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Response to Public Comments

FOR

Cape May County Municipal Authority Utilities Authority

2050 Route 610

Woodbine, Cape May County, New Jersey 08332

Permit Activity Number: BOP 22-0001 Program Interest (PI) Number: 73258

AIR POLLUTION CONTROL OPERATING PERMIT MODIFICATION (TITLE V)

Danny Wong

Chief

Bureau of Stationary Sources

10/4/2023

Date

Comments 1 through 10 were submitted by Bill Wolfe.

Comment 11 was submitted by Mayor William Pikolycky, Borough of Woodbine

COMMENT 1

The commenter asked how the Department calculated total carbon dioxide equivalent emissions and if the total includes all fugitive emissions from the landfill.

RESPONSE TO COMMENT 1

The scope of the Air Permit Application BOP220001 is limited to the installation and operation of a new Tub Grinder with an ancillary engine. The modification also incorporates into the Title V permit an emergency generator previously permitted under a general operating permit. The table below shows calculations of carbon dioxide equivalent emissions (CO₂e) associated with the equipment identified in this modification.

BOP 210001 Permitted Sources	Design Rating MMBTU/hr	Hours of Operation per Year	Heat Input MMBtu/yr	Emission Factor lb CO₂/MMBTU	CO₂e Ton/yr
Tub Grinder Engine	7.17	1,500	10,755	163.05	880
Emergency Generator	1.55	100	155	163.05	13
Ancillary Engine	0.02292	8,760	201	163.05	16
Total:					909

No other landfill equipment operations were considered during the technical review of this modification. Specifically, methane emissions from the landfill have not been reviewed. The Department will update carbon dioxide equivalent emissions (CO₂e) from this facility, including fugitive emission of methane, during the technical review of the pending renewal application.

COMMENT 2

The commenter asked how the methane emissions were converted to carbon dioxide equivalent emissions and whether the methane emissions are considered fugitive emissions.

RESPONSE TO COMMENT 2

The methane emissions were converted to carbon dioxide equivalent emissions using a factor of 21 for the 100-year Global Warming Potential.



The Department estimated carbon dioxide equivalent emissions only for the Tub Grinder engine, the emergency generator, and the insignificant ancillary engine are included in the draft permit BOP220001.

COMMENT 3

The commenter questioned why the methane emissions were not converted to CO₂ equivalent emissions using a 20-year time horizon. The 20-year time horizon is consistent with N.J.S.A. 26:2C-59, which states:

1. a. Whenever the Department of Environmental Protection, the Board of Public Utilities, or any other State agency calculates a global warming potential for the purposes of assessing the global warming impact of a greenhouse gas, the Department of Environmental Protection, the Board of Public Utilities, or other State agency shall use a 20-year time horizon.

RESPONSE TO COMMENT 3

For the review of the Operating Permit Modification application, the methane emissions were converted to CO₂ equivalent emissions to determine whether greenhouse gas emissions (GHG) could be subject to the provisions of 40 Code of Federal Regulations (CFR) Part 52.21 Prevention of Significant Deterioration (PSD). 40 CFR Part 52.21(b)(49) outlines the procedures to be followed to determine if GHG are subject to the PSD regulations. 40 CFR Part 52.21(b)(49)(ii) states the following:

For purposes of [paragraphs \(b\)\(49\)\(iii\)](#) through [\(iv\)](#) of this section, the term *tpy CO₂ equivalent emissions (CO₂e)* shall represent an amount of GHGs emitted, and shall be computed as follows:

- (a) Multiplying the mass amount of emissions (tpy), for each of the six greenhouse gases in the pollutant GHGs, by the gas' associated global warming potential published at Table A-1 to [subpart A of part 98 of this chapter](#)—Global Warming Potentials.
- (b) Sum the resultant value from [paragraph \(b\)\(49\)\(ii\)\(a\)](#) of this section for each gas to compute a tpy CO₂e.

Table A-1 to Subpart A of 40 CFR Part 98 bases Global Warming Potential on a 100-year time horizon. Consequently, for the Operating Permit Modification application, CO₂ equivalent emissions must be calculated using a 100-year time horizon and not a 20-year time horizon.

The Department has been delegated the authority by the USEPA to issue Operating Permits, which must comply with all Federal Regulations. The calculation of CO₂ equivalent emissions for the Operating Permit Modification is done to determine applicability to 40 CFR Part 52.21, and not to assess the global warming impact of a greenhouse gas.



COMMENT 4

The commenter asked if carbon dioxide equivalent emissions are subject to emission control requirements or any other form of restriction on emission rates or total emissions.

RESPONSE TO COMMENT 4

Carbon dioxide equivalent emissions are not subject to emission control requirements or any other form of restriction on emission rates or total emissions since the Cape May County Municipal Utility Authority's landfill is not subject to 40 CFR 52.21.

