TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 03OPMO258

Summit County Landfill
Summit County
Facility ID: 1170017

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1. Purpose

This document will establish the basis for decisions made regarding the Applicable Requirements, Emission Factors, Monitoring Plan and Compliance Status of Emission Units covered within the Colorado Title V Operating Permit proposed for this site. It is designed for reference during review of the proposed permit by the EPA, during Public Comment, and for other interested parties. Information in this report is primarily from the application received on February 11, 2003, as well as discussions with the applicant. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility, made in conjunction with the processing of this operating permit application, have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

2. Source Description

The Summit County Landfill is classified as a municipal solid waste landfill, which falls under the Standard Industrial Classification 4953. This facility is located at 639 Landfill Road, Dillon, Summit County, Colorado. There are no affected states within 50 miles of this facility. The following Federal Class I designated areas are within 100 kilometers of the plant: Maroon Bells-Snowmass Wilderness, Rocky Mountain National Park, Flat Tops Wilderness Area, and Eagles Nest Wilderness Area.

The facility is located in an area designated as attainment for all criteria pollutants. Based on the information provided by the applicant, the facility is categorized as a minor stationary source for PSD applicability purposes (no single criteria pollutant emissions with a Potential-to-Emit greater than 250 TPY) as of the issue date of this permit. The source therefore is not subject to the PSD review requirements of 40 CFR 52.21 (Colorado Regulation No. 3, Part D, Section IV). Future modifications to this facility may result in an exceedance of the major source threshold. Once that threshold is exceeded, future modifications at this facility resulting in a significant net emissions increase for any pollutant as listed in Regulation No. 3, Part D, Section II.A.44 or a modification which is major by itself may result in the application of the PSD review requirements.

Facility-wide emissions are outlined below:

Pollutant	Potential-to-Emit (tons/yr)	2002 Actual Emissions (tons/yr)
PM_{10}	12.73	-
PM	48.80	-
VOCs	0.79	0.41
HAPs	6.75	0.71

The potential-to-emit VOC emissions are calculated from EPA's Landfill Gas Model. This emission rate is based on the landfill's design capacity of 3,420,000 megagrams of degradable waste, and the landfill will not emit at this maximum rate until 2026. The actual VOC emissions are also based on EPA's Landfill Gas Model. However, this emission rate was the emission rate predicted by the model for the 2002 calendar year (As reported on the APENs dated 1/6/03 & 8/5/03).

In the operating permit, compliance with the annual limits for the PM_{10} and PM emissions will be demonstrated by the implementation of the Fugitive Emissions Control Plan. The source will be required to certify semi-annually that the Fugitive Emissions Control Plan is being implemented. The source will also be required to calculate the VOC emissions annually, using EPA's Landfill Gas Model. The model predicts the landfill gas emissions only on an annual basis. Trying to use the model to estimate emissions on a monthly basis would not yield valuable results. This is the reason why an annual frequency for the VOC calculation is required instead of a monthly frequency. Any exceedances of the annual limits will result in the source being out of compliance with the terms and conditions of the operating permit. The source will provide compliance monitoring reports semi-annually and compliance certification reports annually.

The Summit County Landfill began accepting waste in 1964. An initial design capacity report was submitted to the Division on December 23, 1998. The landfill had a maximum design capacity of 1,460,000 megagrams (Mg) at that time. An amended design capacity report was submitted to the Division on February 05, 2002 to increase the maximum capacity to 3,420,000 Mg due to an expansion at the landfill. This increase caused the landfill to exceed 2.5 million Mg, and subjected it to the requirements of the Standards of Performance for Municipal Solid Waste Landfills (40 CFR Part 60, Subpart WWW, as adopted in Colorado Regulation No. 6, Part A). NSPS WWW requires landfills over 2.5 million Mg to obtain an operating permit. Summit County expects to operate this landfill until 2024.

The source was issued an APEN required/Permit Exempt letter by the Division on June 29, 1990 (87SU044F). The landfill was grandfathered since construction commenced prior to February 1, 1972. The source submitted an application for a construction permit on January 6, 2003. A construction permit is now required due to the applicability of NSPS WWW. Initial Approval Construction Permit 87SU044 was issued on December 26, 2003. The Final Approval construction permit will not be issued for this facility. Instead, it has been incorporated into the operating permit in accordance with the procedures outlined in Colorado Regulation No. 3, Part C.

1. Emission Sources

The following emission sources are specifically regulated under the terms and conditions of the operating permit for this facility.

Fugitive Particulate Matter Emissions

Fugitive particulate emissions will result from on-site vehicle traffic, landfill excavation, daily cover application, storage piles, and disturbed areas. Watering, vehicle speeds, and haul road graveling will be used to control emissions from these sources.

a. Applicable Requirements – The regulations that are applicable to the fugitive particulate matter emissions are found in Colorado Regulation No.1.III.D. Specifically, the source must have a fugitive dust control plan to minimize the emissions. The 20% opacity guideline, the off-property transport provision, and the nuisance provision are also applicable to this emission point.

This permit contains fugitive particulate matter emission limits. Compliance with the fugitive emissions control plan serves to demonstrate compliance with the emission limits.

