

Michigan Department of Natural Resources & Environment  
Air Quality Division

State Registration Number  
N2688

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N2688-2011

Veolia-Arbor Hills Landfill, Inc.

SRN: N2688

Located at

10690 W. Six Mile Road, Northville, Michigan 48167

Permit Number: MI-ROP-N2688-2011

Staff Report Date: November 8, 2010

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 Natural Resources and Environment (MDNRE), 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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**November 8, 2010 STAFF REPORT**

**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:	10690 W. Six Mile Road Northville, Michigan 48167
Source Registration Number (SRN):	N2688
North American Industry Classification System (NAICS) Code:	4953
Number of Stationary Source Sections:	3
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	200700149
Responsible Official:	David M. Rettell, General Manager, Veolia-Arbor Hills Landfill, Inc. (Section 1);  Matthew Neely, General Manager BFI Waste Services of North America, LLC, (Section 2);  Anthony Falbo, Vice President Gas Recovery Systems, LLC (Section 3);
AQD Contact:	Glen Erickson, Senior Environmental Analyst 517-780-7851
Date Permit Application Received:	11-26-2007
Date Application Was Administratively Complete:	11-29-2007
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	November 8, 2010
Deadline for Public Comment:	December 8, 2010

## **Source Description**

Veolia-Arbor Hills Landfill is a large, 337-acre municipal, Type II solid waste landfill located in northeast Washtenaw County at 10690 W. Six Mile Road (Northville, Michigan 48167 mailing address) in Salem Township. The eastern edge of the landfill site lies along Napier Road, the boundary between Washtenaw County to the west, and Wayne County to the east.

This site was originally a gravel mining operation and spoils deposition area owned and operated by the Holloway Sand & Gravel Co. connected with the construction of the M-14 expressway. Holloway operated a large asphalt plant on the west edge of the landfill site for about 10 years beginning in 1983. Landfill gas was utilized as supplemental fuel in the asphalt plant for a short amount of time.

Arbor Hills East is the closed 129-acre portion of this landfill. Arbor Hills West is the open, 208-acre portion of the landfill. Landfill gas produced from both portions of the landfill is actively collected, treated, and processed in the adjacent landfill gas-to-energy turbine plant owned and operated by Gas Recovery Systems, LLC (GRS), or alternatively in the two (2) enclosed flares owned by BFI. BFI owns the closed Arbor Hills East, as well as, the landfill gas being produced in that portion of the landfill, along with the landfill gas being produced by Arbor Hills West. Veolia-Arbor Hills Landfill, Inc. (Veolia) owns the operating portion of the landfill, Arbor Hills West, and is the solid waste disposal operating license holder.

This ROP Renewal permit is structured into three (3) separate sections: Section 1 is Veolia; Section 2 is BFI; and Section 3 is GRS.

The NSPS for Municipal Solid Waste Landfills, Part 60, Subpart WWW is predominantly focused around the collection and destruction (ie. combustion) of landfill gas, or the treatment (ie. clean-up) of landfill gas to essentially pipeline quality natural gas. The landfill gas is generated by the decomposition of the buried municipal solid waste.

In January, 2004 Veolia-Arbor Hills Landfill, Inc. received AQD approval of their landfill gas treatment system in accordance with EPA guidelines for defining proper treatment of landfill gas and in accordance with 40 CFR, Part 60.752(b)(2)(iii)(C) shall:

Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (b)(2)(iii)(A) or (B) of this section.

Since GRS (Section 3) properly treats landfill gas from BFI (Section 2), and no atmospheric vents exist in the treatment system, GRS (Section 3) is not subject to any of the requirements of 40 CFR, Part 60, Subpart WWW.

The substantive requirements of Subpart WWW pertain to the landfill gas produced by the decomposition of the buried waste from Veolia. (Section 1), and since all of the landfill gas rights are owned by BFI (Section 2), all of the requirements of Subpart WWW are included within Section 2 (BFI) of this ROP renewal.

Solid Waste Construction Permit No. 4108, issued to Veolia. (Section 1) on December 11, 2009, from the then Waste and Hazardous Materials Division of MDEQ, the Environmental Response Management Division of the MDNRE, includes a vertical and horizontal expansion that will involve an increase in the total permitted landfill size of approximately 800,000 to 1,200,000 additional tons.

New Source Review (NSR) Permit to Install (PTI) No. 274-03B, issued March 3, 2008 for a Solar Taurus model 60 gas turbine, EUTURBINE4-S3 is included in this ROP renewal No. MI-ROP-N2688-2010 in Table EUTURBINE4-SE, and in Table FGNOX-S3. This stand-alone turbine does not connect to the

heat recovery steam turbine system dedicated to the three (3) existing European Gas Turbines (EGT) described in Table FGTURBINES-S3.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2009** submittal.

**TOTAL STATIONARY SOURCE EMISSIONS**

Pollutant	Tons per Year
Carbon Monoxide (CO)	186.34
Nitrogen Oxides (NO <sub>x</sub> )	132.04
Particulate Matter (PM)	42.07
Sulfur Dioxide (SO <sub>2</sub> )	45.56
Volatile Organic Compounds (VOCs)	2.97
NMOC	68.32
<b>Individual Hazardous Air Pollutants (HAPs) **</b>	<b>NA</b>
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>NA</b>

\*\*As listed pursuant to Section 112(b) of the federal 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 explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Washtenaw County which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/maintenance for the ozone standard.

Washtenaw County is currently designated by the U.S. Environmental Protection Agency (USEPA) as a non-attainment area with respect to the PM 2.5 annual and 24-hour standard.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit carbon monoxide and oxides of nitrogen exceed 100 tons per year. In addition, 40 CFR, Part 60.752(c) requires all municipal waste landfills subject to 40 CFR Part 60, Subpart WWW, with capacities greater than 2.5 million megagrams to apply for a Title V Renewable Operating permit.

The stationary source is considered a major source of Hazardous Air Pollutants (HAP) emissions because the potential to emit of a single HAP, hydrogen chloride, is greater than 10 tons per year.

FGNOX-S3, FGTURBINES-S3, FGDUCTBURNERS-S3, and EUTURBINE4-S3 at the stationary source were subject to review under the Prevention of Significant Deterioration regulations of 40 CFR, Part 52.21 because at the time of New Source Review permitting the potential to emit of carbon monoxide was greater than 250 tons per year.

The stationary source has emission units that were subject to R 336.1220 for Major Offset Sources.

FGTURBINES-S3 at the stationary source are subject to the New Source Performance Standards (NSPS) for Stationary Gas Fired Turbines promulgated in 40 CFR, Part 60, Subparts A and GG.

EUTURBINE4-S3 at the stationary source is subject to the NSPS for Stationary Gas Fired Turbines promulgated in 40 CFR, Part 60, Subparts A and KKKK.

The stationary source is subject to the NSPS for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 60, Subparts A and WWW.

The stationary source is subject to the Maximum Achievable Control Technology (MACT) Standards for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 63, Subparts A and AAAA.

The stationary source is subject to the National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos promulgated in 40 CFR, Part 61, Subparts A and M.

The stationary source is not subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64, because the emission limitations or standards for municipal solid waste landfills are covered by 40 CFR, Part 60, Subpart WWW and 40 CFR Part 63 Subpart AAAA.

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

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

**Source-wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. 199600293 are identified in Appendix 6 of the ROP.

PTI Number			
913-90D			

## Equivalent Requirements

The following table lists explanations of any equivalent requirements included in the draft permit pursuant to Rule 213(2)(c). Equivalent requirements are enforceable applicable requirements which are equivalent to the applicable requirements contained in the original PTI, a Consent Order/Judgment, and/or the State Implementation Plan.

Emission Unit/Flexible Group ID	Equivalent Requirement Discussion
FGENCLOSEDFLARES-S2	<p>Removing condition requiring flares to operate with a minimum of 1600°F and a minimum retention time of 0.5 seconds, previously found in Table F-2.4, FGENCLOSEDFLARES, V.1. of ROP No. 199600293 and replacing with condition: FGENCLOSEDFLARES-S2, III., 6.(a)., which reads:</p> <p>The enclosed flare shall be operated within the parameter ranges established during the most recent performance test in compliance with §60.754(d). The operating parameters to be monitored are specified in §60.756 (below in condition VI.1.). (40 CFR 60.752(b)(2)(iii)(B)(2), 40 CFR 63.1955(a))</p> <p>This wording is appropriate as it directly relates flare temperature to equipment-specific verification of compliance with the requirements of Subpart WWW regarding NMOC % destruction or NMOC emission concentration to less than 20 ppm.</p>

## 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

The following table lists processes that were included in the ROP application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

Exempt Emission Unit ID	Description of Exempt Emission Unit	ROP Exemption	PTI Permit Exemption
EU00016	EUSTANDBYGENER	R336.1212(4)(d)	R336.1285(g)
EU00027	EUWASTEOILTANKS	R336.1212(3)(e)	R336.1284(c)
EU00029	EUCOOLANTTANK	R336.1212(3)(e)	R336.1284(c)
EU00030	EUFLRPROPANETANK	R336.1212(4)(c)	R336.1284(b)
EU00031	EUNATGASHEATERS	R336.1212(4)(b)	R336.1282(b)
EU00032	EUKEROSENEHEATER	R336.1212(4)(b)	R336.1282(b)
EU00033	EUPRESSUREWASHER	R336.1212(4)(b)	R336.1282(b)
EU00034	EUCONDENSATETANK	R336.1212(4)(c)	R336.1284(e)
EU00051	EUKSENEWASTETANK	R336.1212(3)(e)	R336.1284(d)
EU00052	EUNEWOILTANK	R336.1212(3)(e)	R336.1284(c)

<b>Exempt Emission Unit ID</b>	<b>Description of Exempt Emission Unit</b>	<b>ROP Exemption</b>	<b>PTI Permit Exemption</b>
EU00053	EUKEROSNETANK	R336.1212(3)(e)	R336.1284(d)
EU00055	EUVEOPROPANETANK	R336.1212(4)(c)	R336.1284(b)
EU00056	EUPRESSUREWASHVE	R336.1212(4)(b)	R336.1282(b)

**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.

**Action taken by the DNRE**

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 Scott Miller, Jackson 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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**RENEWABLE OPERATING PERMIT**

ROP Number  
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**December 9, 2010 STAFF REPORT  
ADDENDUM**

**Purpose**

A Staff Report dated November 8, 2010, 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:	David M. Rettell, General Manager, Veolia-Arbor Hills Landfill, Inc. (Section 1);  Matthew Neely, General Manager BFI Waste Services of North America, LLC, (Section 2);  Anthony Falbo, Vice President Gas Recovery Systems, LLC (Section 3);
AQD Contact:	Glen Erickson, Senior Environmental Analyst 517-780-7851

**Summary of Pertinent Comments**

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

**Changes to the November 8, 2010 Draft ROP**

No changes were made to the draft ROP.