



## 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: **012008-005** Project Number: 2007-09-073

Parent Company: Jefferson City Landfill, LLC

Parent Company Address: 722 Dix Road, Jefferson City, MO 65109

Installation Name: Jefferson City Landfill

Installation Address: 5605 Moreau River Access Road,  
Jefferson City, MO 65102

Location Information: Cole County, S23, T44N, R11W

Application for Authority to Construct was made for:  
Additional haul road use due to storing fleet vehicles and waste containers on-site and an addition of a fuel storage tank. 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.

\_\_\_\_\_  
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 start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located with 15 days after the actual start up of this (these) air contaminant source(s).

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 source(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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Permit No.	
Project No.	2007-09-073

**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."*

Jefferson City Landfill  
Cole County, S23, T44N, R11W

1. Specifications for Haul Roads
  - A. Paved Roads
    - 1) Jefferson City Landfill shall maintain and / or repair the portions of the haul road described in the Application for Authority to Construct as paved. Maintenance of the surfaces will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
    - 2) Jefferson City Landfill shall periodically water, wash and/or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these roads.
  - B. Unpaved Roads  
Jefferson City Landfill shall water the unpaved haul road whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.

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

Project Number: 2007-09-073  
Installation ID Number: 051-0058  
Permit Number:

Jefferson City Landfill  
5605 Moreau River Access Road  
Jefferson City, MO 65102

Complete: September 26, 2007

Parent Company:  
Jefferson City Landfill, LLC  
722 Dix Road  
Jefferson City, MO 65109

Cole County, S23, T44N, R11W

REVIEW SUMMARY

- Jefferson City Landfill has applied for authority to increase use of haul roads due to storage of fleet vehicles and waste containers on-site.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed increased usage of haul roads.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed increased usage of haul roads.
- Periodic watering and washing is being used to control the PM<sub>10</sub> emissions from the unpaved and paved haul roads in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub> are below de minimis levels.
- This installation is located in Cole County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

- Emissions testing is not required for the haul roads.
- A revision to your Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

Jefferson City Landfill, LLC is an existing 41-acre Municipal Solid Waste (MSW) landfill located in Jefferson City, Missouri (Cole County). Jefferson City Landfill currently operates a gas collection and control system consisting of 40 gas extraction wells and associated header piping routed to a 2000 scfm open flare for destruction.

This facility is considered a major source with regards to Operating Permitting and a minor with regards to New Source Review Permitting. A major source operating permit was issued in January of 2005 (Permit No. OP2005-002). The following New Source Review permits have been issued to Jefferson City Landfill from the Air Pollution Control Program.

Table 1: Previously Issued New Source Review Permits

Permit Number	Description
0299-011	Horizontal expansion of the landfill to increase capacity to 5,023,419 tons of municipal solids waste.
0299-011A	Reduction in capacity of the landfill to 2.8 million megagrams and to alter the haul road watering requirements.
052006-019	Installation of a landfill gas collection system to be vented to a 2,000 SCFM open flare.

## PROJECT DESCRIPTION

Jefferson City Landfill (JCLF) has historically stored its fleet vehicles off-site. However, recent changes have made off-site parking impractical for the hauling fleet. Jefferson City Landfill has designed an on-site parking lot, complete with fueling station, to address the issue. Increased traffic on existing haul roads is expected due to these changes in operation. All emissions associated with the container yard and parking lot road will be listed under EP-7. In addition, a 10,000-gallon diesel fuel storage tank (EP-8) will be added for refueling vehicles.

There are three new activities that will occur on-site due to this project: 1) Trucks will leave the parking lot for the day, only to return at the end of the day; 2) A portion of the trucks leaving the parking lot for the day will return once to refuel prior to returning at the end of the day; and 3) Trucks will pick up or deliver containers to the container yard.

The current fleet of JCLF trucks consists of 54 trucks. A conservative 10% increase of the hauling fleet was presumed to yield of total number of sixty (60) trucks utilizing the parking lot. Vehicles will leave the lot each day, possibly returning to refuel, then be

brought back to the landfill at the end of the day. Midday refueling is expected to be a rare occurrence since hauling routes are designed to minimize refueling trips. The potential to emit (PTE) calculations were performed with the presumption that 25 percent of the hauling fleet would return midday to refuel.

Waste containers also need to be store on-site. Trucks carrying full containers of waste will arrive at the landfill, empty the waste load, then deposit the empty container in a container storage yard. The containers remain in the storage yard until a rental contract requires removal of the container from the yard for delivery to the customer. Current container rental records were used to approximate the maximum quantity of containers that could be moved to or from the container yard on a daily basis in the future. No more than 50 containers are ever expected to be moved into or out of the container yard on any given day. PTE calculations are based on the presumption that only the heaviest type of containers (7,200 pounds) are being hauled.

The installation will control emissions from the haul roads affected by this project by paving and periodic watering/washing.

#### EMISSIONS/CONTROLS EVALUATION

The main pollutant of concern for this project is PM<sub>10</sub>. The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 13.2.2, *Unpaved Roads* (Nov 2006). A 95% control efficiency is assumed for routine watering / washing of the paved portions of the haul road. A 50% control efficiency is assumed for routine watering of the unpaved haul roads.

Emissions for the diesel tank were calculated using the EPA document Factor Information Retrieval (FIRE) V6.24, *Source Classification Codes and Emission Factors Listing for Criteria Air Pollutants* (SCC #4-03-010-19 and #4-03-010-21) for working and breathing losses of the storage tank. VOC emissions from the storage tank are less than 0.01 tons per year.

Based upon Permit No. 052006-019, the existing potential emissions from JCLF are assumed to be less than major. Existing actual emissions were taken from the applicant's 2006 Emissions Inventory Questionnaire (EIQ) submittal. Potential emissions of the application represent the potential emissions of the additional haul road use based on maximum possible usage. The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2006 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	< 250	3.11	10.45	N/A
SO <sub>x</sub>	40.0	< 250	1.20	N/A	N/A
NO <sub>x</sub>	40.0	< 250	3.44	N/A	N/A
VOC	40.0	< 250	2.24	N/A	N/A
CO	100.0	< 250	64.46	N/A	N/A
HAPs	10.0/25.0	< 250	0.88	N/A	N/A

N/A = Not Applicable

### 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 PM<sub>10</sub> are below de minimis levels.

### APPLICABLE REQUIREMENTS

Jefferson City 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  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *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 10-3.090

## 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 with special conditions.

\_\_\_\_\_  
Susan Heckenkamp  
Environmental Engineer

\_\_\_\_\_  
Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 24, 2007, received September 25, 2007, designating Jefferson City Landfill, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Northeast Regional Office Site Survey, dated October 26, 2007.

Mr. Brad Zimmerman  
Environmental Manager  
Jefferson City Landfill  
5605 Moreau River Access Road  
Jefferson City, MO 65102

RE: New Source Review Permit - Project Number: 2007-09-073

Dear Mr. Zimmerman:

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 revised 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 Susan Heckenkamp at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:shl

Enclosures

c: Northeast Regional Office  
PAMS File 2007-09-073

Permit Number: