

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

FILE COPY

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

Initials KK 6/19/13
Mailed Out JUN 20 2013

In reply, please refer to:
File:

June 19, 2013

Mr. Joseph R. Whelan
General Manager
Waste Management of Hawaii
92-460 Farrington Hwy
Kapolei, Hawaii 96707

13-547E CAB
File No. 0497

Dear Mr. Whelan:

**Subject: Covered Source Permit (CSP) No. 0497-01-C
Application No. 0497-02
County of Hawaii
West Hawaii Sanitary Landfill
Landfill Gas Collection and Control System and 263 hp Caterpillar 3208
Emergency Diesel Engine Generator
Located at: 71-1111 Queen Kaahumanu Highway, Waikoloa, Hawaii**

Thank you for your comments on the subject air permit. The covered source permit was recently approved by the Department of Health subsequent to the thirty-day (30-day) public comment period and forty five-day (45-day) U.S. Environmental Protection Agency (USEPA) review period. Enclosed is a copy of the signed covered source permit and the Department of Health's responses to your comments on the draft permit.

Pursuant to Hawaii Administrative Rules, Section 11-60.1-100, you may also petition the Administrator of the USEPA in accordance with 40 Code of Federal Regulations 70.8(d) or petition the Department of Health for a contested case hearing. The petition to the Department of Health for a contested case hearing should be made within ninety (90) days of the date of permit issuance and mailed to:

Director of Health
Department of Health
919 Ala Moana Boulevard, Room 203
Honolulu, Hawaii 96814

Should you have any questions, please contact Mr. Kevin Kihara of the Clean Air Branch at (808) 586-4200.

Sincerely,

NOLAN S. HIRAI
Manager, Clean Air Branch

KK:nn
Enclosures

**SUMMARY OF PUBLIC COMMENTS RECEIVED
ON THE DRAFT COVERED SOURCE PERMIT FOR
WEST HAWAII SANITARY LANDFILL
LANDFILL GAS COLLECTION AND CONTROL SYSTEM AND 263 HP CATERPILLAR 3208
EMERGENCY DIESEL ENGINE GENERATOR
LOCATED AT: 71-1111 QUEEN KAAHUMANU HWY, WAIKOLOA, HAWAII**

OVERVIEW

Pursuant to Hawaii Administrative Rules (HAR), Chapter 11-60.1, a 30-day public comment period was afforded from April 30, 2013 to May 30, 2013. The purpose was to receive comments on the Draft Covered Source Permit (CSP) No. 0497-01-C. Approval and issuance of the air permit will allow the West Hawaii Sanitary Landfill (hereinafter referred to as "WHSL") to construct and operate a Landfill Gas Collection and Control System (hereinafter referred to as "GCCS") and continue operation of the existing 263 hp Caterpillar 3208 Emergency Diesel Engine Generator.

During the 30-day public comment period, the Department of Health (hereinafter referred to as the "Department") received comments from Waste Management of Hawaii, consultant and operator of the WHSL. The comments are listed below, followed by the response from the Department.

Comment

1. Revise the subject field in the cover letter to identify the "CAT 3208 diesel engine generator" as "CAT 3208 Emergency Diesel Engine Generator." The change is requested to avoid confusion with similar terminology used at many landfills, including landfill gas to energy engines.

Response:

The requested change has been made to the permit. "CAT 3208 Diesel Engine Generator" has been revised to "CAT 3208 Emergency Diesel Engine Generator."

2. The flare to be installed is a utility flare not an enclosed flare.

Response:

All references to enclosed flare will be replaced with utility flare. Also, the permit conditions pertinent to enclosed flares will be replaced with permit conditions for utility flares. The requested revisions to the permit conditions are:

Attachment IIA, Section A, Condition 1.b has been changed from:

- b. Landfill Gas Collection and Control system for landfill consisting of an enclosed flare, extraction wells, landfill gas piping and associated equipment.

to the following:

- b. Landfill Gas Collection and Control system for landfill consisting of a flare, extraction wells, landfill gas piping and associated equipment.

