

State Registration Number
B1976

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

ROP Number
MI-ROP-B1976-2011

**City of Grand Haven Board of Light and Power
J. B. Sims Generating Station**

SRN: B1976

Located at

1231 North Third Street, Grand Haven, Ottawa County, Michigan 49417

Permit Number: MI-ROP-B1976-2011

Staff Report Date: September 12, 2011

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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September 12, 2011 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:	City of Grand Haven Board of Light and Power, J.B. Sims Generating Station 1231 North Third Street Grand Haven, Michigan 49417
Source Registration Number (SRN):	B1976
North American Industry Classification System (NAICS) Code:	221112 – Fossil Fuel Electric Power Generation
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201100020
Responsible Official:	Annette Allen, General Manager 616-846-9200
AQD Contact:	Stephen J. Lachance, Environmental Quality Specialist 616-356-0239
Date Permit Application Received:	March 15, 2011
Date Application Was Administratively Complete:	March 28, 2011
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	September 12, 2011
Deadline for Public Comment:	October 12, 2011

Source Description

The facility is an electricity generating station, where pulverized coal is the primary fuel. One unit, No. 3, is in use, with a maximum heat input capacity of 785 million Btus per hour and producing up to 80 megawatts (gross) per hour. The facility is located on the Grand River near the developed waterfront of Grand Haven, Ottawa County. A city marina/pier is located directly south of the facility.

Unit 3 was installed about 1983 and Units 1 and 2 were retired in 1989. Emissions from Unit 3 are controlled by low-NOx burners, a four-field electrostatic precipitator and a wet lime/limestone scrubber. A Selective, Non-Catalytic Reduction (SNCR) system for control of nitrogen oxides was installed in 2010. The facility has Continuous Emission Monitoring (CEM) Systems installed for gas flow, sulfur dioxide (inlet and outlet), carbon dioxide, nitrogen oxides and opacity.

Other emission sources at the facility include fuel handling equipment, a backup natural gas-fired auxiliary boiler, a cold cleaner and miscellaneous maintenance painting activities.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the Calendar Year 2010 submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	40
Lead (Pb)	0.02
Nitrogen Oxides (NO _x)	412
Particulate Matter (PM)	34
Sulfur Dioxide (SO ₂)	290
Volatile Organic Compounds (VOCs)	4.7
Individual Hazardous Air Pollutants (HAPs) **	
Hydrogen Chloride (HCl)	91

**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 344, 887. 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 Ottawa County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

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The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit both sulfur dioxide and nitrogen oxides exceeds 100 tons per year, the potential to emit of any single HAP (HCl) regulated by the federal Clean Air Act, Section 112, is more than 10 tons per year, and the potential to emit of Greenhouse Gases calculated as carbon dioxide equivalents (CO₂e) is 100,000 tons per year or more.

The stationary source is subject to Prevention of Significant Deterioration (PSD) of Title 40 of the Code of Federal Regulations, Part 52.21, and Part 18, ACT 451 regulations because its potential to emit of sulfur dioxide and nitrogen oxides is greater than 100 tons per year. However, recent modifications (including increasing boiler heat input capacity and turbine output to 80 MW, installation of second generation low-NO_x burners, and other equipment upgrades to support increased steam production, as permitted by Permit to Install No. 64-04) at this stationary source were not subject to PSD regulations, based on the facility's on-going demonstrations that resulting increases in emissions were not greater than significant levels. Future modifications of the process equipment at this stationary source may be subject to the PSD requirements for pollutants for which Ottawa County is in attainment.

Conditions and requirements of Permit to Install No. 39-09 for installation of a Selective Non-Catalytic Reduction (SNCR) system on EU-Unit-3_BLR have been incorporated into this ROP renewal.

EU-Unit-3_BLR at the stationary source is subject to the New Source Performance Standards for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, promulgated in Title 40 of the Code of Federal Regulations, Part 60, Subparts A and Da.

EU-BLR-4 at the stationary source is subject to the Maximum Achievable Control Technology Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Source Facilities promulgated in 40 CFR Part 63, Subparts A and DDDDD; but that rule has been "stayed" by EPA during reconsideration. The ROP may need to be appropriately re-opened/modified upon finalization of the rule.

EU-Unit-3_BLR at the stationary source is subject to the federal Acid Rain program promulgated in 40 CFR Part 72; to the Clean Air Interstate Rule NO_x annual trading program pursuant to Rules 802a, 803, 821, and 830 through 834; to the Clean Air Interstate Rule NO_x ozone season trading program pursuant to Rules 802a, 803 and 821 through 826; and to the Clean Air Interstate Rule SO₂ annual trading program pursuant to Rule 420.

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

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."

EU-Unit-3_BLR 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 emission limitations or standards for nitrogen oxides and sulfur dioxide from EU-Unit-3_BLR at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR Part 64, because the applicable emissions limitations meets the CAM exemption for Acid Rain monitoring requirements. Therefore, EU-Unit-3_BLR is exempt from CAM requirements for nitrogen oxides and sulfur dioxide.

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-B1976-2006b are identified in Appendix 6 of the ROP.

PTI Number			
541-79	941-85	64-04	64-04A

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

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.

There were no processes listed in the ROP application as exempt devices under Rule 212(4), other than EU-BOILER-4. Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement. Note, while EU-BLR-4 is subject to 40 CFR 63, Subpart DDDDD (which was finalized after the ROP application was submitted), this rule has been subsequently “stayed” by EPA during a period of reconsideration. Therefore, EU-BLR-4 has not been included in the permit at this time. As noted above, the ROP may need to be appropriately re-opened/modified upon finalization of the rule.

Exempt Emission Unit ID	Description of Exempt Emission Unit	Rule 212(4) Exemption	Rule 201 Exemption
EU-BLR-4	21 mmBtu/hr natural gas-fired auxiliary boiler	Rule 212(4)(b)	Rule 282(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 Heidi G. Hollenbach, Grand Rapids 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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**October 14, 2011 STAFF REPORT
ADDENDUM**

Purpose

A Staff Report dated September 12, 2011, 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:	Annette Allen, General Manager 616-846-9200
AQD Contact:	Stephen J. Lachance, Environmental Quality Specialist 616-356-0239

Summary of Pertinent Comments

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

Changes to the September 12, 2011 Draft ROP

No changes were made to the draft ROP.