

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
N2388

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2388-2014a

Grayling Generating Station Limited Partnership

SRN: N2388

Located at

4400 West Four Mile Road, Grayling, Crawford County, Michigan 49738

Permit Number: MI-ROP-N2388-2014a

Staff Report Date: June 16, 2014

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).

TABLE OF CONTENTS

JUNE 16, 2014 - STAFF REPORT	3
JULY 21, 2014 STAFF REPORT ADDENDUM	8
MARCH 7, 2016 STAFF REPORT FOR RULE 217(2) REOPENING	9
APRIL 26, 2016 - STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING	10
JUNE 16, 2016 - STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING	11

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

N2388

RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-N2388-2014

JUNE 16, 2014 - 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:	Grayling Generating Station Limited Partnership 4400 West Four Mile Road Grayling, Michigan 49738
Source Registration Number (SRN):	N2388
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:	201200180
Responsible Official:	Philip E. Lewis, Plant Manager 989-348-4575, Extension 11
AQD Contact:	Rebecca Radulski, Environmental Engineer 989-705-3404
Date Permit Application Received:	November 27, 2012
Date Application Was Administratively Complete:	December 11, 2012
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	June 16, 2014
Deadline for Public Comment:	July 16, 2014

Source Description

The Grayling Generation Station Limited Partnership is an electric utility facility located southeast of Grayling, Michigan near the industrial park. The facility was installed in January 1992 and includes one 523 MM Btu/hr. wood and tire-derived-fuel (TDF) fired boiler equipped with natural gas auxiliary burners. The boiler is of a spreader-stroker design, and is equipped with a multiclone dust collector in order to capture and re-inject flyash, an electrostatic precipitator (ESP) for the control of particulate matter, and a selective non-catalytic reduction (SNCR) system for the control of nitrogen oxide. The facility receives both chipped wood and TDF by truck and uses these fuels in the boiler to produce steam. The boiler is initially started on natural gas then wood and TDF are added. The steam is used to produce approximately 36 megawatts of electricity at full capacity. The ash is collected, treated with water, and transported to a landfill for disposal.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2013** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	289
Lead (Pb)	0.01
Nitrogen Oxides (NO _x)	179
Particulate Matter (PM)	8
Sulfur Dioxide (SO ₂)	8
Volatile Organic Compounds (VOCs)	4
Individual Hazardous Air Pollutants (HAPs) **	
HCL	0.9
Total Hazardous Air Pollutants (HAPs)	0.9

**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 480,110, including the biogenic emissions associated with wood firing in EUBOILER. Excluding biogenic CO₂, the potential to emit of Greenhouse Gases in tons per year CO₂e is approximately 78,440. 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 working 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 Crawford 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 and carbon monoxide each exceed 100 tons per year.

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.

The stationary source is subject to Prevention of Significant Deterioration of 40 CFR, Part 52.21, regulations because its potential to emit nitrogen oxides and carbon monoxide is greater than 250 tons per year.

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.

EUBOILER at the stationary source is subject to the Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR, Part 60, Subparts A and Db.

EUBOILER at the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers at Area Sources for HAPs promulgated in 40 CFR, Part 63, Subparts A and JJJJJJ. The ROP contains special conditions provided by Grayling Generating Station for applicable requirements from 40 CFR, Part 63, Subparts A and JJJJJJ. The Boiler Area Source MACT special conditions only reflect ongoing source requirements, as all initial notifications, one-time energy assessment and initial boiler tune-up have already been completed. Furthermore, the specific elements associated with the tune-up process have been tailored for EUBOILER, in that EUBOILER is a stoker fired boiler and not equipped with burners (i.e., combustion occurs on the boiler grate) or a system which controls the air to fuel ratio. Thus, the provisions of 40 CFR § 63.11223(b)(1), (2) and (3) do not apply EUBOILER tune-ups. The AQD is not delegated the regulatory authority for this area source MACT; therefore, the special conditions for the Boiler Area Source MACT contained in EUBOILER were not reviewed by the AQD.

EUEMERGENERATOR and EUFIREPUMP (FGCIRICEMACT) at the stationary source are subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines at Area Sources promulgated in 40 CFR, Part 63, Subparts A and ZZZZ. (RICE Area Source MACT). The ROP contains special conditions provided by Grayling Generating Station for applicable requirements from 40 CFR, Part 63, Subparts A and ZZZZ. The AQD is not delegated the regulatory authority for this area source MACT; therefore, the special conditions for the RICE Area Source MACT contained in FGCIRICEMACT were not reviewed by the AQD.

EUBOILER at the stationary source is subject to the Clean Air Interstate Rule NO_x annual trading program pursuant to Rules 802a, 803, 821, and 830 through 834.

EUBOILER at the stationary source is subject to the Clean Air Interstate Rule NO_x ozone season trading program pursuant to Rules 802a, 803 and 821 through 826.

EUBOILER at the stationary source is subject to the Clean Air Interstate Rule SO₂ annual trading program pursuant to Rule 420.

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."

EUBOILER at the stationary source is subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. This emission unit has a control device and potential pre-control emissions of particulate matter greater than the major source threshold level. The monitoring for the control device

is COMS-recorded opacity, which functions within the range of 0-5 percent opacity, on an hourly average basis, during proper operating conditions.

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-N2388-2008a are identified in Appendix 6 of the ROP.

PTI Number			
275-07	882-89E		

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
EUBOILER	I.1	0.03 lb/MMBtu heat input (40 CFR 52.21(c),(d),&(j), R 336.1331(1)(c))	0.10 lb/MMBtu heat input (40 CFR 60.43b(c)(1))	The particulate limit listed in Condition 1.1 (0.03 lb/MMBtu heat input) is more stringent than the particulate limit in NSPS Subpart Db.
EUBOILER	I.4	10% opacity, except for one 6-minute average of not more than 20% opacity (40 CFR 52.21(c),(d)&(j), R 336.1301(c).	20% opacity, 6 minute average except one 6 minute average per hour of not more than 27% opacity (40 CFR 60.43b(f)).	The opacity limit listed in Condition 1.4 (10% opacity, except for one 6-minute average per hour of not more than 20% opacity) is more stringent than the opacity limit in NSPS Subpart Db.

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
EU00010	One (1) natural gas-fired office building heater.	R 336.1212(4)(b)	R 336.1282(b)
EU00011	One (1) natural gas-fired water heater.	R 336.1212(4)(b)	R 336.1282(b)
EU00012	Thirteen (13) natural gas-fired unit heaters.	R 336.1212(4)(b)	R 336.1282(b)
EU00013	Six (6) natural gas-fired unit heaters.	R 336.1212(4)(b)	R 336.1282(b)

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 at the time of issuance of the 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.

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2388

JULY 21, 2014 STAFF REPORT ADDENDUM

MI-ROP-N2388-2014

Purpose

A Staff Report dated June 16, 2014, 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:	Philip E. Lewis, Plant Manager 989-348-4575, Extension 11
AQD Contact:	Rebecca Radulski, Environmental Engineer 989-705-3404

Summary of Pertinent Comments

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

Changes to the June 16, 2014 Draft ROP

No changes were made to the draft ROP.

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2388

**MARCH 7, 2016 STAFF REPORT FOR RULE
217(2) REOPENING**

MI-ROP-N2388-2014a

Purpose

On September 4, 2014, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2388-2014 to Grayling Generating Station Limited Partnership 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:	Philip E. Lewis, Plant Manager 989-348-4575, Extension 11
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 9, CAIR Annual NO_x Budget Permit in Appendix 10, and CAIR Ozone NO_x Budget Permit in Appendix 11 were removed from the ROP. The requirements of CSAPR were inserted into Appendix 9. In Table EUBOILER, 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 9.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-N2388-2014, 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.

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number

RENEWABLE OPERATING PERMIT

ROP Number

N2388

**APRIL 26, 2016 - STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

MI-ROP-N2388-2014a

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:	Philip E. Lewis, Plant Manager 989-348-4575, Extension 11
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
Air Quality Division

State Registration Number

N2388

RENEWABLE OPERATING PERMIT

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

ROP Number

MI-ROP-N2388-2014a

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:	Philip E. Lewis, Plant Manager 989-348-4575, Extension 11
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.