

217/782-2113

OPERATING PERMIT - REVISED

PERMITTEE

D & L Landfill, Inc.
Attn: Lee Roy McCray
1212 Ayers Road
Greenville, Illinois 62246

Application No.: 95110062 I.D. No.: 005801AAE
Applicant's Designation: GAS FLARE Date Received: November 20, 2006
Subject: Passive Gas Flare
Date Issued: Expiration Date:
Location: 825 West Willard Street, Greenville, Bond County

Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of closed municipal solid waste landfill with landfill gas collection and control system (GCCS) (i.e., seven passive landfill gas flares) as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

1. Lifetime Conditions
 - a. This permit shall expire 180 days after the Illinois EPA sends a written request for the renewal of this permit.
 - b. This permit shall terminate if it is withdrawn or is superseded by a revised permit.
2. Applicable State Regulations
 - a. 35 IAC Part 220 - Nonmethane Organic Compounds
 - i. (A). This permit is issued based upon the municipal solid waste (MSW) landfill being subject to 35 IAC Part 220, Specifically, except as provided in 35 IAC 220.200(b), an owner or operator of an MSW landfill for which construction or modification commenced before May 30, 1991, is subject to the requirements of 35 IAC Part 220 if the landfill has accepted waste at any time since November 8, 1987. [35 IAC 220.200(a)]
 - (B). The MSW landfill being an inactive landfill, pursuant to the definition in 35 IAC 220.110. Specifically, 35 IAC 220.110 defines an inactive landfill as follows:

"Inactive landfill" means a landfill in which solid waste is no longer being placed, and that is no longer permitted to accept waste under Section 21 of the Act or has a federally enforceable permit condition prohibiting the acceptance of additional waste. If an inactive landfill is subsequently permitted to accept additional waste and additional solid waste is placed in the landfill, the landfill is no longer inactive";

- (C). The MSW landfill having a design capacity less than 2.5 million Mg by mass and 2.5 million cubic meters by volume with emissions of nonmethane organic compounds (NMOC) from the MSW landfill being less than 50 Megagrams per year (Mg/year).

Note: Based on information provided by the Permittee, the capacity of the closed landfill was approximately 937,500 cubic meters and 375,655 megagrams. If the ownership or control of the source were to change, such that it could qualify as a single source with the Bond County Landfill, the status of the facility operated by the Permittee would have to be reevaluated to determine whether it would become subject to the control requirements of 35 IAC Part 220 or the NSPS, 40 CFR 60, Subpart WWW. (See Condition 8(c)).

- ii. Pursuant to Condition 2(a)(i), this permit is issued based upon Permittee being subject to the compliance requirements shown in 35 IAC 220.210(a). Specifically, submittal of an initial design capacity report, as provided in 35 IAC 220.280(a), and, if applicable, an amended design capacity report, as provided for in 35 IAC 220.280(a)(3), as applicable. [35 IAC 220.210(a)]
 - iii. Pursuant to Condition 2(a)(i)(B), the Permittee is prohibited from accepting additional without first obtaining the required construction permit prior to reopening the landfill for waste operations or changing the landfill's status from "inactive" to "active", See Condition 8(c).
 - iv. This permit shall in no way supersede any limitation imposed by the Illinois EPA Bureau of Land pursuant to 35 IAC Subtitle G: Waste Disposal.
- b. 35 IAC Part 212 - Particulate Matter
- i. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property

line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

- ii. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, except as allowed by 35 IAC 212.123(b) and 212.124.

3. Non-Applicability of Regulations of Possible Concern

Pursuant to provisions of Condition 4, this permit is issued based on the emissions from the above referenced project not constituting a new major source or major modification subject to 35 Ill. Adm. Code 203 or Prevention of Significant Deterioration (PSD), 40 CFR 52.21.

4. Facility Limitation

- a. This permit is issued based upon the operation of a landfill gas collection and control system in order to control emissions of landfill gas, which contain methane and non-methane organic compounds (NMOCs).
- b. i. Landfill gas, supplemented as needed with natural gas or other gaseous fuel, shall be the only fuels fired in the control system. Fuel usage shall not exceed the following limits.

<u>Monthly Limit</u>	<u>Annual Limit</u>
8.64 million scf/month	86.4 million scf/yr

These limits are based on the maximum fuel usage for the facility shown in the application.

- ii. Total emissions of nitrogen oxide (NOx), sulfur dioxide (SO₂), volatile organic material (OM), carbon monoxide (CO) and particulate matter (PM) from the passive flares shall not exceed the following:

A. NO_x and CO

		<u>Pollutants</u>
<u>NOx</u>	<u>CO</u>	
0.09	1.62	ton/month
0.86	16.20	ton/year

- B. This permit is issued based upon negligible emissions of VOM, SO₂, and PM from the landfill gas flares. For this purpose total emissions of each specific pollutant from a total of all the flares shall not exceed nominal rates of 0.1 pound per hour and 0.44 ton per year.

- c. Each affected well and flare shall be operated in accordance with good air pollution control practices to minimize emissions, including:
 - i. For each affected well, the Permittee shall install and maintain port(s) for measurement of temperature and pressure (or measurement device(s) on the well for these operating parameters) and a port for sampling of the collected landfill gas.
 - ii. For each affected flare, the Permittee shall comply with the following requirements:
 - A. Operate with a flame present at all times when landfill gases may be vented to it, except during startup, shutdown and malfunction.
 - B. Designed for and operate with no visible emissions as determined by USEPA Method 22, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - C. In the event an affected flare is inoperable the gas flow to the flare shall be shut off.
 - iii. The Permittee shall monitor the open flare(s) to ensure that they are operated and maintained in conformance with manufacturer's specifications and/or recommendations. This includes but is not limited to the following:
 - A. Routine inspection and maintenance of the spark arrestors for each affected flare, as applicable, spark plugs and any batteries or solar panels necessary for the proper operation of the spark plugs and the spark ignition system, in accordance with the manufacturer's recommendations. This shall include but not be limited to ensuring the plugs are properly sparking, the batteries are adequately charged and the solar panels are clean and properly aligned.
 - B. The Permittee shall also maintain a sufficient supply of routine replacement parts for each affected flare such as spark plugs and batteries so as to minimize maintenance and repair downtimes.
- d. In the event that the operation of the gas collection system results in an odor nuisance or any other nuisance due to the operation of any one or combination of flares or through any other cause, the Permittee shall take all appropriate and necessary action, including but not limited to, changes in operating procedures or installation of air pollution control equipment, in order to eliminate the nuisance.

5. Testing and Monitoring - Methods and Procedures

Testing by Owner or Operator: The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests [35 IAC 201.282(a)].

6. Monitoring Requirements.

- a. USEPA Method 22 shall be used to determine the compliance of the landfill with the general fugitive particulate matter visible emissions limit Condition 2(b)(i) and the flare visible emission provisions of Special Condition 4(c)(ii). Observations shall be taken at least on an annual basis and the observation period shall extend for 2 hours as per USEPA Method 22.
- b. The Permittee shall verify and log on a bi-weekly basis (i.e., inspections at least once every two weeks) that the spark ignition system is operating continuously for each affected flare. Upon determination of a malfunction, the Permittee shall take immediate corrective action which shall include but is not limited to the closure of the respective landfill gas flare's shutoff valve.

7. Recordkeeping Requirements

- a.
 - i. A file containing the design specifications for each affected flare including capacity (scfm), visible emissions, acceptable range of heat content of waste gas and design exit velocity, and the manufacturer's emission factors for the flare.
 - ii. The Permittee shall maintain an operating log for each affected flare, which at a minimum includes status of the flare, adjustments of the flare's operating parameters, the results of inspections and maintenance and repair activity, See Condition 6(b).
 - iii. A log or records of inspection/maintenance of each affected flare, which shall include the following:
 - A. Date of inspection with condition of the flare and description of any maintenance needed.
 - B. Date of maintenance performed with description.

