

Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number  
P0270

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-P0270-2012a

**CANTON RENEWABLES, LLC**

SRN: P0270

Located at

4345 South Lilley, Canton Twp., Wayne, Michigan 48188

Permit Number: MI-ROP-P0270-2012a

Staff Report Date: September 10, 2012

Amended Date: May 11, 2016

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).

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**RENEWABLE OPERATING PERMIT**

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**SEPTEMBER 10, 2012 STAFF REPORT**

MI-ROP-P0270-2012

**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:	Canton Renewables, LLC 4345 South Lilley Road Canton Twp., Michigan 48188
Source Registration Number (SRN):	P0270
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:	201200070
Responsible Official:	Mr. Stephen Smith, Vice President 562-626-8819
AQD Contact:	Erik A. Gurshaw, Environmental Quality Analyst 313-456-4704
Date Permit Application Received:	May 16, 2012
Date Application Was Administratively Complete:	May 30, 2012
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	September 10, 2012
Deadline for Public Comment:	October 10, 2012

## **Source Description**

Canton Renewables, LLC, a subsidiary of Clean Energy Renewable Fuels, LLC, converts landfill gas (LFG) generated by Sauk Trail Hills Development Landfill into pipeline quality natural gas. The resultant pipeline quality natural gas is sent into the existing natural gas distribution system. The facility consists of a 3,200 standard cubic feet per minute (scfm) high Btu compression and treatment plant, a 4,200 scfm regenerative thermal oxidizer (RTO), and a 4,200 scfm open flare.

LFG is converted into high BTU natural gas through a series of steps. Raw LFG is first collected from Sauk Trail Hills Development Landfill's existing gas collection and control system under a vacuum by a positive displacement blower. The LFG then passes through a series of gas chillers and moisture separators. After the LFG has been chilled and moisture has been removed from it, it passes through a polishing bed and oxygen removal system to produce high Btu pipeline quality natural gas. The resultant pipeline quality gas is then compressed and sent into the existing natural gas distribution system. The off gas from the LFG compression and treatment process is passed through additional polishing beds and is desulfurized prior to being sent to a 4,200 scfm RTO. The RTO destroys the Non-Methane Organic Compounds (NMOC) portion of the raw LFG. The 4,200 scfm open flare is used to control processed gas from the 3,200 scfm high Btu processing plant which does not meet strict natural gas pipeline specifications. This scenario only occurs during times of startup, shutdown, or a malfunction of the high Btu processing plant. The open flare only accepts gas which has already been processed. The open flare does not accept raw LFG.

Canton Renewables, LLC is totally dependent upon Sauk Trail Hills Development Landfill to provide the LFG which is processed in its high Btu compression and treatment plant. The two companies have a contractual agreement in which Sauk Trail Hills Development Landfill sells LFG to Canton Renewables, LLC. The contractual and spatial relationship between the two facilities establishes Sauk Trail Hills Development Landfill as the controlling entity of the partnership. Therefore, the two facilities are considered to be one stationary source based on the definition of stationary source in Michigan State Air Pollution Rule 336.1119(r). Based on an agreement between the AQD and the management of Sauk Trail Hills Development Landfill and Canton Renewables, LLC, the two entities will be issued separated ROPs.

The facility did not operate during the 2011 calendar year. Therefore, the facility did not report any emissions for the 2011 MAERS season.

The potential to emit of Greenhouse Gases in tons per year of CO<sub>2</sub>e is less than 100,000. CO<sub>2</sub>e is a calculation of the combined global warming potentials of six Greenhouse Gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

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.

Wayne County is currently designated by the U.S. Environmental Protection Agency (USEPA) as a non-attainment area with respect to the PM 2.5 standard. Wayne County is currently designated as attainment/unclassified for all other criteria pollutants.

No emissions 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 all criteria pollutants was less than 100 tons per year.

EULFGPLANT and EUTREATSYS at the stationary source are subject to the New Source Performance Standards for Municipal Solid Waste Landfills promulgated in 40 CFR, Part 60, Subparts A and WWW.

EULFGPLANT and EUTREATSYS at the stationary source are subject to the Maximum Achievable Control Technology Standards for Municipal Solid Waste Landfills 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."

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 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. 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.

#### **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.

#### **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**

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 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 DEQ**

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 Wilhemina McLemore, Detroit Field Office 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.

**Purpose**

A Staff Report dated September 10, 2012, 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:	Mr. Stephen Smith, Vice President 562-626-8819
AQD Contact:	Erik A. Gurshaw, Environmental Quality Analyst 313-456-4704

**Summary of Pertinent Comments**

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

**Changes to the September 10, 2012 Draft ROP**

No changes were made to the draft ROP.

Michigan Department of Environmental Quality  
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**RENEWABLE OPERATING PERMIT**

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**MAY 11, 2016 STAFF REPORT FOR RULE 216(2)  
MINOR MODIFICATION**

MI-ROP-P0270-2012a

**Purpose**

On December 4, 2012, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-P0270-2012 to Canton Renewables, LLC pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(2).

**General Information**

Responsible Official:	Mr. Stephen Smith, V.P. Operations 949-437-1257
AQD Contact:	Caryn E. Owens, Environmental Quality Analyst 231-876-4414
Application Number:	201600062
Date Application For Minor Modification Was Submitted:	March 18, 2016

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to R 336.1216(2).

**Description of Changes to the ROP**

Incorporate PTI 98-11B into ROP, which increases the hours of operation of the existing 4,200 scfm open flare from 1,248 hours to 3,744 hours per 12-month rolling time period.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

**Action Taken by the DEQ**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-P0270-2012, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the U.S. 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 the District Supervisor. The final determination for approval of the Minor Modification 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 requirements, and resolution of any objections by any affected states or the USEPA.

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**JUNE 28, 2016 - STAFF REPORT ADDENDUM FOR  
RULE 216(2) MINOR MODIFICATION**

MI-ROP-P0270-2012a

**Purpose**

A Staff Report dated May 11, 2016, was developed in order to set forth the applicable requirements and factual basis for the proposed Minor Modification to the Renewable Operating Permit's (ROP) terms and conditions as required by R 336.1216(2)(c). The purpose of this Staff Report Addendum is to summarize any significant comments received on the proposed ROP modification during the U.S. Environmental Protection Agency's (USEPA) 45-day comment period as described in R 336.1216(2)(c). In addition, this addendum describes any changes to the proposed ROP Minor Modification resulting from these pertinent comments.

**General Information**

Responsible Official:	Mr. Stephen Smith, V.P. Operations 949-437-1257
AQD Contact:	Caryn E. Owens, Environmental Quality Analyst 231-876-4414

**Summary of Pertinent Comments**

No pertinent comments were received during the USEPA's 45-day comment period.

**Changes to the May 11, 2016 Proposed ROP Minor Modification**

No changes were made to the proposed ROP Minor Modification.