

State Registration Number

N1160

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number

MI-ROP-N1160-2018b

National Energy of McBain LLC

State Registration Number (SRN): N1160

Located at

6751 West Gerwoude Drive, McBain, Missaukee County, Michigan 49657

Permit Number: MI-ROP-N1160-2018b

Staff Report Date: July 9, 2018

Amended Dates: February 7, 2022
September 7, 2022

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 Environment, Great Lakes, and Energy (EGLE), 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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Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
N1160

RENEWABLE OPERATING PERMIT
JULY 9, 2018 - STAFF REPORT

ROP Number
MI-ROP-N1160-2018

Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an 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 Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP 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:	Viking Energy of McBain LLC 6751 West Gerwoude Drive McBain, Michigan 49657
Source Registration Number (SRN):	N1160
North American Industry Classification System (NAICS) Code:	221117
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201700020
Responsible Official:	Thomas Vine, Plant Manager 231-825-2772, Extension 19
AQD Contact:	William Rogers, Environmental Quality Analyst 989-705-3406
Date Application Received:	February 2, 2017
Date Application Was Administratively Complete:	February 2, 2017
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	July 9, 2018
Deadline for Public Comment:	August 8, 2018

Source Description

Viking Energy of McBain, Inc. is a wood fired boiler electric utility plant located within the McBain city limits. Virgin wood, tire derived fuel, particleboard and plywood, construction and demolition wood, and creosote treated wood are used as fuels in the boiler. The fuel is delivered to the site by truck and stored on-site in piles that are managed to control fugitive dust. The fuels are fed through handling systems to the boiler which uses the heat from combustion to produce steam. The steam is used to drive a generator that produces approximately 17 megawatts of electricity at full capacity. Air emissions from the boiler are controlled by a multiple cyclonic collector and an electrostatic precipitator. Ash from the boiler 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 (MAERS) for the year **2016**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	84.9
Lead (Pb)	0.02
Nitrogen Oxides (NO _x)	225.3
Particulate Matter (PM)	2.2
Sulfur Dioxide (SO ₂)	224.7
Volatile Organic Compounds (VOCs)	1.2

This source is a true minor source for Hazardous Air Pollutants (HAPs) thus no HAP emissions data is listed.

See Parts C and D in the 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 in Missaukee 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 particulate matter, carbon monoxide, and nitrogen oxides exceeds 100 tons per year.

The stationary source is 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.

EUBOILER at the stationary source was subject to review under the Prevention of Significant Deterioration regulations of 40 CFR 52.21, because at the time of New Source Review permitting the potential to emit of carbon monoxide was greater than 250 tons per year

EUBOILER at the stationary source is subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units promulgated under 40 CFR Part 60, Subparts A and

Db because the steam generating unit commenced construction after June 19, 1984 and the heat input capacity from fuels combusted in the steam generating unit is greater than 100 million Btu/hour (176 million Btu/hour).

EUBOILER at the stationary source is subject to the Maximum Achievable Control Technology Standards for Industrial, Commercial and Institutional Boilers and Process Heaters – Area Sources promulgated under 40 CFR Part 63, Subparts A and JJJJJJ because the stationary source is an area source of HAPs and EUBOILER includes an existing biomass fueled industrial boiler as defined in 40 CFR 63.11237.

EUGENERATOR at the stationary source is subject to the Maximum Achievable Control Technology Standards for Reciprocating Internal Combustion Engines (RICE) – Area Sources promulgated under 40 CFR Part 63, Subparts A and ZZZZ because the stationary source is an area source of HAPs and EUGENERATOR is an existing stationary emergency compression ignition engine ≤ 500 hp.

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."

The emission limitations for PM from EUBOILER at the stationary source are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64. This emission unit has a control device and potential pre-control emissions of PM greater than the major source threshold level.

