

State Registration Number
N5988

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N5988-2021a

City Environmental Services Incorporated of Waters

State Registration Number (SRN): N5988

Located at

11375 Sherman Road, Frederic, Crawford County, Michigan 49733

Staff Report Date: March 8, 2021

Amended Date: April 11, 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) of the administrative rules promulgated under Act 451, 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).

TABLE OF CONTENTS

MARCH 8, 2021 - STAFF REPORT	3
APRIL 13, 2021 - STAFF REPORT ADDENDUM	7
APRIL 11, 2022 - STAFF REPORT FOR RULE 217(2) REOPENING	8
JUNE 1, 2022 - STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING	10

State Registration Number
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RENEWABLE OPERATING PERMIT

MARCH 8, 2021 - STAFF REPORT

ROP Number
MI-ROP-N5988-2021

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; and Michigan’s Administrative Rules for Air Pollution Control promulgated under 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 Mailing Address:	City Environmental Services Inc. of Waters 11375 Sherman Road Frederic, Michigan 49733
Source Registration Number (SRN):	N5988
North American Industry Classification System (NAICS) Code:	562212
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202000072
Responsible Official:	James Palmer, District Manager 989-705-8930
AQD Contact:	Kurt Childs, Senior Environmental Quality Analyst 231-878-2045
Date Application Received:	April 14, 2020
Date Application Was Administratively Complete:	April 14, 2020
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	March 8, 2021
Deadline for Public Comment:	April 7, 2021

Source Description

City Environmental Services Inc. of Waters (CESW) is classified as a Type II sanitary landfill, which is a Municipal Solid Waste (MSW) Landfill. The facility currently accepts petroleum contaminated soils, sludge, asbestos containing waste, municipal household waste, and other waste. The landfill is located in a rural area of Crawford county and is surrounded by forest. There are few homes or businesses in the immediate area and the Village of Waters is located a little more than a mile north of the landfill.

Landfill gas is collected at CESW by an active gas collection system. This system consists of vertical extraction wells that are installed in the depths of the landfill refuse and which remove landfill gas by vacuum that is applied to the well from the blower. Most of the collected landfill gas is then routed to a leachate evaporator where it is combusted as fuel. Landfill gas that is not used by the leachate evaporator is combusted in the flare as necessary. The leachate evaporator is housed in its own building on the west side of the landfill, the flare is adjacent. Collected leachate is pumped to the building. The landfill gas is used to fire a burner that directs hot exhaust gas through a vessel into which the collected leachate is sprayed. Direct contact between the hot gas and the leachate spray results in evaporation of the leachate. This reduces the amount of leachate that must be collected and disposed of in another manner. Since the NMOC emissions from the landfill have not yet reached 50 Megagrams, there are no operational requirements for the active gas collection system.

This current active system is allowed to be operated by CESW until 30 months after the facility’s actual NMOC emissions reach 50 megagrams. When the actual NMOC emission at CESW reaches 50 Megagrams, the landfill then has 12 months to submit an approvable design plan that satisfies the requirements of NSPS Subpart WWW. Some of the requirements of NSPS Subpart WWW require the design plan to specify equipment that can fulfill specific capture and destruction efficiencies. It is expected that this design plan will include an active landfill gas collection system that will be routed to a landfill gas combustion device. Within 18 months after the design plan has been submitted, the equipment specified in the approved design plan shall be installed and operating properly.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2019**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	17
Lead (Pb)	NA
Nitrogen Oxides (NO _x)	6
Particulate Matter (PM)	2
Sulfur Dioxide (SO ₂)	3
Volatile Organic Compounds (VOCs)	<1

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2019 by CESW:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
NMOC	4
Total Hazardous Air Pollutants (HAPs)	4

**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 Crawford County, which is currently designated by the 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 source is subject to 40 CFR Part 60, Subparts A and WWW and has a design capacity of greater than 2.5 million megagrams and 2.5 million cubic meters.

The stationary source is considered to be a minor source of 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 are less than 25 tons per year.

No emissions units at the stationary source have been evaluated for the applicability of the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451, because there is no equipment that has been subject to New Source Review permitting.

EULANDFILL<50 at the stationary source is subject to the Standards of Performance for Municipal Solid Waste Landfills promulgated in 40 CFR Part 60, Subparts A and WWW.

MSW landfills are regulated under National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subparts A and AAAA. However, EULANDFILL<50 is currently not currently subject to this standard. Although it has a design capacity of greater than 2.5 million megagrams and 2.5 million cubic meters, it has uncontrolled NMOC emissions of less than 50 megagrams per year.

City Environmental Services Inc. of Waters accepts asbestos containing materials and therefore is regulated under the National Emission Standards for Hazardous Air Pollutants: National Emission Standards for Asbestos promulgated in 40 CFR Part 61, Subparts A and M. These requirements are contained in EUASBESTOS.

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables.

There have not been any significant changes since last ROP was issued and no enforcement actions.

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."

No emission units are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64, because all emission units at the stationary source do not have emission limits, have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds.

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. This ROP does not contain any conditions established pursuant to Rule 201. Therefore, no Source-Wide PTI is being issued with this ROP.

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.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUPROPANE	2-1000 GALLON PROPANE TANK	R 336.1212(4)(c)	R 336.1284(b)
EUGENERATORS	Portable generator used to power the welder with a design heat input <20 MMBTU/hr	R 336.1212(4)(d)	R 336.1284(b)(ii)

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 Shane Nixon, Cadillac/Gaylord 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.