This Operating Permit contains annual waste acceptance limits from the construction permit. These limits indirectly limit the fugitive dust and landfill gas emissions since the amount of incoming waste determines the amount of haul road traffic and the amount of landfilled waste will also determine how much landfill gas is generated.

b. Emission Factors – The permitted fugitive particulate matter emissions were calculated using various sections of AP-42.

c. Monitoring and Compliance – The source will demonstrate compliance with the particulate matter emission limits by implementing the Fugitive Emissions Control Plan that is outlined in the permit. In addition, the source will be required to perform a weekly check of the measures in the plan to ensure that the plan is being implemented and it is effective. The source certified in the operating permit application that the landfill is currently in compliance with the applicable requirements.

VOC Emissions from Landfill

a. Applicable Requirements – The requirements that are applicable to this emission point are the VOC emission limit, and the NSPS Subpart WWW regulations. The main requirement of Subpart WWW is the submittal of the annual non-methane organic compounds (NMOC) emission report. If the annual report shows that the NMOC emission rate is greater than 50 megagrams per year, the source may have to install a gas collection and control system.

MACT AAAA exists for municipal solid waste landfills. The MACT requirements are very similar to the NSPS requirements. The MACT additionally requires the development and implementation of a startup, shutdown, and malfunction plan and the submittal of reports on a more frequent basis. It should be noted that this landfill is not a major source of HAPs. The MACT applies to both major and area sources. The Summit County Landfill conducted Tier II testing for NSPS WWW in June, 2002. The testing resulted in a NMOC as hexane of 37 ppmv. The NMOC emission rate based on Tier II testing was 0.95 Mg/yr NMOC (as reported in the report received October 31, 2002). MACT AAAA does not apply to landfills that produce under 50 Mg/yr NMOC. I will not include the MACT AAAA conditions in the permit at this time.

b. Emission Factors* – The landfill gas emissions were estimated with EPA's Landfill Gas Model Version 2.0. This model is based on the emission calculations found in AP-42 2.4 Emission Calculations for Municipal Solid Waste Landfills. The values of the parameters used in this model were:

Lo = methane generation potential (cubic meters per megagrams solid waste). A value of 170 m^3/megagrams was used in the model.

K= methane generation rate constant (year $^{-1}$). The default value for this parameter is 0.05. However, the landfill is located in an area that receives less than 25 inches of rain per year, based on a thirty-year annual average. The regulation allows the source to use a value of 0.02 instead of 0.05.

C = concentration of NMOC (parts per million by volume as hexane). A NMOC concentration of 37 ppm was used to estimate emissions. This concentration was measured and approved during the Tier II testing conducted by Summit County. This value is low compared to other landfills tested in Colorado. However, the results were reviewed and approved by the APCD. Tier II testing will be required again in 2006.

Landfill capacity: the capacity of this landfill is 3,420,000 megagrams of degradable waste.

- Note that these values are acceptable for permit compliance calculations, but not the NSPS & MACT compliance calculations. The values specified in the NSPS & MACT must be used for NSPS & MACT calculations and reports.

The EPA's Landfill Gas Emission model predicted that the highest NMOC emission rate that will ever occur at this landfill is 2.04 tons per year. This emission rate will not take place until 2026. Of the total NMOC emissions, only 39% (0.79 tons) are VOC emissions.

c. Monitoring and Compliance – The source will demonstrate compliance with the VOC emission limit with EPA's Landfill Gas Model, Version 2.0 or the most current version. This model will be run on an annual basis. The NMOC result from the model will be multiplied by 0.39 (39%) to derive the VOC emissions. The model predicts the landfill gas emissions on an annual basis. Therefore, it is not necessary for the source to demonstrate compliance with the emission limit on a rolling 12-month basis. The source certified in the operating permit application that the landfill is currently in compliance with the applicable requirements.

Emission Factors

From time to time published emission factors and/or other emission estimating methods are changed based on new or improved data. A logical concern is what happens if the use of the new factors/methods in a calculation results in a source being out of compliance with a permit limit. For this operating permit, the emission factors, equations, and/or other emission estimating methods included in the permit are considered to be fixed until changed by the permit. Obviously, emission factors dependent of the heat content of the fuel cannot be fixed and will vary with the test results. The method for determining the emissions is, however, fixed. It is the responsibility of the permittee to be aware of changes in the emission factors, etc. and to notify the Division in writing of impacts on the permit requirements when there is a change. Upon notification, the Division will work with the permittee to address the situation. In addition, the Division will review the factors, etc. as appropriate during permit modifications and renewals.

2. Final Approval for Initial Construction Permits

The Construction Permit has not yet been issued Final Approval. Since these sources will have been in operation for more than 180 days by the due date of the first semi-annual monitoring required by the operating permit, the Division will consider the Responsible Official certification submitted with that report to serve as the self certification for Final Approval for these sources.

3. Insignificant Activities

The following is a list of insignificant activities that was provided by the source to assist in the understanding of the facility layout:

- Surface water storage impoundment of non-potable water and storm water evaporation ponds
- Composting piles.
- One 10,000 gallon above ground diesel storage tank
- 0.028 mmbtu/hr propane heater

4. Alternative Operating Scenarios

There are no alternative operating scenarios for this facility.

5. Accidental Release - 112(r)

Section 112(r) of the Clean Air Act mandates a new federal focus on the prevention of chemical accidents. Sources subject to these provisions must develop and implement risk management programs that include hazard assessment, a prevention program, and an emergency response program. They must prepare and implement a Risk Management Plan (RMP) as specified in the Rule.

Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act).