DEQ

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

N7762

RENEWABLE OPERATING PERMIT STAFF REPORT

ROP Number

MI-ROP-N7762-2008

Richfield Landfill, Inc.

SRN: N7762

Located at

11145 Mt. Morris Road, Davison, Michigan 48423

Permit Number:	MI-ROP-N7762-2008
Staff Report Date:	April 14, 2008
Amended Date:	May 29, 2008

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with a ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for air pollution control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft permit terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft permit pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Richfield Landfill, Inc. 11145 Mt. Morris Road Davison, MI 48423
Source Registration Number (SRN):	N7762
Standard Industrial Classification (SIC) Code:	4953
Number of Stationary Source Sections:	Two
Is Application for a Renewal or Initial Issuance?	Initial Issuance
Application Number:	200700064
Responsible Official:	1. Frederick Hambleton, Treasurer 248-255-2951 2. Bill Roberts, Vice President-Operations and Engineering, 810-631-4105
AQD Contact:	Brad Myott, Environmental Engineer, 517-373-7084
Date Permit Application Submitted:	May 9, 2007
Date Application Was Administratively Complete:	December 13, 2007
Is Application Shield In Effect?	No
Date Public Comment Begins:	April 14, 2008
Deadline for Public Comment:	May 14, 2008

Source Description

The Richfield Landfill is owned by Richfield Landfill, Incorporated. The facility is located in Genesee County in the City of Davison. The stationary source includes an active municipal solid waste landfill (MSW) with an active landfill gas collection and treatment system, both of which are operated year round. The collection and treatment system is comprised of a series of gas wells, a network of collection piping and headers, condensate drains, processing equipment, and an open flare. Solid waste arrives in a variety of vehicles that potentially generate fugitive dust emissions. The primary standard industrial code is 4953 (Municipal Solid Waste Landfill).

The landfill serves as the final disposal point for general and household waste and inert wastes such as construction and demolition debris, ash and low level contaminated soils. The facility also accepts asbestos waste. The solid waste is transported to the facility to an area (cell) where it is deposited on the working surface. The deposited waste is covered with soil or other MDEQ alternate daily cover materials (ADCM) on a daily basis. When a cell reaches its design capacity, a liner is installed, covering the waste. Natural biological processes occurring in landfills decompose the waste producing leachate and landfill gas. Initially, decomposition is aerobic until the oxygen supply is exhausted. Anaerobic decomposition of buried refuse creates most of the landfill gas. Landfill gas consists mainly of methane, carbon dioxide, and a small percentage of non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAP), greenhouse gases, and volatile organic compounds (VOC).

The landfill gas is collected at the Richfield Landfill by an active gas collection system. This system consists of vertical extraction wells that are installed into the depths of the landfill refuse and which remove landfill gas by vacuum that is applied to the well from a blower. The collected landfill gas is then routed to processing equipment that treats the collected landfill gas for subsequent sale. The collection system is periodically modified by adding a gas well and/or collection piping as needed when sections of the landfill begin to produce significant gas quantities.

The treatment system consists of compression, filtration and water knockout. Collected landfill gas passes through a water knockout pot that separates moisture from the gas. The gas then passes through one of two multi-stage blowers which pressurize the gas. Then the gas passes through a chiller which reduces the temperature of the compressed gas. Next the gas passes through a series of coarse filters and coalescing filter which traps moisture before passing through a 0.5 micron particle filter.

The gas is then treated based on UOP Separex Membrane Technology. This technology uses temperature and pressure differential across a semi-permeable membrane to separate the methane in the landfill gas from the carbon dioxide. The processed landfill gas taken from the landfill is sold into a local pipeline as natural gas.

In the event that the treatment system is not operational, the collected landfill gas will be routed to an open flare. The flare will be tested to meet NSPS requirements.

The landfill is classified as a Type II facility, and therefore does not receive any regulated quantities of hazardous waste that cannot be placed in a Type II facility.

The following table lists stationary source emission information as reported in Michigan Air Emissions Reporting System for reporting year 2006 submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Non-methane Organic Compounds (NMOCs)	46.18

**As listed pursuant to Section 112(b) of the Clean Air Act.

See Parts C and D in the draft ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are addressed in the non-applicable requirement part of the Staff Report and Part E of the ROP.

The stationary source is located in Genesee County which is currently designated as attainment/ unclassified for all criteria pollutants.

The stationary source is not considered a major source of Hazardous Air Pollutant (HAP) emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112 is less than 10 tons per year and the potential to emit of all HAPs combined is less than 25 tons per year.

The stationary source is not currently subject to Prevention of Significant Deterioration (PSD) of Title 40 of the Code of Federal Regulations, Part 52.21, regulations because its potential to emit of each criteria pollutant is less than 250 tons per year.

The stationary source is subject to the federal Plan Requirements for Municipal Solid Waste (MSW) Landfills promulgated in Title 40 of the Code of Federal Regulations, Part 62, Subpart GGG, which reference the requirements detailed in the New Source Performance Standards for MSW Landfills promulgated in Title 40 Part 60 Subpart WWW. Subpart WWW requires that a Part 70, Renewable Operating Permit (ROP), be submitted for all new and existing landfills with a design capacity equal to or exceeding 2.5 million megagrams and 2.5 million cubic meters.

The stationary source is subject to the Maximum Achievable Control Technology (MACT) Standards for MSW landfills promulgated in Title 40 of the Code of Federal Regulations, Part 63, Subparts A and AAAA. 40 CFR 63 Subpart AAAA is applicable to all MSW landfills with a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters that have a calculated NMOC emission rate greater than or equal to 50 megagrams.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the DEQ's "Procedure for Evaluating Periodic Monitoring Submittals."

The stationary source is not subject to the federal Compliance Assurance Monitoring (CAM) rule under Title 40 of the Code of Federal Regulations, Part 64, because the emission limitation(s) or standard(s) for Municipal Solid Waste Landfills are covered under 40 CFR 60, Subpart WWW (NSPS) and 40 CFR 63 Subpart AAAA (MACT). Thus control equipment is exempt from CAM requirements.

Please refer to Parts B, C, and D in the enclosed draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Equivalent Requirements

This permit does not include any equivalent requirements or significant changes pursuant to Rule 212(5). Equivalent requirements are enforceable applicable requirements that are equivalent to the applicable requirements contained in the original New Source Review permit, a Consent Order/ Judgment, and/or the State Implementation Plan.

Non-applicable Requirements

Part E of the draft ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the draft ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

There were no processes listed in the ROP application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

Draft ROP Terms/Conditions Not Agreed to by Applicant

This permit does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP. A schedule of compliance may be appropriate depending on the issuance date of this ROP.

Action taken by the DEQ

The AQD proposes to approve this permit. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the U.S. Environmental Protection Agency (USEPA) is allowed up to 45 days to review the draft permit and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision-maker for the AQD is Michael F. Masterson, District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

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May 29, 2008 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated April 14, 2008, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	1. Frederick Hambleton, Treasurer 248-255-2951 2. Bill Roberts, Vice President-Operations and Engineering, 810-631-4105
AQD Contact:	Brad Myott, Environmental Engineer 517-373-7084

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the Draft ROP

No changes were made to the draft ROP.