- b. Records shall be retained for five years and shall be readily available for inspection and copying by the Illinois EPA upon request. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

8. Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of non-compliance with the operating requirements and emissions limitations of this permit.

- a. The Permittee shall report in writing to the Illinois EPA within 30 days of any deviation from the requirements of this permit with a description of the deviation, time and duration, cause and remedial action, if any.
- b. Two copies of required reports and notifications shall be sent to the Illinois EPA's compliance section at the following address unless otherwise indicated:

- i. Two copies of reports and notifications shall be sent to:

Illinois Environmental Protection Agency (MC 40)
Bureau of Air
Compliance Section
P.O. Box 19276
Springfield, Illinois 62794-9276
217/782-5811

Questions regarding testing shall be directed to the
Illinois EPA - Bureau of Air -Compliance Section

- ii. One copy to the Regional Office

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

- c. Pursuant to 40 CFR 60.750(a) and 35 Ill. Adm. Code 220.200(b), any increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion is classified as a "modification" of the MSW landfill (See the definitions of "modification" in 40 CFR 60.751 and 35 Ill. Adm. Code 220.110) which will subject the source to the requirements of 40 CFR 60, Subpart WWW. Therefore, if the landfill associated the "control system" will be modified or otherwise trigger applicability of 40 CFR 60 Subpart WWW, the Permittee shall obtain a construction permit and operating for the control system, as applicable, that identifies the these rules as being applicable, addresses applicable changes to the landfill gas collection and control system in order to comply with the provisions of 40 CFR 60

Subpart WWW, and sets forth the deadlines by which compliance shall be shown.

9. Compliance Provisions

- a. Compliance with the emission limits in Condition 4 shall be based on the recordkeeping requirements in Condition 7 and calculated based on the emission factors and procedures in AP-42 - Chapter 2.4, and the maximum landfill gas flow rate shown in the application:

<u>Pollutant</u>	<u>lb/hr</u>	<u>Emission Rates</u>		<u>Notes</u>
		<u>ton/month</u>	<u>ton/year</u>	
NO _x	0.20	0.09	0.86	1
CO	3.70	1.620	16.20	2
PM	0.08	--	0.37	3
SO ₂	0.08	--	0.33	4
NMOC	0.01	--	0.04	4
VOM	0.00	--	0.02	4

Notes:

- 1 Emissions factor based upon AP-42 emission factor (40 lb/10⁻⁶ dscf methane), the maximum landfill gas flow rate shown in the application (86.37 x 10⁶ ft³/yr), and a landfill gas methane content (50% by volume);
- 2 Emissions factor based upon AP-42 emission factor (750 lb/10⁻⁶ dscf methane), the maximum landfill gas flow rate shown in the application (86.37 x 10⁶ ft³/yr), and a landfill gas methane content (50% by volume);
- 3 Emissions factor based upon AP-42 emission factor (17 lb/10⁻⁶ dscf methane), the maximum landfill gas flow rate shown in the application (86.37 x 10⁶ ft³/yr), and a landfill gas methane content (50% by volume);
- 4 Emissions factor based equations and calculation procedures in AP-42 Section 2.4 (Table 2.4-5.), the maximum landfill gas flow rate shown in the application (86.37 x 10⁶ ft³/yr), and a landfill gas methane content (50% by volume);

Maximum monthly emissions are assumed to be one tenth of annual emissions.

It should be noted that this Permit covers the operation of a closed municipal solid waste landfill with landfill gas collection and control system (GCCS) which will control landfill gas emissions by using collected landfill gas as a fuel in the seven passive landfill gas flares. Based upon other information provided in the application, the source opened in approximately 1967 and accepted waste until 1994. Final closure, under 35

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IAC Subtitle G: Waste Disposal, including construction of a final cover system, was completed in 1996.

Further, it should be noted that this permit does not include the operation of the 6,000 gallon leachate storage tank since a permit is not required pursuant to 35 Ill. Adm. Code 201.146(n)(1).

If you have any questions about this permit, please contact Michael Davidson, Permit Analyst at 217/782-2113.

Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:MED:jws

cc: File
Region 3
Steve Nightengal, BOL