

State Registration Number  
N2804

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N2804-  
2020a

**Central Sanitary Landfill  
and  
North American Natural Resources, Inc. – Central Generating Facility**

SRN: N2804

Located at

21545 Cannonsville Road, Pierson, Montcalm County, Michigan, 49339

Permit Number: MI-ROP-N2804-2020a

Staff Report Date: January 13, 2020

Amended Date: July 25, 2022

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 Environment, Great Lakes, and Energy (EGLE), 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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**RENEWABLE OPERATING PERMIT**

ROP Number

MI-ROP-N2804-2020

**January 13, 2020 - STAFF REPORT**

**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an 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 Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP 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 Section 1 Mailing Address:	Central Sanitary Landfill 21545 Cannonsville Road Pierson, Michigan 49339
Stationary Source Section 2 Mailing Address:	North American Natural Resources, Inc. Central Generating Facility 300 North 5 <sup>th</sup> Street, Suite 100 Ann Arbor, Michigan 48104
Source Registration Number (SRN):	N2804
North American Industry Classification System (NAICS) Code:	562212 & 221119
Number of Stationary Source Sections:	2
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201800073
Responsible Official Section 1:	Todd Harland, General Manager, 231-723-4850
Responsible Official Section 2	Richard Spranger, Director of Operations 734-627-9000
AQD Contact:	Dave Morgan, Environmental Quality Specialist 616-356-0009
Date Application Received:	August 24, 2018
Date Application Was Administratively Complete:	August 24, 2018
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	January 13, 2020
Deadline for Public Comment:	February 12, 2020

## Source Description

The Central Sanitary Landfill (CSL) is a municipal solid waste landfill located in Pierson, Montcalm County, Michigan. Section 1 of the stationary source consists of the municipal solid waste (MSW) landfill including an active landfill gas collection system and open flare. CSL began operation in 1977 and currently accepts municipal solid waste, non-hazardous special waste, and construction and demolition debris. The landfill also accepts non-friable asbestos containing materials. In landfills, natural biological processes produce leachate and landfill gas from the breakdown of waste constituents. Initially, decomposition is aerobic until the oxygen supply is exhausted. Anaerobic decomposition of buried refuse creates most of the landfill gas. Landfill gas (LFG) consists mainly of methane, carbon dioxide, and nonmethane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAPs), greenhouse gases, and volatile organic compounds (VOCs). Although CSL accepted waste prior to May 30, 1991 the permitted design capacity of the landfill was increased in August 2000 from 2.5 million cubic meters to 13.0 million cubic meters. Because the design capacity was increased after May 30, 1991, the landfill is considered an existing source subject to the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills. In addition, because the design capacity exceeds 2.5 million cubic meters, the NSPS requires NMOC emissions to be characterized to determine if landfill gas collection and control is warranted.

In June 2018, the measured site-specific NMOC concentration was determined to be 325 ppmv NMOC as hexane. Since the site-specific NMOC emission rate was determined to be less than the 50 Megagram/year threshold in the NSPS, landfill gas collection and control is not required. Regardless, CSL has installed and operates an active gas collection system with an open flare to control odors from the site.

Section 2 consists of the North American Natural Resources – Central Generating Station (CGS), a landfill gas treatment and electric generating facility located within the CSL property, in Pierson. The CGS consists of one landfill gas treatment system, one Caterpillar model G3516LE internal combustion engine, and one Caterpillar model G3520C internal combustion engine. Landfill gas from the CGS is piped through the landfill gas treatment system where the gas is filtered, dewatered, compressed, and cooled. After treatment, the landfill gas is combusted in the engines to generate electricity for sale; the engines operate 24 hours per day, 7 days per week. Any gas not burned in the engines is routed to the CSL open flare. CGS began operation in July 2018.

CSL and CSG have a contractual agreement in which CSL sells landfill gas to CSG for combustion in engines to produce electricity. The contractual and spatial relationship of the two facilities establishes CSL and CSG as a single stationary source based on the definition in Michigan's Rule 119(r).

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons Per Year</b>
Carbon Monoxide (CO)	31.9
Nitrogen Oxides (NO <sub>x</sub> )	5.9
Particulate Matter (PM)	3.6
Sulfur Dioxide (SO <sub>2</sub> )	1.3
Volatile Organic Compounds (VOCs)	0.3
Non-methane organic Compounds (NMOC)	8.4

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2017 reported to MAERS for Section 2:

<b>Individual Hazardous Air Pollutants (HAPs) **</b>	<b>Tons per Year</b>
Formaldehyde	20.9
Other HAPs	3.86
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>24.8</b>

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

See Parts C and D in the 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 Montcalm County, which is currently designated by the United States 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 (CFR) Part 70, because the potential to emit of CO and SO2 exceeds 100 tons per year. In addition, the source is considered a major source of Hazardous Air Pollutant (HAP) emissions because the potential to emit of any single HAP regulated by the Clean Air Act, Section 112 is greater than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year. The potential to emit of NMOCs does not exceed 50 megagrams per year (Mg/yr).