Attachment IIA, Section D, Condition 1.c has been changed from:

- c. The control system for the landfill gas shall be designed and operated to reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than twenty (20) parts per million (ppm) by volume. The reduction efficiency or parts per million by volume shall be established by the initial performance test.

to the following:

- c. The control system for the landfill gas shall be an open flare designed and operated in accordance with §60.18 except as noted in Attachment II, Special Conditions H.1 and H.2

Attachment IIA, Section F, Condition 2 has been changed from:

2. Enclosed Flare

The permittee shall calibrate, maintain, and operate the following equipment according to the manufacturer's specifications:

- a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 degrees Celsius, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity equal to or greater than forty four (44) megawatts.

to the following:

2. Flare

The permittee shall calibrate, maintain, and operate the following equipment according to the manufacturer's specifications:

- a. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

Attachment IIA, Section H, Condition 1 has been changed from:

1. **Within sixty (60) days after achieving the maximum production rate** of the collection and control system but not later than 180 days after initial start-up, and annually thereafter, the permittee shall conduct or cause to be conducted performance tests on the collection and control system for the following purposes:
 - a. To establish the reduction efficiency or parts per million volume of a control system designed and operated to reduce NMOC by ninety eight (98) weight percent or when an enclosed combustion device is used for control, to either reduce NMOC by ninety eight (98) weight percent or reduce the outlet NMOC concentration to less than twenty (20) parts per million by volume, dry basis as hexane at three (3) percent oxygen.

to the following:

1. **Within sixty (60) days after achieving the maximum production rate** of the collection and control system but not later than 180 days after initial start-up, and annually thereafter, the permittee shall conduct or cause to be conducted performance tests on the collection and control system for the following purposes:
 - a. To establish the performance of a control system designed and operated as a flare in accordance with 40 CFR §60.18.

Attachment IIA, Section H, Condition 1 has been changed from:

2. On an annual basis or other times as may be specified by the Department of Health, performance tests for the emissions of NMOC shall be conducted and results reported in accordance with the test methods set forth in 40 CFR Part 60, Appendix A, and 40 CFR Part 60.8. The following test methods or U.S. EPA approved equivalent methods with written consent from the Department of Health shall be used:
 - a. The permittee shall use Method 25, 25C, or Method 18 of 40 CFR Part 60, Appendix A, to determine compliance with the ninety eight (98) weight percent efficiency or the twenty (20) ppmv outlet concentration level, unless another method to demonstrate compliance is included in the collection and control system design plan approved by the Department of Health.
 - b. The permittee shall use Method 3 or 3A to determine the oxygen for correcting the NMOC concentration as hexane to three (3) percent.
 - c. The permittee shall use Method 25A in place of Method 25 in cases where the outlet concentration is less than fifty (50) parts per million NMOC as carbon (8 ppm NMOC as hexane).
 - d. If using Method 18 of Appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42).
 - e. The permittee shall use the following equation to calculate efficiency:

$$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / \text{NMOC}_{\text{in}}$$

Where, NMOC_{in} = mass of NMOC entering control device; and
 NMOC_{out} = mass of NMOC exiting control device.

to the following:

2. On an annual basis or at other times as may be specified by the Department of Health, performance tests shall be conducted and results reported in accordance with the test methods set forth in 40 CFR Part 60, Appendix A and 40 CFR Part 60.8. The following test methods or U.S. EPA approved equivalent methods, with written consent from the Department of Health, shall be used:
 - a. The net heating value of the combusted landfill gas as determined in 40 CFR §60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three (3) thirty-minute (30-minute) Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not

applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR §60.18(f)(4).

- b. Method 22 of 40 CFR Part 60 Appendix A shall be used to determine compliance of flares with the visible emissions provisions of 40 CFR §60.18. The observation period is two (2) hours and shall be used according to Method 22.

The following permit conditions were also modified due to the fact that the flare is not enclosed:

Attachment IIA, Section D, Condition 5.c has been changed from:

- c. For any six (6) minute averaging period, the flare shall not exhibit visible emissions of twenty (20) percent or greater, except as follows: during start-up, shutdown, or equipment breakdown, the enclosed flare may exhibit visible emissions greater than twenty (20), but not exceeding sixty (60) percent opacity for a period aggregating not more than six (6) minutes in any sixty (60) minute period.

to the following:

- c. The flare shall be designed for and operated with no visible emissions as determined by 40 CFR 60, Appendix A, Method 22, except for periods not to exceed a total of 5 (five) minutes during any two (2) consecutive hours.

Attachment IIA, Section F.2.c has been incorporated into the permit. The conditions is:

- c. The permittee has the choice of adhering to either the heat content specifications in 40 CFR §60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR §60.18(c)(4), or adhering to the requirements of 40 CFR §60.18(c)(3)(i).