TECHNICAL REVIEW DOCUMENT
for
OPERATING PERMIT 99OPWE215

Denver Regional Landfill North
Weld County
Facility ID: 1230079

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October 2004

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 July 16, 1999, the revised applications received on February 29, 2000 & August 30, 2004, 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

Denver Regional Landfill North (DRLN) is classified as a municipal solid waste landfill, which falls under the Standard Industrial Classification 4953. This facility is located at 1441 Weld County Road 6, Erie, Weld 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: Rocky Mountain National Park, and Rawah 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)	2004 Actual Emissions (tons/yr)
VOCs	23.3	12.36
HAPs	15.32	15.32

The potential-to-emit VOC emissions are calculated from EPA's Landfill Gas Model. This emission rate is based on the waste contained within the landfill. This landfill no longer accepts any waste, so the landfill gas emissions should decrease each year. 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 2004 calendar year (As reported on the APEN dated 9/01/2004).

This landfill will not have any haul road traffic because it does not accept waste anymore. Thus, a Fugitive Emissions Control Plan is not required. The source will 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.

This landfill is located next to an active landfill: Denver Regional Landfill South (DRLS) – construction permit 12WE652 – operating permit 03OPWE254. These landfills are considered a single source for both Title V and PSD purposes. Both of these landfills have landfill gas collection systems installed. The collected landfill gas is controlled with a flare permitted by DRLS. Emissions in this operating permit represent the uncollected landfill gas from the DRLN landfill only. All of the collected gas is routed to the control equipment covered by operating permit 03OPWE254.

Leachate: DRL sent in an APEN for leachate activities. The emissions were below APEN reporting levels. I will list the leachate activities as an insignificant activity in the operating permit. This point should be considered APEN exempt unless emissions increase above reporting levels. Update – DRLN informed the Division that the leachate is now being disposed of offsite. DRLN generates about 50 gal of leachate every 6 months.

This landfill opened in December 1985. They accepted waste from 1/1/86 to 4/10/92. DRLN has an estimated 4.42 million tons of refuse in place. This design of the landfill exceeds 2.5 million Mg, and it is subject 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.

The source obtained construction permit 83WE412 on March 30, 1984. The construction permit was modified numerous times over the years. Most recently Initial Approval Construction Permit Modification No. 1, 83WE412, was issued on October 10, 2001. 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.

P001 – Landfill Gas Emissions

a. Applicable Requirements – The requirements that are applicable to this emission point are the VOC emission limit, the NSPS Subpart WWW regulations, and the MACT Subpart AAAA regulations. The uncontrolled NMOC emissions from this landfill exceed 50 megagrams per year and this landfill is required to have a gas collection and control system. 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. The MACT applies to both major and area sources.

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 100 m^3/megagrams was used in the model. This value is acceptable when used to demonstrate compliance with the permit limit. However, the source must use a value of 170 m^3/megagrams for the annual NMOC emission report. This requirement is outlined in §60.754(a)(1).

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). Tier II testing was conducted in 6/99 per NSPS WWW. The NMOC concentration was measured as 1596 ppmv. Testing in June 2004 yielded a NMOC concentration of 784 ppmv. 784 ppmv was used in the most recent operating permit application to estimate emissions. Emission estimates used different HAP concentrations than the default AP-42 values. These concentrations are based on gas samples that were taken from the landfill in June 1999.

Landfill capacity: The capacity of this landfill is 4.42 million tons of degradable waste. This value was given in the Title V Permit Application.

- 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.

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 fuel sulfur content or 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:

- Leachate management

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).