State Registration Number
N5988

RENEWABLE OPERATING PERMIT
APRIL 13, 2021 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-N598-2021

Purpose

A Staff Report dated March 8, 2021, 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:	James Palmer, District Manager 989-705-8930
AQD Contact:	Kurt Childs, Senior Environmental Quality Analyst 231-878-2045

Summary of Pertinent Comments

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

Changes to the March 8, 2021, Draft ROP

No changes were made to the draft ROP.

State Registration Number
N5988

RENEWABLE OPERATING PERMIT
APRIL 11, 2022 - STAFF REPORT FOR RULE 217(2)
REOPENING

ROP Number
MI-ROP-N5988-2021a

Purpose

On June 2, 2021, the Department of Environment, Great Lakes, and Energy, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N5988-2021 to City Environmental Services Incorporated of Waters 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:	James Palmer, District Manager 989-539-6111
AQD Contact:	Kurt Childs, Senior Environmental Quality Analyst 231-878-2045
Date Public Comment Begins:	April 11, 2022
Deadline for Public Comment:	May 11, 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.

This ROP previously contained requirements to ensure compliance with 40 CFR Part 60, Subpart WWW, NSPS for Municipal Solid Waste Landfills with NMOC emissions less than 50 megagrams per year. Under Subpart WWW the current active system was allowed to be operated by City Environmental Services Incorporated of Waters until 30 months after the facility's actual NMOC emissions reached 50 megagrams per year.

Similarly, the requirements of 40 CFR Part 62, Subpart OOO "Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014" require an active gas collection and control system, but once NMOC emissions reach 34 megagrams per year instead of 50 megagrams per year.

As indicated above, an active gas collection and control system is already in place and operating. Therefore, at the time the NMOC emissions exceed 34 megagrams the landfill would need to ensure the current active gas collection and control system meets the requirements of 40 CFR Part 62, Subpart OOO or update the system to the required standards.

Since the NMOC emissions from the landfill have not yet reached 34 megagrams, there are currently no operational requirements for the active gas collection system.

Description of Changes to the ROP

The emission unit table EULANDFILL<50 which included requirements from 40 CFR Part 60, Subpart WWW has been replaced with the EULANDFILL<34 which includes the requirements from 40 CFR Part 62, Subpart OOO. Additionally, Appendices 5 and 7 of the ROP have been updated with 40 CFR Part 62, Subpart OOO requirements.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-N5988-2021, which was reopened by the AQD to incorporate the requirements of 40 CFR Part 62, Subpart OOO and remove the requirements of 40 CFR Part 63, Subpart WWW. 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 USEPA has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is Shane Nixon, Cadillac/Gaylord 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.

State Registration Number
N5988

RENEWABLE OPERATING PERMIT
JUNE 1, 2022 - STAFF REPORT ADDENDUM FOR
RULE 217(2) REOPENING

ROP Number
MI-ROP-N5988-2021a

Purpose

A Staff Report dated April 11, 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:	James Palmer, District Manager 989-539-6111
AQD Contact:	Kurt Childs, Senior Environmental Quality Analyst 231-878-2045

Summary of Pertinent Comments

The following comments were received by USEPA during the 30-day public comment period for the Pitsch Sanitary Landfill. Because the ROP for City Environmental Services Incorporated of Waters contains the same information, an agreement was made between USEPA and AQD to address these comments in this ROP as well:

1. Appendix 5, Tier 4, Section (A): We recommend adding "at least" before 6,570 hours. This makes the incorporated language more consistent with 40 CFR 62.16718(a)(6)(viii)(A).
2. Appendix 7, equation 1: The index of summation included in the argument of the exponential function should be included as a subscript (e.g., $e^{-(kt_i)}$).
3. Appendix 7, Tier 2: The final paragraph of the section incorporates 40 CFR 62.16718(a)(3)(iv)(A) and (B) but does not include the option to conduct a SEM demonstration using the tier 4 procedures as allowed in 40 CFR 62.16718(a)(3)(iv)(C). We recommend including the option to conduct a SEM demonstration using the tier 4 procedures.
4. Appendix 7, tier 3: The first paragraph of this section refers to the tier 4 procedures as included in Appendix 5 of the draft permit instead of 40 CFR Part 62 Subpart OOO. We recommend citing 40 CFR 62.16718(a)(6) within this section of the appendix for further consistency with the Federal plan.
5. Appendix 7, "Calculating expected gas generation flow rates from the landfill": The first paragraph of this section states that USEPA Region V may approve site-specific factors. While this may be true in practice, we recommend referring to the Administrator for consistency with both the Federal plan requirements at 40 CFR 62.16720(a)(1) and the other references to the Administrator already proposed within the draft permit.

6. Appendix 7, Equations 5 and 6: Equations 5 and 6 appear to be missing from the draft permit. We recommend adding the equations to the permit.

Also, the Part 60, Subpart WWW citations in the Asbestos table under the Design Parameters and the Monitoring/Recordkeeping sections were inadvertently missed during the 30-Day Public Comment period and have now been changed to the Part 62, Subpart OOO citations.

Changes to the April 11, 2022 Draft ROP Reopening

All changes proposed by USEPA during the 30-day comment period were made to the draft ROP.