

STATE OF MISSOURI

PERMIT BOOK



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: 112011-004

Project Number: 2011-07-069
Installation Number: 095-0272

Parent Company: City of Lee's Summit

Parent Company Address: 220 SE Green Street, Lee's Summit, MO 64064

Installation Name: Lee's Summit Resource Recovery Park

Installation Address: 2101 SE Hamblen Road, Lee's Summit, MO 64082

Location Information: Jackson County, S21, T47N, R31W

Application for Authority to Construct was made for:

The addition of an asphalt shingles storage pile and related hauling activities. This review was conducted in accordance with Section (6), 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 - 8 2011

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 Departments' Air Pollution Control Program of the anticipated date of start up 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 start up 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.

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SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Lee's Summit Resource Recovery Park
Jackson County, S21, T47N, R31W

1. **Restriction on the Use of Asbestos-Containing Shingles**
Lee's Summit Resource Recovery Park is not permitted to store, in the new storage pile, asphalt shingles containing asbestos. Any shingles suspected of containing asbestos shall be rejected.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2011-07-069
Installation ID Number: 095-0272
Permit Number:

Lee's Summit Resource Recovery Park
2101 SE Hamblen Road
Lee's Summit, MO 64082

Complete: July 25, 2011

Parent Company:
City of Lee's Summit
220 SE Green Street
Lee's Summit, MO 64064

Jackson County, S21, T47N, R31W

REVIEW SUMMARY

- Lee's Summit Resource Recovery Park has applied for authority to add an asphalt shingles storage pile and related hauling activities.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed activities.
- New Source Performance Standards (NSPS) Subpart WWW, *New Source Performance Standards for Municipal Solid Waste Landfills*, applies to this landfill.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new activities.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of particulate matter (PM) are above its *de minimis* level.
- This installation is located in Jackson County, a maintenance area for ozone and an attainment area for all other 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.
- Ambient air quality modeling was not performed because there is no National Ambient Air Quality Standard (NAAQS) or Increment for particulate matter (PM).

- Emissions testing is not required for the equipment.
- A notification shall be submitted to the Air Pollution Control Program for this off-permit change before the next annual emissions report.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

The City of Lee’s Summit owns and operates a municipal solid waste landfill (Lee’s Summit Resource Recovery Park) in Jackson County. The design capacity is 3,441,355 megagrams (Mg) of total waste. This facility is a minor source for construction permits and was issued a Part 70 Operating Permit in July, 2010, due to it being subject to Subpart WWW of the NSPS.

The following permits have been issued to Lee's Summit Resource Recovery Park from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
112002-008	Installation of an open flare

PROJECT DESCRIPTION

Lee’s Summit Resource Recovery Park has applied for authority to divert asphalt shingles from the landfill to a separate storage pile. Eventually, the shingles will be removed and processed by a facility at another location. An average of 100 cubic yards (60.5 tons) per day of shingles are expected to be processed during periods of high storm frequency and an average of 20 cubic yards (12 tons) are expected to be processed when storms are less frequent. The shingles storage pile will be located southeast of an existing compost facility onsite.

EMISSIONS/CONTROLS EVALUATION

Emissions from the project include particulate matter less than two-and-a-half microns in diameter (PM_{2.5}), particulate matter less than ten microns in diameter (PM₁₀) and PM from haul road traffic, loading and unloading of the shingles and wind erosion of the storage pile. Emissions from the haul roads were calculated using a predictive equation from Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.2, *Unpaved Roads*, (11/06). Emissions from load-in and load-out of the storage pile were calculated using a predictive equation in AP-42, Section 13.2.4, *Aggregate Handling and Storage Piles*, (11/06). Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program’s Emissions Inventory Questionnaire Form 2.8 “Storage Pile Worksheet.” The maximum hourly throughput rate (8.64 tons per hour) used in the calculations is the daily expected throughput rate (60.5 tons) during periods of high storm activity divided by seven (7) hours of operations. Potential emissions of the application assume continuous operation (8,760 hours per year).

The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM _{2.5}	10.0	4.08	0.84	0.97	N/A
PM ₁₀	15.0	8.73	2.74	9.49	N/A
PM	25.0	21.71	N/D	32.19	N/A
SO _x	40.0	1.21	0.52	N/A	N/A
NO _x	40.0	8.39	1.49	N/A	N/A
VOC	40.0	36.01	2.61	N/A	N/A
CO	100.0	<100.0	27.99	N/A	N/A
HAPs	10.0/25.0	7.60	0.59	N/A	N/A

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

The existing potential emissions were recalculated for this project. The previous permit issued to the installation (082002-008) was for the construction of the flare, but does not have a condition that requires the use of the flare. Therefore, for each pollutant, if operating the flare leads to higher emissions, then that value was used. Conversely, if higher emissions results from not operating the flare, then that value was used. For existing potential emissions of PM_{2.5}, PM₁₀, PM, sulfur oxides (SO_x) and nitrogen oxides (NO_x), taking into account the flare leads to the worst-case emissions. The existing potential emissions from these pollutants were calculated using emission factors from EPA document AP-42 or the Factor Information Retrieval Software (FIRE). The emission factors from flare usage are based on pounds of pollutant per dry standard cubic feet (lbs/dscf) of methane. Since the flare has a design rate of 800 cubic feet per minute (cfm), it was assumed that all of this was methane in the calculations.

For volatile organic compounds (VOC) and HAP emissions, the worst-case emissions result from the flare not being used. The existing potential emissions of VOC and HAPs were calculated from EPA excel file LandGem.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM are above the *de minimis* level.

APPLICABLE REQUIREMENTS

Lee's Summit Resource Recovery Park 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.

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 – *New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills*, 40 CFR Part 60, Subpart WWW.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated July 14, 2011, received July 25, 2011, designating Lee's Summit Resource Recovery Park as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, August 11, 2011.

Mr. Chris Bussen
Solid Waste Superintendent
Lee's Summit Resource Recovery Park
1971 SE Hamblen Road
Lee's Summit, MO 64082

RE: New Source Review Permit - Project Number: 2011-07-069

Dear Mr. Bussen:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. 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 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 have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, at the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:cyk
Enclosures

c: Kansas City Regional Office
PAMS File: 2011-07-069

Permit Number: