



State Registration Number
N1395

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

ROP Number
MI-ROP-N1395-2008a

Cadillac Renewable Energy LLC

SRN: N1395

Located at

1525 Miltner St., Cadillac, Michigan 49601

Permit Number: MI-ROP-N1395-2008a

Staff Report Date: February 4, 2008

Amended Date: May 18, 2009

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

February 4, 2008 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:	Cadillac Renewable Energy LLC 1525 Miltner St. Cadillac, Michigan 49601
Source Registration Number (SRN):	N1395
Standard Industrial Classification (SIC) Code:	4931
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	200600185
Responsible Official:	Tim Schimke, Plant Manager (Authorized Representative) 231-779-8604
AQD Contact:	Kurt Childs, Environmental Quality Analyst 231-775-3960
Date Permit Application Submitted:	12/05/2006
Date Application Was Administratively Complete:	12/07/2006
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	February 4, 2008
Deadline for Public Comment:	March 5, 2008

Source Description

Cadillac Renewable Energy LLC is a wood-fired electric utility plant located within the Cadillac city limits. The facility receives chipped wood by truck and uses it to fuel a single spreader-stoker boiler to produce steam. The steam is used by the associated generator to produce up to 41 megawatts of electricity at full capacity. Natural gas is used as a startup fuel for the boiler. The facility is equipped with Selective NonCatalytic Reduction (SNCR) for NO_x control and a Multi-clone and Electrostatic Precipitator (ESP) for particulate control. The fly ash and bottom ash are collected, treated with water, and transported to a landfill or recycled for agricultural uses.

The following table lists stationary source emission information as reported in Michigan Air Emissions Reporting System for **2006** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	358
Lead (Pb)	0.01
Nitrogen Oxides (NO _x)	245
Particulate Matter (PM10)	46
Sulfur Dioxide (SO ₂)	1
Volatile Organic Compounds (VOCs)	4
Individual Hazardous Air Pollutants (HAPS) **	
NA	NA
Total Hazardous Air Pollutants (HAPs)	NA

**As listed pursuant to Section 112(b) of the 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 addressed in the non-applicable requirement part of the Staff Report and Part E of the ROP.

The stationary source is located in Wexford County, which is currently designated 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 nitrogen oxides and carbon monoxide exceeds 100 tons.

The stationary source is subject to Prevention of Significant Deterioration of Title 40 of the Code of Federal Regulations, Part 52.21, regulations because its potential to emit of nitrogen oxides and carbon monoxide are both greater than 250 tons per year.

The stationary source is subject to the New Source Performance Standards for High Pressure Steam Boilers promulgated in Title 40 of the Code of Federal Regulations, Part 60, Subparts A and Db.

The stationary source is not subject to R 336.1220 for Major Offset Sources.

The oxides of nitrogen emission limit of 0.15 pound per million BTUs heat input for the boiler, listed in EUBLR in the Renewable Operating Permit, is lower than the 0.30 pound per million BTUs heat input required by NSPS Subpart Db. Additionally, the visible emissions limit of 10% opacity for the boiler, listed in EUBLR, is lower than the 20% limit also required by NSPS Subpart Db. Consequently, the NSPS Db requirements are subsumed by the limits set under the PSD regulations.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the DEQ's "Procedure for Evaluating Periodic Monitoring Submittals."

The stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under Title 40 of the Code of Federal Regulations, Part 64, because EUBLR has both a control device and potential pre-control emissions of particulate greater than the major source threshold levels. CAM requirements are included in this ROP. NOx emissions are not subject to CAM per 40 CFR 64.2(b)(vi) since the NSPS already requires continuous emission monitoring for NOx.

Please refer to Parts B, C and D in the enclosed 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. PTIs that are being incorporated through this current permit action into the Source-wide PTI are listed in Appendix 6 of the permit.

The following table lists all individual PTIs that were incorporated into previous ROP/Source-wide PTIs and subsequently voided.

PTI Number			
NA	NA	NA	NA

Equivalent Requirements

The following table lists explanations of any equivalent requirements or other significant changes requested by the applicant pursuant to Rule 212(5) and included in the draft permit pursuant to Rule 213(2)(c). Equivalent requirements are enforceable applicable requirements which are equivalent to the applicable requirements contained in the original New Source Review permit, a Consent Order/Judgment, and/or the State Implementation Plan.

