

PROPOSED

COVERED SOURCE PERMIT REVIEW - NO. 0564-01-C

Initial Permit

Application No. 0564-01

Applicant: Hakuyosha Hawaii, Inc.
Facility: Petroleum Dry Cleaning

Equipment Location: 730 Sheridan St., Honolulu, Oahu

Responsible Official: Carl Patton
Title: Manager
955.6116

Applicant's Mailing Address: 730 Sheridan Street
Honolulu 96814

SICC: 7216 – Dry Cleaning Plants

Background

Hakuyosha Hawaii, Inc. (HHI) is applying for an initial permit to operate two petroleum solvent recovery dryers at their dry cleaning facility. HHI owns and operates a dry cleaning facility. The facility used PERC and petroleum solvents to clean the laundry. The PERC dry cleaning machines are current permitted to operate under a general covered source permit.

The two petroleum solvent recovery dryers were install and operated approximately 10 years ago. HHI did not apply for an operating permit for these dryers because they were unaware of the CFRs regulating petroleum dry cleaners. The dryers are equipped with a refrigerated condenser which, according to the manufacturer, reclaims up to 95 percent of the residual solvent.

Equipment Description

Two Hoyt Petromiser petroleum solvent recovery dryers, model no. PET-50, serial nos. 1023 and 1024.

Air Pollution Controls

The Hoyt dryers are equipped with refrigerated condensers.

Applicable Requirements

Hawaii Administrative Rules (HAR):

Chapter 11-59, Ambient Air Quality Standards

Chapter 11-60.1 Air Pollution Control

Subchapter 1, General Requirements

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

11-60.1-161 New Source Performance Standards

NSPS:

40CFR Part 60 Subpart A – General Provisions

40 CFR Part 60 Subpart JJJ - Standards of Performance for Petroleum Dry Cleaners

The petroleum solvent recovery dryers are subject to NSPS Subpart JJJ because the total dryer capacity at the facility is greater than 84 pounds and the dryers were installed after December 14, 1982.

Non-Applicable Requirements

PSD:

PSD does not apply since this facility is not a major source.

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. The potential VOC emission from this facility is less than the significant level of 40 tons per year.

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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. Since the facility is not a major source, CAM does not apply.

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. The trigger levels for VOC are 100 tons per year facility total and 25 tons per year for individual sources of VOC. Emissions from the facility and dryers are less than the trigger levels and thus, the facility is not subject to annual emission reporting under CERR. The Department does however require facilities to report their annual emissions if the facility-wide emissions exceed the Department's trigger level of 25 tons per year for VOCs. The potential VOC emission from both dryers is greater than 25 tons per year and thus, the facility must report annual emissions to the Department.

NESHAP/MACT:

There are no NESHAP or MACT standards for petroleum dry cleaning facilities.

Synthetic minor:

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

Insignificant Activities/Exemptions

No insignificant activities were identified in the application.

Alternate Operating Scenarios

The applicant did not propose any alternate operating scenarios.

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Project Emissions

Emissions from the facility were estimated by using the solvent consumption of the washers, the chemical make-up of the solvent, and the operating hours of the facility. Purchase records of solvent were used to determine that HHI uses 14 barrels (52 gallons) of solvent every three months. The MSDS sheets for the solvent, Chevron 325, states the VOC content is 780 g/l. No HAPs were listed. The facility operates everyday for eight hours per day.

$14 \text{ barrels} * [52 \text{ gallons per barrel}] * [12 \text{ months per year}] / 3 \text{ months} = 2,912 \text{ gallons per year}$
 $\text{VOC} = 780 \text{ g/l} * 8.345 \times 10^{-3} * 2,912 \text{ gallons per year} / 2,000 \text{ lbs per ton} = 9.48 \text{ tons per year}$

For continuous operations:

$\text{VOC} = 9.48 \text{ tons per year} * 8,760 \text{ hours} / 2,856 \text{ hours} = 29.07 \text{ tons per year.}$

Air Quality Assessment

Emission sources from this facility are considered area sources. As such, modeling and an ambient air quality assessment are not required.

Conclusion and Recommendation:

The dryers are installed and currently operating without any significant problems. Estimated emissions are conservative as the analysis assumes that the solvent is lost only to the atmosphere. Actual emissions from the facility should be less than the estimated 9.48 tons per year.

Recommend issuance of permit.