

State Registration Number
P0222

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-P0222-2023

C&C Energy, LLC

State Registration Number (SRN): P0222

Located at

19401 15 Mile Road, Marshall, Calhoun County, Michigan 49068

Permit Number: MI-ROP-P0222-2023

Staff Report Date: April 24, 2023

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).

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RENEWABLE OPERATING PERMIT

April 24 - STAFF REPORT

ROP Number

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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 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:	C&C Energy, LLC 19401 15 Mile Road Marshall, Michigan 49068
Source Registration Number (SRN):	P0222
North American Industry Classification System (NAICS) Code:	221119
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	202200200
Responsible Official:	Anthony J. Falbo, Chief Operating Officer 716-713-4135
AQD Contact:	Chance Collins, Environmental Quality Analyst 269-254-7119
Date Application Received:	October 13, 2022
Date Application Was Administratively Complete:	October 13, 2022
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 24, 2023
Deadline for Public Comment:	May 24, 2023

Source Description

C&C Energy, LLC (Facility) is located at 19401 15 Mile Road, Marshall, Calhoun County, Michigan. The Facility is a landfill gas to energy facility that leases property from the C&C Expanded Sanitary Landfill (C&C Landfill), but is a separate entity. The Facility currently has been permitted for and installed three Waukesha stationary spark ignited internal combustion engines and one Solar turbine. The Facility has historically been included as Section 2 of C&C Landfill's ROP but a request was made in 2011 and EGLE, AQD, agreed to allow them both to have separate ROPs. However, the AQD still considers them to be one stationary source for permitting and regulatory purposes because at the present time, the Facility is totally dependent on the landfill gas supplied by C&C Landfill to run their engines and turbine. The State Registration Number (SRN) for C&C Landfill is N2896, and the Facility has been assigned SRN P0222.

The process involved at the Facility revolves around the disposal of municipal solid waste (household and industrial non-hazardous waste) at C&C Landfill. Over time, the waste will decompose within the landfill, which produces a gas primarily made up of methane and carbon dioxide that C&C Landfill sells to the Facility under a contract. The landfill gas also contains a small percentage of non-methane organic compounds, which can consist of various organic hazardous air pollutants (HAPs), greenhouse gases, and volatile organic compounds. The landfill gas is collected by an active collection system (under vacuum) through a network of wells and piping that is owned and operated by C&C Landfill, but is routed to the internal combustion engines and turbine owned and operated by the Facility. Once routed to the engines and/or turbine, the landfill gas is combusted and the energy created is transferred to generators. The generators produce electricity that is purchased by the utility company that services the area and is transmitted to their power lines for distribution. If for any reason both the engines and turbine are not in operation, the landfill gas is routed to two enclosed flares owned by C&C Landfill for combustion.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2021**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	59.58
Nitrogen Oxides (NO _x)	37.29
PM10*	14.59
Sulfur Dioxide (SO ₂)	16.56
Volatile Organic Compounds (VOCs)	3.10
Non-Methane Organic Compound (NMOCs)	13.28

* Particulate matter (PM) that has an aerodynamic diameter less than or equal to a nominal 10 micrometers.

This source is an area source of hazardous air pollutant (HAP) emissions pursuant to Section 112(b) of the federal Clean Air Act. No HAP emissions data is reported.

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 in Calhoun 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 they are considered a single stationary source along with C&C Landfill (SRN N2896) and has the potential to emit of carbon monoxide over 100 tons. Also, when the Facility received the permit for their turbine in 2006, it allowed emissions of hydrochloric acid of 8.3 tons. When that is combined with the hydrochloric acid emission limit of 7.9 tons for their internal combustion engines permit that was issued in 1997, it totaled 16.2 tons, thus making them a major source of HAPs. This issue was discovered in 2011 upon ROP renewal. The Facility could not opt-out of any past maximum achievable control technology standards because of the USEPA's "Once In Always In" policy in place at that time. As mentioned in the source description above, the AQD agreed to issue separate ROPs for all future renewals.

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

FGTREATMENTSYS-XXX 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 XXX.

EUTURBINE at the stationary source is subject to the Standards of Performance for Stationary Combustion Turbines promulgated in 40 CFR Part 60, Subparts A and KKKK.

FGTREATMENTSYS-AAAA at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Municipal Solid Waste Landfills promulgated in 40 CFR Part 63, Subparts A and AAAA.

EUTURBINE at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Combustion Turbines promulgated in 40 CFR Part 63, Subparts A and YYYY.

EUEMERGEN#1 at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ.

FGICENGINES at the stationary source would be subject to the Maximum Achievable Control Technology Standards for Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ, if any modification, reconstruction, or construction as defined in the General Provisions of 40 CFR Part 63, Subpart A, occurs at the Facility with regards to the existing internal combustion engines.

The stationary source was subject to Consent Order No. 4-2012. In March of 2007, the Facility violated the initial notification, recordkeeping, and reporting requirements of 40 CFR Part 63, Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines for EUTURBINE. Because of these violations, the Facility entered into Consent Order No. 4-2012 on January 23, 2013. The Facility complied with all the requirements of the CO and it was terminated on August 13, 2018.

The stationary source was also subject to Consent Order No. 17-2015. The Facility exceeded the CO emission limits from the reciprocating internal combusting engine #2 (EUIENGINE#2) during two emission testing events in 2014. Because of these exceedances, the Facility entered into Consent Order No. 17-2015 on May 21, 2015. The Facility complied with all the requirements of the CO and it was terminated on June 19, 2020.

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 have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 40 CFR Part 64, because all emission units at the stationary source either do not 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. 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-P0222-2018 are identified in Appendix 6 of the ROP.

PTI Number			
132-06	260-06	332-97	411-95

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

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 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 Rex Lane, Kalamazoo 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
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RENEWABLE OPERATING PERMIT
June 8, 2023 - STAFF REPORT ADDENDUM

ROP Number
MI-ROP-P0222-2023

Purpose

A Staff Report dated April 24, 2023, 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:	Anthony J. Falbo, Chief Operating Officer 716-713-4135
AQD Contact:	Chance Collins, Environmental Quality Analyst 269-254-7119

Summary of Pertinent Comments

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

Changes to the April 24, 2023 Draft ROP

No changes were made to the draft ROP.