Emission Unit/Flexible Group ID	Equivalent Requirement and Significant Changes Discussion
EUBLR	PM limit of 68.7 tons per year from PTI 373-86A is equivalent to the hourly PM limit from the same permit. Therefore the annual limit has been removed from the emission limits section of EUBLR.
EUBLR	VOC limit of 98.6 tons per year from PTI 373-86A is equivalent to the hourly VOC limit from the same permit. Therefore the annual limit has been removed from the emission limits section of EUBLR.

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 Janis Denman, Cadillac 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.



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March 7, 2008 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated February 4, 2008, 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 proposed ROP resulting from these pertinent comments.

General Information

Responsible Official:	Tim Schimke, Plant Manager Cadillac Renewable Energy 231-779-8609
AQD Contact:	Kurt Childs, Environmental Quality Analyst 231-775-3960

Summary of Pertinent Comments

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

Changes to the February 4, 2008 Proposed ROP

No changes were made to the proposed ROP.



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**February 2, 2009 STAFF REPORT FOR RULE
217(2) REOPENING**

Purpose

On May 6, 2008, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N1395-2008 to Cadillac Renewable Energy LLC pursuant to R 336.1214. Once issued, the AQD is required to reopen the ROP as described in R 336.1217. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1217.

General Information

Responsible Official:	Mr. Tim Shimke, Plant Manager 231-779-8609
AQD Contact:	Brian Carley, Environmental Quality Specialist 517-780-7843
Date Public Comment Begins:	February 2, 2009
Deadline for Public Comment:	March 4, 2009

Regulatory Analysis

The AQD has determined that the ROP must be reopened because to insert the Clean Air Interstate Rule (CAIR) Annual Sulfur Dioxide Permit, CAIR Annual Nitrogen Oxide Budget Permit, and CAIR Ozone Nitrogen Oxide Budget Permit into the ROP.

These permits must be complete and separable portions of the ROP per the requirements of 40 CFR 96.120, 96.220, and 96.320 and R 336.1420(3) and R 336.1821(2).

Description of Changes to the ROP

The CAIR Annual Sulfur Dioxide Permit was incorporated into the ROP as Appendix 9. The CAIR Annual Nitrogen Oxide Budget Permit was incorporated into the ROP as Appendix 10. The CAIR Ozone Nitrogen Oxide Budget Permit was incorporated into the ROP as Appendix 11. The requirements to comply with the CAIR Annual Sulfur Dioxide Budget Permit, CAIR Annual Nitrogen Oxide Budget Permit, and CAIR Ozone Nitrogen Oxide Budget Permit and the requirements to have the appropriate amount of allowances in their accounts were added to Section IX of Table EUBLR.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-N1395-2008, which was reopened by the AQD in order to incorporate CAIR Permits into the ROP per 40 CFR 96.120, 96.220, and 96.320 and R 336.1420(3) and 336.1821(2). 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 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 Ms. Janis Denman, Cadillac 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.



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**March 24, 2009 STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

Purpose

A Staff Report dated February 2, 2009, was developed in order 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 R 336.1214(3). 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 R 336.1214(3) and (4). In addition, this addendum describes any changes to the proposed ROP reopening resulting from these pertinent comments.

General Information

Responsible Official:	Mr. Tim Shimke, Plant Manager 231-779-8609
AQD Contact:	Brian Carley, Environmental Quality Specialist 517-780-7843

Summary of Pertinent Comments

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

Changes to the February 2, 2009 Draft ROP Reopening

No changes were made to the draft ROP reopening.



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**May 18, 2009 STAFF REPORT ADDENDUM FOR
RULE 217(2) REOPENING**

Purpose

A Staff Report dated March 24, 2009, was developed in order to set forth the applicable requirements and factual basis for a proposed reopening to Renewable Operating Permit's (ROP) terms and conditions as required by R 336.1214(3). The purpose of this Staff Report Addendum is to summarize any significant comments received on the proposed ROP reopening during the U.S. Environmental Protection Agency's (USEPA), 45-day comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the proposed ROP reopening resulting from these pertinent comments.

General Information

Responsible Official:	Mr. Tim Shimke, Plant Manager 231-779-8609
AQD Contact:	Brian Carley, Environmental Quality Specialist 517-780-7843

Summary of Pertinent Comments

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

Changes to the March 24, 2009 Proposed ROP Reopening

No changes were made to the proposed ROP reopening.