In addition, under the NSPS for Municipal Solid Waste Landfills, affected facilities with a design capacity equal to or greater than 2.5 million cubic meters and 2.5 million megagrams are required to obtain a Part 70 permit.

The stationary source is subject to the following federal standards:

- Emission Guidelines for existing Municipal Solid Waste Landfills promulgated under 40 CFR Part 60, Subparts A and Cf.
- NSPS for Municipal Solid Waste Landfills promulgated under 40 CFR Part 60, Subparts A and WWW. Subpart WWW applies until a State Plan is implemented under 40 CFR Part 60, Subpart Cf.
- NSPS for Stationary Spark Ignition Internal Combustion Engines promulgated under 40 CFR Part 60, Subpart JJJJ.
- National Emission Standard for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subparts A and AAAA.
- NESHAP for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.
- NESHAP for Asbestos promulgated in 40 CFR Part 61, Subparts A and M.

It is noted that EUENGINE1 and EUENGINE2 are not currently subject to 40 CFR Part 60, Subpart JJJJ because according to CGS, the engines were relocated from another site and have dates of manufacture between June 12, 2006 and July 1, 2007. The manufacture dates fall into a very specific window that has limited applicability relative to the NSPS. EUENGINE3 which was permitted in October 2019 is subject to 40 CFR Part 60, Subpart JJJJ.

In April 2019 a permit to install was issued for EUENGINE1 and EUENGINE2 which increased the SO2 emission limits as a result of sulfur analysis of the landfill gas. Also, in October 2019, a permit to install was issued for EUOPENFLARE which established SO2 emission limits from the flare as well as Source-Wide SO2 limits. Lastly, in October 2019, a permit to install was issued for the installation of EUENGINE3; installation of this unit is pending.

The stationary source is considered a “synthetic minor” source in regard to the Prevention of Significant Deterioration regulations of the Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality. The stationary source accepted legally enforceable permit conditions under Source-Wide requirements limiting the potential to emit of CO and SO2 to less than 250 tons per year.

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 NMOC, CO, SO2, NOx and formaldehyde for EULANDFILL, EUOPENFLARE, EUASBESTOS, and FGRICEENG at the stationary source are exempt from the federal Compliance Assurance Monitoring regulation under 40 CFR Part 64, because 40 CFR Part 60, Subparts A and WWW; and 40 CFR Part 63, Subparts A and ZZZZ meet the CAM Exemption for NSPS or MACT proposed after November 15, 1990.

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. MI-ROP-N2804-2014 are identified in Appendix 6 of the ROP.

PTI Number			
167-06			

**Streamlined/Subsumed Requirements**

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

**Non-applicable Requirements**

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

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
EUPROPANEHEATERS	Multiple propane fired space heaters and hot water heater for heating buildings < 50 mmbtu	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUPROPANETANKS	(3) 1,000 gallon propane storage tanks (1) 125 gallon propane storage tank	R 336.1212(4)(d)	R 336.1284(2)(b)
EUUSED OILTANKS	(1) 275 gallon and (1) 225 gallon used oil tank	R 336.1212(4)(d)	R 336.1284(2)(i)
EUPORTTORCHCUTS	Portable cutting torch for equipment repair and maintenance.	R 336.1212(4)(e)	R 336.1285(2)(j)(i)
EULEACHATETANK	(1) 290,000 gallon above-ground leachate storage tank	R 336.1212(4)(i)	R 336.1291

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

This draft ROP 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 EGLE, AQD**

The AQD proposes to approve this ROP. 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 ROP 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 Heidi Hollenbach, Grand Rapids District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP 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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ROP Number  
MI-ROP-N2804-  
2020

**February 24, 2020 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated January 13, 2020, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. 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 Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official Section 1:	Todd Harland, General Manager, 231-723-4850
Responsible Official Section 2	Richard Spranger, Director of Operations 734-627-9000
AQD Contact:	Dave Morgan, Environmental Quality Specialist 616-356-0009

**Summary of Pertinent Comments**

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

**Changes to the January 13, 2020 Draft ROP**

No changes were made to the draft ROP.



**RENEWABLE OPERATING PERMIT**

**July 25, 2022- STAFF REPORT FOR RULE 217(2)  
REOPENING**

**Purpose**

On January 13, 2020, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2804-2020 to Central Sanitary Landfill located at 21545 Cannonsville Road in Pierson, Michigan pursuant to Rule 214 of the Michigan Air Pollution Control Rules. Once issued, the AQD is required to reopen the ROP if the criteria described in Rule 217 are met. Only those conditions to be added or changed in the ROP are to be considered during this public comment period. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 217.