Emission Unit/Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring	PAM?
EUBOILER	PM/ 0.10 pounds per million BTU heat input	R 336.1331(1)(c) 40 CFR 60.43b(c)(1)	Multiple cyclone and ESP	Continuous opacity monitor used to indicate proper functioning of ESP	No
EUBOILER	PM/ 23.0 pounds per hour	R 336.1331(1)(c)	Multiple cyclone and ESP	Continuous opacity monitor used to indicate proper functioning of ESP	No
EUBOILER	PM/ 98.9 tons per year	R 336.1331(1)(c)	Multiple cyclone and ESP	Continuous opacity monitor used to indicate proper functioning of ESP	No

*Presumptively Acceptable Monitoring (PAM)

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-N1160-2012 are identified in Appendix 6 of the ROP.

PTI Number			
261-86G	261-86F		

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	1.8	0.25 pounds NOx per million BTU heat input (R 336.1205(1)(a))	0.30 pounds NOx per million BTU heat input (40 CFR 60.44b(d))	The streamlined limit is lower. Therefore, it is more stringent than the subsumed requirement.
EUBOILER	1.38	Visible emissions of 20% opacity or less except one 6-minute average per hour of no more than 27% opacity. (R 336.1301(1))	Visible emissions of 20% opacity or less except one 6-minute average per hour of no more than 27% opacity, and except during periods of startup, shutdown, and malfunction (40 CFR 60.43b(f))	The subsumed requirement allows some periods of higher opacity. The streamlined requirement does not. Therefore, the streamlined requirement is more stringent.

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the 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.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUSPACEHEATER	Eight natural gas fired space heaters btu value less than 50,000,000 btu heat input each	212(4)(b)	282(b)(i) 282(2)(b)

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP 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 MDEQ, AQD

The AQD proposes to approve this ROP. 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 USEPA is allowed up to 45 days to review the draft ROP 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 Shane Nixon, Cadillac District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP 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

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RENEWABLE OPERATING PERMIT

ROP Number
MI-ROP-N1160-2018

AUGUST 10, 2018 - STAFF REPORT ADDENDUM

Purpose

A Staff Report dated July 9, 2018, 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:	Thomas Vine, Plant Manager 231-825-2772, Extension 19
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.

State Registration Number
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RENEWABLE OPERATING PERMIT
FEBRUARY 7, 2022 - STAFF REPORT FOR
RULE 216(1)(a)(i)-(iv) ADMINISTRATIVE
AMENDMENT

ROP Number
MI-ROP-N1160-2018a

Purpose

On September 28, 2018, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N1160-2018 to Viking Energy of McBain LLC pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(1)(a)(i-iv).

General Information

Responsible Official:	Todd Tolkinen, General Manager 231-825-2772
AQD Contact:	Caryn E. Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202100239
Date Application for Administrative Amendment was Submitted:	December 6, 2021

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for an Administrative Amendment pursuant to Rule 216(1)(a)(iv).

Description of Changes to the ROP

The Company name changed from Viking Energy of McBain LLC to National Energy of McBain LLC.

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 Administrative Amendment to the ROP.

Action Taken by EGLE

The AQD approved an Administrative Amendment to ROP No. MI-ROP-N1160-2018, as requested by the stationary source. The delegated decision maker for the AQD is the District Supervisor.

State Registration Number
N1160

RENEWABLE OPERATING PERMIT
SEPTEMBER 7, 2022 - STAFF REPORT FOR RULE
216(2) MINOR MODIFICATION

ROP Number
MI-ROP-N1160-2018b

Purpose

On February 7, 2022, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N1160-2018a to National Energy of McBain LLC pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(2).

General Information

Responsible Official:	Todd Tolkinen, General Manager 231-825-2772
AQD Contact:	Caryn E. Owens, Senior Environmental Engineer 231-878-6688
Application Number:	202200147
Date Application for Minor Modification was Submitted:	July 29, 2022

Regulatory Analysis

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to Rule 216(2).

Description of Changes to the ROP

Minor Modification Number 202200147 was to incorporate PTI No. 69-22 into the ROP, which was to update the averaging times for the hourly emission limits for CO and SO₂ to keep them consistent with the lb/MMBTU averaging times. During development of PTI No. 69-22, AQD required modeling of CO and SO₂ pollutants in order to show that the new averaging times would not interfere with the NAAQS or cause an exceedance of the PSD Increment, and the new averaging times were acceptable.

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 EGLE

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N1160-2018a, 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 United States 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.