

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **11 2 0 1 4 - 0 0 9**

Project Number: 2014-09-037
Installation Number: 163-0040

Parent Company: Waste Corporation of Missouri, Inc.

Parent Company Address: 33924 Olathe Drive, Lebanon, MO 65536

Installation Name: Eagle Ridge Sanitary Landfill

Installation Address: 13100 Highway VV, Bowling Green, MO 63334

Location Information: Pike County, S2, T53N, R3W

Application for Authority to Construct was made for:

The installation of a gas flare. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

NOV 18 2014

EFFECTIVE DATE



DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of startup of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources' regional office responsible for the area within which you are located within 15 days after the actual startup of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2014-09-037
Installation ID Number: 163-0040
Permit Number:

Eagle Ridge Sanitary Landfill
13100 Highway VV
Bowling Green, MO 63334
Pike County, S2, T53N, R3W

Complete: October 1, 2014

Parent Company:
Waste Corporation of Missouri, Inc.
33924 Olathe Drive
Lebanon, MO 65536

REVIEW SUMMARY

- Eagle Ridge Sanitary Landfill has applied for authority to install a gas flare.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are combustion products from landfill gas, including polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs).
- 40 CFR 60 Subpart WWW, *Standards of Performance for Municipal Solid Waste Landfills*, applies to the equipment.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is in Pike County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Emissions testing is not required for the equipment.
- A Part 70 Operating Permit is required for this installation.
- Approval of this permit is recommended without special conditions.

INSTALLATION DESCRIPTION

Eagle Ridge Sanitary Landfill is an active Municipal Solid Waste Landfill that opened in 1972. The installation has a design capacity of 6.0 million cubic meters. Based on Tier 2 calculations for the landfill, the non-methane organic compound (NMOC) emissions rate is below 50 megagrams per year (Mg/yr). Therefore, a gas collection and control system is not required at this time. Eagle Ridge Sanitary Landfill requires a Part 70 Operating Permit because the site's potential to emit exceeds major emission levels for Hazardous Air Pollutants (HAPs). A Part 70 Operating Permit (OP2007-052) was previously issued in October of 2007, and an Operating Permit renewal is currently undergoing technical review. No New Source Review construction permits have previously been issued to Eagle Ridge Sanitary Landfill from the Air Pollution Control Program.

PROJECT DESCRIPTION

Eagle Ridge Sanitary Landfill plans to install an active gas control system. The system will consist of collection wells installed in the existing waste mass, rock remediation wells; landfill gas collection piping to convey the collected gas; a blower to provide a vacuum to the collection rock and remediation wells; and a 30,000 scf/hr flare (EU-0020) to combust the collected landfill gas. Although the facility is not currently required to implement active gas collection and control, the system is being installed due to an off-site migration issue. This construction permit is for the landfill gas flare only.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

PM, NO_x, and CO emissions from the flare were calculated using emission factors from AP-42 Section 2.4, Table 2.4-5, *Municipal Solid Waste Landfills* (November 1998). For the remaining criteria pollutants, emission factors were taken from AP-42 Section 1.4, Table 1.4-2, *Natural Gas Combustion* (July 1998). It was conservatively assumed that all PM emissions were equal to PM₁₀ and PM_{2.5} emissions.

HAP emissions from the flare were calculated using emission factors taken from the EPA's online emission factor database, WebFIRE. These emission factors were representative of HAP emissions released after flare combustion, so the flare's destruction efficiencies for VOCs and HAPs were not included in calculations.

No other air pollution control equipment is being used in association with the new equipment.

The following table provides an emissions summary for this project. Existing potential emissions were taken from the latest operating permit for the installation, OP2014-022. Existing actual emissions were taken from the installation's 2013 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8,760 hours per year).

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM	25.0	N/D	N/D	2.23	N/A
PM ₁₀	15.0	N/D	4.66	2.23	N/A
PM _{2.5}	10.0	N/D	0.46	2.23	N/A
SO _x	40.0	N/D	N/D	0.08	N/A
NO _x	40.0	N/D	N/D	5.26	N/A
VOC	40.0	18.71	4.36	0.74	N/A
CO	100.0	5.28	N/D	98.55	N/A
GHG (CO ₂ e)	75,000	230,027	N/D	15,768	N/A
Combined HAPs	25.0	31.70	0.43	0.03	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Eagle Ridge Sanitary Landfill shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations, 10 CSR 10-6.070*
 - *–Standards of Performance for Municipal Solid Waste Landfills, 40 CFR Part 60, Subpart WWW*

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted without special conditions.

Ryan Schott
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 18, 2014, received September 22, 2014, designating Waste Corporation of Missouri, Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- EPA's online emission factor database, WebFIRE, <http://cfpub.epa.gov/webfire/>

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO₂e carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SDS Safety Data Sheet
GHG Greenhouse Gas	SIC Standard Industrial Classification
gpm gallons per minute	SIP State Implementation Plan
gr grains	SMAL Screening Model Action Levels
GWP Global Warming Potential	SO_x sulfur oxides
HAP Hazardous Air Pollutant	SO₂ sulfur dioxide
hr hour	tph tons per hour
hp horsepower	tpy tons per year
lb pound	VMT vehicle miles traveled
lbs/hr pounds per hour	VOC Volatile Organic Compound
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	

Mr. Ethan Shackelford
Region 1 Director of Engineering and Compliance
Eagle Ridge Sanitary Landfill
33924 Olathe Drive
Lebanon, MO 65536

RE: New Source Review Permit - Project Number: 2014-09-037

Dear Mr. Shackelford:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 of RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is found at: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Ryan Schott, at the Department of Natural Resources' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:rs1

Enclosures

c: Northeast Regional Office
PAMS File: 2014-09-037
Permit Number: