

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
N6526

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-N6526-2014a

**CMS Generation Michigan Power LLC
Livingston Generating Station**

SRN: N6526

Located at

155 North Townline Road, Gaylord, Otsego County, Michigan 49735

Permit Number: MI-ROP-N6526-2014a

Staff Report Date: November 4, 2013

Amended Date: March 7, 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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November 4, 2013 - 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:	CMS Generation Michigan Power L.L.C 2400 Miller Road Dearborn, Michigan 48120
Source Registration Number (SRN):	N6526
North American Industry Classification System (NAICS) Code:	4911
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201300006
Responsible Official:	Jimmy Chong, Commercial Director 313-336-7189
AQD Contact:	William Rogers, Environmental Quality Analyst 989-705-3406
Date Permit Application Received:	January 14, 2013
Date Application Was Administratively Complete:	January 28, 2013
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	November 4, 2013
Deadline for Public Comment:	December 4, 2013

Source Description

The Livingston Generating Station is an electric power plant located on North Townline Road a short distance north of State Highway M-32, about two miles west of Gaylord, Michigan. It is a "peaking plant," meaning that it operates mainly for short periods of "peak load" when demand for electricity is high. The facility contains four Dresser-Rand natural gas fired turbine units, with two engines each, driving electric generators. The turbines are equipped with water injection systems for nitrogen oxides air emissions control. The turbine units are rated at 39 MW each.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2012** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	40.35
Lead (Pb)	0
Nitrogen Oxides (NO _x)	29.66
Particulate Matter (PM)	0.83
Sulfur Dioxide (SO ₂)	0.07
Volatile Organic Compounds (VOCs)	0.26
Individual Hazardous Air Pollutants (HAPs) **	
Formaldehyde	0.09
Toluene	0.02
Xylenes	0.01
Total Hazardous Air Pollutants (HAPs)	0.12

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

In addition to the pollutants listed above that have been reported in MAERS, the potential to emit of Greenhouse Gases in tons per year of CO₂e is 3,472,516. CO₂e 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.

The stationary source is located in Otsego County, which is currently designated by the U.S. 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 nitrogen oxides exceeds 100 tons, the potential to emit carbon monoxide exceeds 100 tons, and the potential to emit of Greenhouse Gases is 100,000 tons per year or more calculated as carbon dioxide equivalents (CO₂e) and 100 tons per year or more on a mass basis.

The stationary source is considered to be a minor source of Hazardous Air Pollutant (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 is less than 25 tons per year.

The stationary source is considered a “synthetic minor” source in regards to the Prevention of Significant Deterioration regulations of because the stationary source accepted legally enforceable permit conditions limiting the potential to emit of nitrogen oxides and carbon monoxide to less than 250 tons per year each.

At this time, there are no GHG applicable requirements to include in the ROP. The mandatory Greenhouse Gas Reporting Rule under 40 CFR, Part 98 is not an ROP applicable requirement and is not included in the ROP.

Four combustion turbine units, EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 at the stationary source are subject to the New Source Performance Standards for Stationary Gas Turbines promulgated in 40 CFR, Part 60, Subparts A and GG.

EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 at the stationary source are subject to the federal Acid Rain program promulgated in 40 CFR, Part 72.

EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 at the stationary source are subject to the Clean Air Interstate Rule NO_x annual trading program pursuant to Rules 802a, 803, 821, and 830 through 834.

EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 at the stationary source are subject to the Clean Air Interstate Rule NO_x ozone season trading program pursuant to Rules 802a, 803 and 821 through 826.

EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 at the stationary source are subject to the Clean Air Interstate Rule SO₂ annual trading program pursuant to Rule 420.

EUCOMBTURB1, EUCOMBTURB2, EUCOMBTURB3, and EUCOMBTURB4 the stationary source are subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64, for their nitrogen oxides limit in parts per million. Each of these emission units has a control device and potential pre-control emissions of nitrogen oxides greater than the major source threshold level. The monitoring for the control device is a data acquisition system which continuously calculates the ratio of fuel burned in the turbines with water injected into them. The water is injected to reduce temperatures, thereby reducing the formation of nitrogen oxides. Therefore, keeping the proper ratio of fuel to water gives a reasonable assurance that nitrogen oxide emissions will remain within acceptable limits.

