PROPOSED

Minor Modification to a Covered Source
Review Summary

Application No.: 0089-07 (minor modification application)

Permit No.: 0089-01-C

Applicant: Hawaii Independent Energy, LLC

Facility Title: Maui Terminal
Petroleum Bulk Loading Terminal
140-A Hobron Avenue
Kahului, Hawaii 96732

Mailing Address: Hawaii Independent Energy, LLC
91-325 Komohana Street
Kapolei, Hawaii 96707-1713

Responsible Official: Jeffrey Hibner
Logistics Manager
(808) 547-3801

Point of Contact: Ms. Rose Chu
Environmental Compliance Administrator
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Application Dates: Received on October 16, 2014

Proposed Project:

SICC 5171 (Petroleum Bulk Stations and Terminals)

The Maui Terminal permit, Covered Source Permit No. 0089-01-C, currently includes four petroleum storage tanks and a petroleum tank truck loading rack with vapor recovery system. The applicant plans to convert the existing fixed roof fire water tank no. 2 into an internal floating roof petroleum storage tank. The existing tank currently is used as an emergency fire water tank and will be used after the roof tank conversion to store either gasoline or ethanol.

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 minor modification application fee of $100.00 (non-major, non-toxic covered source) was submitted by the applicant and processed.

Equipment Description:

1. Petroleum storage tanks

Tank Number	Capacity (bbls)	Construction	Permitted Service	Actual Service
1 (55-1)	45,000	Internal Floating Roof	Insignificant Activity	Jet Fuel
2 (6027)	**5,000**	**Internal Floating Roof, mechanical wiper**	**Gasoline**	**Ethanol or Gasoline**
3 (6023)	30,000	Internal Floating Roof	Gasoline	Gasoline 87
4 (6025)	20,000	Fixed Roof	Insignificant Activity	Jet Fuel
5 (6024)	15,000	Internal Floating Roof	Gasoline	Diesel - Low Sulfur
6 (6026)	20,000	Internal Floating Roof	Gasoline	Diesel - High Sulfur
7 (6028)	15,000	Internal Floating Roof	Gasoline	Gasoline 92

Air Pollution Controls:

Tank No. 2 will be equipped with an internal floating roof to comply with NSPS Subpart Kb.

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

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.

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

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 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 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] (tpy)
VOC	≥100	≥25	67.03

[1] Based on potential emissions

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 truck loading 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 no. 1 (55-1) storing jet;
2. Tank no. 4 (6025) storing jet;
3. Diesel/jet loading rack; and
4. Low sulfur diesel load arm (insignificant activity) on the petroleum tank truck loading rack (bottom loading) with vapor recovery system.

Alternate Operating Scenarios:

There are no proposed alternate operating scenarios.

Project Emissions:

The maximum VOC emissions (Potential to Emit) were calculated for permitted Tank Nos. 3, 5, 6, and 7 using a true vapor pressure (TVP) of 11.1 psia. For Tank No. 2, the maximum VOC emissions were calculated using the Tanks 4.0.9d Program. Gasoline throughput was assumed to be 100% through the smallest diameter gasoline tank. This gives the maximum withdrawal emissions.

Maximum emissions from the gasoline load rack is based on the maximum gasoline throughput allowed by the permit assuming the NSPS allowable limit of thirty-five (35) mg. of VOC per liter of gasoline throughput.

Equations found in AP-42 were used to calculate the true vapor pressure of 6.57 for the gasoline with the highest HAP content for Tank No. 2. The average HAP vapor weight concentration for ninety-two (92) octane gasoline loaded at the Barbers Point Harbor was used for each HAP. This gives a very conservative maximum HAP content.

Note that no credit was taken for ethanol in calculating gasoline air toxic emissions from the load rack. All product through the load rack was assumed to be gasoline. The maximum emissions are shown in the table below:

Facility Potential Emissions

Source	VOC (tpy)	Benzene (tpy)	Ethyl-Benzene (tpy)	Toluene o-p-m (tpy)	Xylenes o-p-m (tpy)	Hexane (tpy)	Total HAPs (tpy)
Tank 2	**1.97**	**0.01**	**0.01**	**0.09**	**0.07**	**0.04**	**0.22**
Tank 3	8.24	0.14	0.02	0.36	0.04	0.27	0.83
Tank 5*	8.34	0.14	0.02	0.37	0.04	0.27	0.84
Tank 6	9.01	0.15	0.02	0.40	0.05	0.29	0.91
Tank 7	8.77	0.15	0.02	0.39	0.04	0.29	0.89
Load Rack	30.7	0.51	0.07	1.32	0.15	0.98	3.03
Total	67.03	1.10	0.16	2.93	0.39	2.14	6.72

* This tank shows 100% of the withdrawal emissions.

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:

1. The petroleum storage tank nos. 2, 3, 5, 6, and 7 are subject to the provisions of the following federal regulations:

    a. 40 Code of Federal Regulations (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.

2. The petroleum storage tank nos. 2, 3, 5, 6, and 7 are subject to the provisions of the following federal regulations when storing gasoline:

    a. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants, 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.

Conclusion and Recommendations:

Recommend issuance of the minor modification to existing Covered Source Permit No. 0089-01-C, subject to the significant permit conditions above. A 45-day EPA review period is also required. This permit shall supersede CSP No. 0089-01-C issued on October 22, 2012 in its entirety.

Reviewer: Darin Lum
Date: 7/2015