

State Registration Number
N5432

Michigan Department of Environmental Quality
Air Quality Division
**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N5432-2011

Southeast Berrien County Landfill
and
North American Natural Resources SBL-LLC

SRN: N5432

Located at

3200 Chamberlain Road, Buchanan, Berrien County, Michigan 49107

Permit Number: MI-ROP-N5432-2011

Staff Report Date: May 9, 2011

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).

TABLE OF CONTENTS

May 9, 2011 STAFF REPORT	3
August 23, 2011 STAFF REPORT ADDENDUM	7

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May 9, 2011 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:	Southeast Berrien County Landfill 1540 Mayflower Road Niles, Michigan 49120
Source Registration Number (SRN):	N5432
North American Industry Classification System (NAICS) Code:	562212
Number of Stationary Source Sections:	2
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201100003
Responsible Official:	<u>Section 1 – Southeast Berrien County Landfill</u> Sonny Fuller, Interim General Manager 269-695-2500 <u>Section 2 – North American Natural Resources</u> SBL-LLC Robert C. Evans 517-347-4048
AQD Contact:	Dorothy Bohn, EQA 12 269-567-3552
Date Permit Application Received:	January 3, 2011
Date Application Was Administratively Complete:	February 10, 2011
Is Application Shield In Effect?	No
Date Public Comment Begins:	May 9, 2011
Deadline for Public Comment:	June 8, 2011

Source Description

Southeast Berrien County Landfill (SEBCL) is a Type II Municipal Solid Waste Landfill (MSWL) as defined in 40 Code of Federal Regulations (CFR) 60.751 and is owned and operated by the SEBCL Authority. The SEBCL has a design capacity greater than 2.5 million megagrams and has estimated uncontrolled Non-Methane Organic Compound emissions greater than 50 megagrams per year. Therefore, SEBCL is subject to the federal New Source Performance Standards (NSPS) for MSWL as codified in 40 CFR, Part 60, Subpart WWW. In July 2009 North American Natural Resources (NANR) installed three engines with generators to operate off the landfill gas and provide power to the electric utility grid. The SEBCL still has an open flare as a backup control device. The ROP now has two sections; one contains the requirements for SEBCL and the other the requirements for NANR.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2010** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	174.3
Nitrogen Oxides (NO _x)	38.5
Particulate Matter (PM10)	7.8
Sulfur Dioxide (SO ₂)	2.4
Non-Methane Organic Compounds (NMOC)	52.0
Volatile Organic Compounds (VOC)	61.55

**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 Berrien County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations, Part 70, because the potential to emit carbon monoxide exceeds 100 tons per year and the source is subject to 40 CFR, Part 60, Subpart WWW. 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.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, PSD of Air Quality of Act 451, because at the time of New Source Review permitting the potential to emit of each criteria pollutant was less than 250 tons per year.

EULANDFILL-S1, EUACTIVECOLL-S1, EUOPENFLARE-S1, EUASBESTOS-S1, FGENGINES-S2, and EUTREATMENTSYS-S2 at the stationary source are subject to the NSPS for MSWLs promulgated in 40 CFR, Part 60, Subparts A and WWW.

EULANDFILL-S1, EUACTIVECOLL-S1, EUOPENFLARE-S1, EUASBESTOS-S1, FGENGINES-S2, and EUTREATMENTSYS-S2 at the stationary source are subject to the Maximum Achievable Control Technology Standards for MSWLs promulgated in 40 CFR, Part 63, Subparts A and 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."

The emission limitation(s) or standard(s) for VOC from EULANDFILL-S1, EUACTIVECOLL-S1, EUOPENFLARE-S1, EUASBESTOS-S1, FGENGINES-S2, and EUTREATMENTSYS-S2 at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR, Part 64, because the emission limitations are addressed by 40 CFR, Part 60, Subparts A and WWW; and 40 CFR, Part 63, Subparts A and AAAA. Therefore, the equipment is exempt from CAM requirements for VOC.

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. The PTIs issued after the effective date of ROP No. MI-ROP-N5432-2006 are identified in Appendix 6 of the ROP.

PTI Number			
NA			

Streamlined/Subsumed Requirements

This permit does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

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	Rule 212(4) Exemption	Rule 201 Exemption
EU-GASOLINE	One (1) 330-gallon gasoline aboveground storage tank	R 336.1212(4)(c)	R 336.1284(g)(i)
EU-PROPANE1-3	Three (3) 1000-gallon liquid	R 336.1212(4)(c)	R 336.1284(b)

Exempt Emission Unit ID	Description of Exempt Emission Unit	Rule 212(4) Exemption	Rule 201 Exemption
	propane tanks		
EU-LP-HEATER1	Three (3) liquid propane fired heaters located in the Material Recovery Facility	R 336.1212(4)(b)	R 336.1282(b)(i)
EU-WATER-HEATER	One (1) gas fired water heater	R 336.1212(4)(b)	R 336.1282(b)(i)
EU-GENERATOR	One (1) 7500 watt Genpro generator	R 336.1212(4)(d)	R 336.1285(g)
EU-SPACE-HEATER	One (1) 0.5 hp John Deer space heater	R 336.1212(4)(c)	R 336.1282(b)(i)
EU-POWER-WASHER	One (1) 320,000 btu gas fired power washer	R 336.1212(4)(d)	R 336.1285(g)
EU-PROPANE4-5	Two (2) 500-gallon liquid propane tanks	R 336.1212(4)(c)	R 336.1284(b)
EU-LP-HEATER2	Three (3) liquid propane fired heaters located in maintenance building	R 336.1212(4)(b)	R 336.1282(b)(i)
EU-LP-HEATER3-4	Two (2) liquid propane fired heaters	R 336.1212(4)(b)	R336.1282(b)(i)

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 MDEQ

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 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 Ms. Mary Douglas, Kalamazoo 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.

August 23, 2011 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated May 9, 2011, was developed in order to set forth the applicable requirements and factual basis for the draft 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:	<u>Section 1 – Southeast Berrien County Landfill</u> Sonny Fuller, Interim General Manager 269-695-2500
	<u>Section 2 – North American Natural Resources SBL-LLC</u> Robert C. Evans 517-347-4048
AQD Contact:	Dorothy Bohn, EQA 12 269-567-3552

Summary of Pertinent Comments

On May 19, 2011, the AQD received comments on the draft ROP from one citizen. Below is a summary of the citizen's comments that relate to the draft ROP and the AQD's response. Also, below is clarification of an enforcement issue between the USEPA and NANR.

Comment: The public notice on this Renewable Operating Permit indicates: "The Proposed ROP will result in no emissions change at the facility." I have a hard time understanding this since the previous ROP did not include the gas to energy generators operated by NANR.

AQD Response: The same amount of landfill gas is being combusted whether by SEBCL in their open flare or by NANR in their internal combustion engines. There may be variations in certain pollutant emissions levels, such as nitrogen oxide and carbon monoxide because of the combustion source. Overall, the emissions stay relatively the same.

Comment: It is my understanding that the gas to energy generators were not installed with a proper permit to install; they are currently being operated without a valid air permit.

AQD Response: The NANR was issued a valid Permit to Install (PTI No. 296-08) in 2008 for the installation and operation of up to four internal combustion engines.

Comment: I understand that it is expected that the gas generator will effectively burn the methane, which is emitted. However, I am concerned that since this gas is generated from the conglomerate of wastes that have been placed over many years, it probably has more constituents than just methane. I do not see any provisions for stack emissions monitoring. It concerns me that combustion products from these other constituents may be toxic and will continue to be emitted into the air in my community.

AQD Response: In Section 2 (page 59) of the ROP that pertains to NANR, there is a requirement that stack testing of the engines for nitrogen oxide, carbon monoxide, and VOC be performed every 8,760 hours or every three years, whichever comes first. The emission limits for these pollutants were based on federal regulations for spark ignited internal combustion engines firing on landfill or digester gas, specifically, 40 CFR, Part 60, Subpart JJJJ (New Source Performance Standards for Stationary Spark Ignited Internal Combustion Engines).

Comment: It is my understanding that as of May 8, the landfill and NANR continue to operate beyond the expiration of the previous ROP permit, even though the MIDEQ staff report indicates the application shield is not in place. I (and I am sure other citizens) would like to understand the circumstances, which allow this to occur.

AQD Response: The NANR would not be affected by this because they are currently operating under the PTI No. 296-08 mentioned earlier. This ROP, as drafted, includes all the conditions from that permit and it will be voided out upon ROP issuance. As for SEBCL, the AQD recently reinstated their application shield. The regulations state that the AQD has to notify the facility within 15 days of when an ROP application is received if any deficiencies are noted. During recent internal conversations, the AQD determined that our deficiency letter went out 17 days after we had received their application, so the application shield is granted by default under the regulations.

Comment: Local elected officials have been very open with their desire to sell our community owned landfill. This is even in the face of overwhelming public comment against the sale. I would like clarified whether this ROP would apply to a subsequent owner of the landfill. (i.e., could the local elected officials sell this ROP along with the landfill?). How would the DEQ assure a new owner follows the environmental requirements to protect the community?

AQD Response: Yes, the conditions of the ROP would apply to a new owner and the AQD would inspect them as often as deemed necessary to ensure compliance with the ROP. Also, conditions in the ROP require semi-annual and annual certification reports be submitted to the AQD that certify their compliance and/or non-compliance with any of the conditions of the ROP.

Comment: It is my understanding that the effluent collection system often emits levels of ammonia. I do not see this addressed in the permit. How can I be assured there will not be a toxic ammonia cloud floating over the community? It is my understanding that in the right (or wrong) atmospheric conditions, ammonia can travel several miles at toxic concentrations.

AQD Response: The AQD is assuming that you are making reference to the amount of ammonia in the leachate collected at the landfill and the sequencing batch reactor (SBR) they have for treating it. During the SBR process, the ammonia is ultimately converted to nitrate prior to being discharged to the public owned treatment works so that it meets their limits.

Comment: It is my understanding that the landfill has had difficulty achieving the toxicity levels with the effluent of the perimeter wells and air scrubber system. It is also my understanding that it is not clear what is causing the toxicity which effects the test fish, but activated carbon seems to improve results. My concern is that whatever unknown chemical is leaching out of the old waste cells and getting into the groundwater, is being exhausted by the air stripper into the community. I do not see any provisions for profiling or monitoring that air coming from the air stripper. It seems to be just lumped into FGRULE290. Flexible Group Emissions, with little consideration on what unknown toxics might be present.

AQD Response: The groundwater discharge is regulated by the National Pollution Discharge Elimination System permit that was issued by the MDEQ's Water Resources Division. The discharge limits set by that permit are based on groundwater characterization scans that were done. As for the emissions from the air stripper, the AQD Rule 290 that it is operating under has very restrictive emission standards that are based on whether the pollutant is a carcinogen or not and were based on toxicology studies. Under

this rule, the highest allowable emissions for VOC from the air stripper are 1,000 pounds per month. From review of past analytical reports, the emissions from the air stripper have been minimal and have never approached the limit. Also, the toxicity level of any contaminant is going to change depending on the organism (fish vs. human) and media (water vs. air) being tested.

Comment: In the early morning hours (6:30-7:00 a.m.) I have on many occasions smelled an odor coming from the landfill along Chamberlain Road. I am concerned that the emissions are greater than what they should be from this facility.

AQD Response: The average landfill gas collection system is approximately 70 to 80 percent efficient, so it is possible to have odors from time to time. The requirements in the federal regulation pertaining to municipal solid waste landfills are included in the ROP. Some of those requirements include quarterly surface emissions monitoring, monthly cover integrity checks, and monthly gas well monitoring, etc. These requirements are to try to insure that the landfill and active gas collection system is being operated as efficiently as possible to prevent fugitive emissions. Although it is AQD's policy not to investigate drive by complaints, we do take into account any that we receive for potential issues.

Additional comments related to plant personnel were not pertinent to the ROP. The AQD believes that the public comments have been adequately addressed and that the ROP, as drafted, contains sufficient provisions for monitoring and recordkeeping to ensure compliance with applicable requirements. These comments were all submitted in writing by one person and they requested a public hearing. The AQD responded to the comments in writing and a public hearing was not held.

Enforcement Issue: The NANR has installed a landfill gas treatment system that USEPA has determined to be unacceptable based on their draft policy. The NANR and USEPA are currently in negotiations to address the alleged violations. The AQD believes the ongoing USEPA enforcement action is the most efficient mechanism for resolving these allegations at this time and that the issuance of the ROP with existing applicable requirements is appropriate. The AQD will modify the ROP appropriately or reopen it in the future, in accordance with the procedures and timeframes of Rules 216 and 217, to include any enforceable schedule of compliance and/or applicable requirements that result from any final enforcement action by the USEPA.

Changes to the May 9, 2011 Draft ROP

No changes were made to the draft ROP.