On September 13, 2010, CMS Energy requested a minor modification to their current Renewable Operating Permit. This minor modification was issued Application Number 201000083. It was to incorporate the conditions of Air Use Permit 250-09, which had been issued for the stationary source. Permit 250-09 changed operating limits on the facility from limiting emissions by limiting hours of operation per year to demonstrating compliance with emission limits by detailed calculations. In addition, Permit 250-09 removed restrictions on operation of EUCOMBTURB4 which later emission testing showed to be no longer necessary to ensure compliance with emission limits. The conditions of this minor modification and of Permit 250-09 are incorporated into this Renewable Operating Permit Renewal.

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."

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-N6526-2009 are identified in Appendix 6 of the ROP.

PTI Number			
302-98C			

Streamlined/Subsumed Requirements

The following table lists explanations of any streamlined/subsumed requirements included in the ROP pursuant to Rules 213(2) and 213(6). All subsumed requirements are enforceable under the streamlined requirement that subsumes them.

Emission Unit/Flexible Group ID	Condition Number	Streamlined Limit/ Requirement	Subsumed Limit/ Requirement	Stringency Analysis
FGCOMBTURB	III.1	Permittee shall burn only natural gas as defined in 40 CFR 60.331(u)	Permittee shall not burn natural gas containing more than 0.8 percent sulfur by weight, as required by 40 CFR 60.333(b)	Natural gas as defined by 40 CFR 60.331(u) contains no more than 0.068% sulfur by weight, which is lower than the standard of 0.8 percent sulfur by weight in 40 CFR 60.333(b)

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

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.

Exempt Emission Unit ID	Description of Exempt Emission Unit	Rule 212(4) Exemption	Rule 201 Exemption
DVHTR01	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR02	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR03	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR04	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR05	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR06	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR07	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR08	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)
DVHTR09	100,000 btu/hr natural gas heater	R 336.1212(4)(b)	R 336.1282(b)(i)

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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December 9, 2013 - STAFF REPORT ADDENDUM

MI-ROP-N6526-2014

Purpose

A Staff Report dated November 4, 2013, 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:	Jimmy Chong, Commercial Director 313-336-7189
AQD Contact:	William Rogers, Environmental Quality Analyst 989-705-3406

Summary of Pertinent Comments

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

Changes to the November 4, 2013, Draft ROP

No changes were made to the draft ROP.

Michigan Department of Environmental Quality
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**March 7, 2016 STAFF REPORT FOR RULE
217(2) REOPENING**

MI-ROP-N6526-2014a

Purpose

On January 28, 2015, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N6526-2014 to CMS Generation Michigan Power LLC Livingston Generating Station pursuant to R 336.1214. Once issued, the AQD is required to reopen the ROP if the criteria described in R 336.1217 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 R 336.1217.

General Information

Responsible Official:	Jimmy Chong, Commercial Director 313-336-7189
AQD Contact:	Brian Carley, Environmental Quality Specialist 517-780-7843
Date Public Comment Begins:	March 7, 2016
Deadline for Public Comment:	April 6, 2016

Regulatory Analysis

The AQD has determined that the ROP must be reopened because on January 1, 2015 the Transport Rule (a.k.a. Cross State Air Pollution Rule (CSAPR)) went into effect replacing the Clean Air Interstate Rule (CAIR).

Description of Changes to the ROP

The CAIR Annual SO₂ Permit in Appendix 10, CAIR Annual NO_x Budget Permit in Appendix 11, and CAIR Ozone NO_x Budget Permit in Appendix 12 were removed from the ROP. The requirements of CSAPR were inserted into Appendix 10. In Table FGCOMBTURB, Section IX, the language referencing CAIR was removed and replaced with the requirements to comply with the provisions of the CSAPR NO_x Annual Trading Program, CSAPR NO_x Ozone Trading Program, and the CSAPR SO₂ Group 1 Trading Program and identified in Appendix 10.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-N6526-2014, which was reopened by the AQD in order to incorporate CSAPR. 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 Janis Ransom, 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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**April 26, 2016 - STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

MI-ROP-N6526-2014a

Purpose

A Staff Report dated March 7, 2016, 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:	Jimmy Chong, Commercial Director 313-336-7189
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 March 7, 2016 Draft ROP Reopening

No changes were made to the draft ROP reopening.

Michigan Department of Environmental Quality
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ROP Number

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**June 16, 2016 - STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

MI-ROP-N6526-2014a

Purpose

A Staff Report dated April 26, 2016, 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:	Jimmy Chong, Commercial Director 313-336-7189
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 April 26, 2016 Proposed ROP Reopening

No changes were made to the proposed ROP reopening.