT:

A Best Available Control Technology (BACT) analysis is required for new or modified emission units if the net increase in pollutant emissions exceeds significant levels as defined in HAR §11-60.1-1. Equilon is not adding any new emission units or modifying any of the existing emission units. The addition of the tank truck load rack to the permit is not considered a modification because the load rack is an existing unit that was previously permitted. Since the operating

permit for the tank truck load rack became invalid when reconstruction of the load rack did not occur, the proposed throughput limit of 62,000,000 gallons per year will establish the baseline for the load rack.

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 area sources, CERR does not apply.

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.

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 because the construction dates are before the subparts were promulgated. The addition of floating roofs to tank nos. 1,6, 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.

PSD:

Prevention of Significant Deterioration is not applicable to any of the emission units. Since no changes or modifications were proposed to the existing units, a PSD review is not necessary.

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.

Calculations:

Emission factors for the tanks were taken from AP-42, section 7.1, revised 9/97. The throughput and tank turn over quantities used to calculate the emissions are based on the throughput of the tank truck load rack. The analysis assumed only one tank was in service and used the load rack throughput, 1,476,190 barrels, for each tank. This would be the maximum operating capacity of the tanks. It is not expected the facility will operate at this level as usually only one tank is removed from service at a time. As expected the largest tank, tank no. 8, had the highest emissions - 5.6 tons per year. Total HAPs from tank no. 8 was estimated as less than 0.2 tons per year.

Emission factors for the tank truck load rack are from AP-42 section 5.2, revised 1/95. The applicant has a self-imposed throughput limit of 1,476,190 barrels per year. With this throughput limit, the VOC emissions were estimated at 225 tons per year. Total HAPs were estimated at

5.2 tons per year.

Fugitive emissions from the load rack fittings and pumps were estimated using emission factors from USEPA Protocol for Equipment Leak Emission Estimates document. Fugitive emission estimates were 178 pounds per year of VOC and four pounds per year of HAPs.

Total emissions for the facility are 231 tons per year VOC and 5.4 tons per year of HAPs.

Alternate Operating Scenarios:

The applicant did not list any alternate operating scenarios.

Insignificant Activities:

The applicant identified the following insignificant activities.
one 2.8 million barrel fixed roof tank, tank no. 3, storing diesel fuel no. 2;
one 5.5 million barrel fixed roof tank, tank no. 4, storing contact water;
one 2.4 million barrel fixed roof tank, tank no. 5, storing contact water.

Air Quality Assessment:

The facility is an area source for VOCs. As such, an air quality assessment is not required.

Conclusion/Recommendation:

Issue permit with the proposed throughput limits on the load rack.