COMMENT 5

The commenter asked if flaring represented state-of-the-art control for methane and Hazardous Air Pollutants.

RESPONSE TO COMMENT 5

Air Permit Application BOP220001 is limited to the installation and operation of a new Tub Grinder with an ancillary engine. Flaring of the landfill gas was not considered during the review of this application.

The installation and operation of a flare represents state-of-art control for methane. This is outlined in the State of the Art Manual for Municipal Solid Waste Landfills, which can be accessed at [State of the Art Manual \(nj.gov\)](https://www.nj.gov/dep/solidwaste/stateoftheartmanual/). The installation and operation of a flare would be considered to represent state-of-the-art control for some organic Hazardous Air Pollutants (HAP), but not for non-organic HAP, such as lead, mercury, and hydrogen chloride. A source operation which emits a HAP over the N.J.A.C. 7:27-17.9 State-of-the-Art threshold can meet the provisions of N.J.A.C. 7:27-22.35 "Advances in the Art of Air Pollution Control" if compliance with an applicable Maximum Achievable Control Technology (MACT) Standard, as listed in 40 CFR Part 63, is achieved.

COMMENT 6

The commenter asked if HAP emissions are considered in the CO₂ equivalents.

RESPONSE TO COMMENT 6

Estimates of HAP emissions from this permit BOP 220001 are not included in the CO₂ equivalents because HAPs are not identified as greenhouse gases.

COMMENT 7

The commenter asked if reporting requirements include CO₂ equivalent emissions and if these emissions are included in the Department's greenhouse gas emission inventory.

RESPONSE TO COMMENT 7

Estimates of greenhouse gas emissions from NJ landfills in the NJ Greenhouse Gas Inventory Reports were based on waste quantities reported to the Department by permitted solid waste



facilities pursuant to N.J.A.C. 7:26. Historical records were also used to establish past disposal quantities (see <https://www.nj.gov/dep/dshw/resource/rules.html>).

A standard method developed by the USEPA was then applied to estimate methane emissions from the combined total mass of waste landfilled in the state (see <https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool>).

The method used to calculate emissions from solid waste landfills was summarized in Appendix B.5 of the 2022 NJ GHG Inventory Report (1990-2019) (see <https://dep.nj.gov/ghg/nj-ghg-inventory/inventory-archive/>).

These methane emission estimates were based on total, statewide quantities of landfilled waste and did not rely on individual landfills to report quantities of methane generated.

COMMENT 8

The commenter asked if the Department's air emissions fees are applicable to methane and CO₂ equivalent emissions.

RESPONSE TO COMMENT 8

Pursuant to N.J.A.C. 7:27-22.31, there are no annual emission fees applicable to methane and CO₂ equivalent emissions.

COMMENT 9

The commenter asked if the landfill is required to install alternate control technology to collect and treat LF gas, pursuant to SOTA TM 3.18.2.5 Alternate Control Technologies – Beneficial Uses of Landfill Gas

RESPONSE TO COMMENT 9

Air Permit Application BOP220001 is limited to the installation and operation of a new Tub Grinder with an ancillary engine. Collection and treatment of the landfill gas were not considered during review of this application.

COMMENT 10

The commenter asked to receive a copy of the Health Risk Assessment conducted in accordance with Technical Manual 1003.

RESPONSE TO COMMENT 10

A copy of the Health Risk Assessment (dated June 12, 2023) conducted in accordance with Technical Manual 1003 is enclosed.

COMMENT 11

The commenter stated that the Cape May County Municipal Utility Authority should continue to prevent odors and minimize glare from the landfill's flare.



RESPONSE TO COMMENT 11

The Department submitted a notification to the Office of the Mayor of Woodbine recently as part of the Air Permit Minor Modification Application BOP220001 permitting process. The scope of the Air Permit Application BOP220001 is limited to the installation and operation of a new Tub Grinder only and no other landfill equipment operations, including any proposed changes to the facility's flare operations, are included in this significant modification. The Department's focus is to address comments associated with the specific equipment identified in this modification. As part of a separate permit application, as referred to in the comment letter dated August 10, 2023, the Renewal/Significant Modification application BOP180001 is concurrently under Department review, which at this time is not part of the present public comment period process. The equipment and concerns referred to in the August 10, 2023 letter are associated with the Renewal/Significant Modification application BOP180001 which includes the facility's request to replace the existing enclosed flare with a newer enclosed flare. Also, as part of the Renewal/Significant Modification application BOP180001, the Department's review involves the facility's permitted equipment including the existing open (candlestick) flare which is intended to be operated only during emergency and maintenance conditions associated with the existing enclosed flare.

The Department recognizes the validity of the comments in the August 10, 2023 letter and address each specific item (odor and visible flame of the candle stack flare) accordingly during the public comment period for Renewal/Significant Modification BOP180001.