**General Information**

Responsible Official Section 1:	Todd Harland, General Manager, 231-723-4850
Responsible Official Section 2	Richard Spranger, Director of Operations 734-627-9000
AQD Contact:	David L. Morgan, Environmental Quality Specialist 616-824-1139
Date Public Comment Begins:	July 25, 2022
Deadline for Public Comment:	August 24, 2022

**Regulatory Analysis**

The AQD has determined that the ROP must be reopened in order to remove obsolete requirements related to 40 CFR Part 60, Subpart WWW and to add new applicable requirements associated with 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA. Since the time the ROP was issued on January 13, 2020, the landfill has NMOC emissions that exceed the applicable thresholds in 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA which require the installation and operation of a landfill gas collection and control system. The incorporation of landfill gas collection and control requirements will therefore be included in this ROP permit action.

Section 2 consists of the North American Natural Resources – Central Generating Station (CGS), a landfill gas treatment and electric generating facility located within the CSL property in Pierson. Landfill gas from the CGS is piped through the landfill gas treatment system where the gas is filtered, dewatered, compressed, and cooled. After treatment, the landfill gas is combusted in reciprocating engines to generate electricity for sale. Any gas not burned in the engines is routed to the CSL open flare. EUTREATMENTSYS is used to comply with the landfill gas control requirements of 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA. As a result applicable requirements for landfill gas treatment systems will be added to the ROP.

## **Description of Changes to the ROP**

The following changes were made to Section 1 of the ROP for the Central Sanitary Landfill:

First, the EULANDFILL, emission unit table was removed because 40 CFR Part 60, Subpart WWW is no longer applicable and is obsolete. The table was replaced with flexible group tables FGLANDFILL-OOO, FGACTIVCOLL-OOO, and FGOPENFLARE-OOO which incorporate the applicable requirements of 40 CFR Part 62, Subpart OOO as well as FGLANDFILL-AAAA, FGACTIVCOLL-AAAA and FGOPENFLARE-AAAA which incorporate the applicable requirements of 40 CFR Part 63, Subpart AAAA. EUASBESTOS has been updated with the requirements from 40 CFR Part 62, Subpart OOO in Special Conditions IV.1 and VI.3 replacing functionally identical but obsolete requirements from 40 CFR Part 60, Subpart WWW.

Second, the testing procedures in Appendix 5 were updated to those applicable requirements found in 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA.

Third, the emission calculation procedures in Appendix 7 were updated to those applicable requirements found in 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA.

The following changes were made to Section 2 of the ROP for North American Natural Resources:

As described above, flexible group tables were added for FGTREATMENTSYS-OOO which incorporates the applicable requirements of 40 CFR Part 62, Subpart OOO and FGTREATMENTSYS-AAAA which incorporates the applicable requirements of 40 CFR Part 63, Subpart AAAA.

## **Action Taken by the Department**

The AQD proposes to approve this change to ROP No. MI-ROP-N2804-2020, which was reopened by the AQD to incorporate the applicable requirements of 40 CFR Part 62, Subpart OOO and 40 CFR Part 63, Subpart AAAA. A final decision on the approval of the revised ROP will not be made until the public and any affected states have had an opportunity to comment on the proposed changes to the ROP and the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is Heidi Hollenbach, Grand Rapids District Supervisor. The final determination for approval of the revised ROP will be based on a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by the public, any affected states or the USEPA.

Michigan Department of Environment,  
Great Lakes, and Energy  
Air Quality Division

State Registration Number  
N2804

**RENEWABLE OPERATING PERMIT**  
**August 29, 2022 - STAFF REPORT ADDENDUM FOR**  
**RULE 217(2) REOPENING**

ROP Number  
MI-ROP-N2804-2020a

**Purpose**

A Staff Report dated July 25, 2022, was developed to set forth the applicable requirements and factual basis for the draft reopening to Renewable Operating Permit's (ROP) terms and conditions as required by Rule 214(3) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP reopening during the 30-day public and affected state(s) comment period as described in Rule 214(3) and (4). In addition, this addendum describes any changes to the proposed ROP reopening resulting from these pertinent comments.

**General Information**

Responsible Official Section 1:	Todd Harland, General Manager, 231-723-4850
Responsible Official Section 2	Richard Spranger, Director of Operations 734-627-9000
AQD Contact:	David L. Morgan, Environmental Quality Specialist 616-824-1139

**Summary of Pertinent Comments**

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

**Changes to the July 25, 2022 Draft ROP Reopening**

No changes were made to the draft ROP reopening.