

State Registration  
Number  
N6626

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N6626-2019a

**Consumers Energy - Jackson Generating Station**

State Registration Number (SRN): N6626

Located at

2219 Chapin Street, Jackson, Jackson County, Michigan 49203

Permit Number: MI-ROP-N6626-2019a

Staff Report Date: April 1, 2019

Amended Date: July 16, 2020

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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**RENEWABLE OPERATING PERMIT**

**APRIL 1, 2019 - STAFF REPORT**

**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:	Consumers Energy - Jackson Generating Station 2219 Chapin Street Jackson, Michigan 49203
Source Registration Number (SRN):	N6626
North American Industry Classification System (NAICS) Code:	221112
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201800078
Responsible Official:	John P. Broschak, Vice President of Generation Operations and Compression 616-738-3718
AQD Contact:	Brian Carley, Environmental Quality Specialist 13 517-416-4631
Date Application Received:	June 5, 2018
Date Application Was Administratively Complete:	June 5, 2018
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	April 1, 2019
Deadline for Public Comment:	May 1, 2019

## Source Description

The facility is located in the city of Jackson with the closest residence within 50 yards of the property line to the west of the facility. The facility is a 550-megawatt combined cycle electric generating plant. It consists of six identical combined cycle turbines and one larger combined cycle turbine that generate electricity for sale. Each of the six identical units has the capacity for generating 52 megawatts, and the larger unit has the capacity to generate 112 megawatts; all in combined cycle operation. Each combined cycle unit is also equipped with a duct burner that can increase electrical output by approximately 18 megawatts per unit. An emergency diesel generator is operated for minimal hours for emergency purposes only and station power during scheduled outages of high voltage interconnection. The facility is also equipped with a small diesel fire pump engine.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	303
Nitrogen Oxides (NO <sub>x</sub> )	468
Particulate Matter (PM)	55
Sulfur Dioxide (SO <sub>2</sub> )	4
Volatile Organic Compounds (VOCs)	10

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2017 by Consumers Energy - Jackson Generating Station:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
Formaldehyde	7
<b>Total Hazardous Air Pollutants (HAPs)</b>	<b>7</b>

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

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 Jackson 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 of nitrogen oxides, carbon monoxide, and particulate matter exceeds 100 tons per year.

The stationary source is a "synthetic minor" source regarding HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, to less than 10 tons per year and the potential to emit of all HAPs combined to less than 25 tons per year.

EUEDG, EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source were 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 nitrogen oxides, carbon monoxide, and particulate matter was greater than 100 tons per year.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Db. The stationary source's duct burners are not subject to the monitoring and reporting requirements of 40 CFR 60 Subpart Db.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the Standards of Performance for Stationary Gas Turbines promulgated in 40 CFR Part 60, Subparts A and GG.

EUEDG and EUDFP at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines promulgated in 40 CFR Part 63, Subparts A and ZZZZ as an Area Source. The ROP contains special conditions provided by Consumers Energy - Jackson Generating Station in their application 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.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the federal Acid Rain program promulgated in 40 CFR Part 72.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the Cross-State Air Pollution Rule NO<sub>x</sub> Annual Trading Program pursuant to 40 CFR Part 97, Subpart AAAAA.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the Cross-State Air Pollution Rule NO<sub>x</sub> Ozone Season Group 2 Trading Program pursuant to 40 CFR Part 97, Subpart EEEEE.

EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, and EUDB7 at the stationary source are subject to the Cross-State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program pursuant to 40 CFR Part 97, Subpart CCCCC.

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."

No emission units have emission limitations or standards that are subject to the federal Compliance Assurance Monitoring rule pursuant to 40 CFR Part 64, because all emission units at the stationary source either do not have a control device for specific pollutants or those with a control device do not have potential pre-control emissions over the major source thresholds and/or the ROP specifies a continuous compliance determination method.

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-N6626-2014 are identified in Appendix 6 of the ROP.

PTI Number			
206-99A			

### **Streamlined/Subsumed Requirements**

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

### **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
EU1BHEAT	Stationary building heaters with a total heat input of 5,645,000 Btu/hr. Installed building heaters (natural gas) include: 4 at 60,000 Btu/hr each, 13 at 75,000 Btu/hr each, 1 at 80,000 Btu/hr, 1 at 150,000 Btu/hr, 2 at 200,000 Btu/hr each, 6 at 300,000 Btu/hr each and 5 at 400,000 Btu/hr each. Portable Kerosene Heaters 6 at 155,000 Btu/hr each	R 336.1212(4)(c)	R 336.1282(b)(i)

### **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 Scott Miller, Jackson 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.

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**RENEWABLE OPERATING PERMIT**

ROP Number  
MI-ROP-N6626-2019a

**MAY 6, 2019 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated April 1, 2019, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. 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 Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	John P. Broschak, Vice President of Generation Operations and Compression 616-738-3718
AQD Contact:	Brian Carley, Environmental Quality Specialist 13 517-416-4631

**Summary of Pertinent Comments**

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

**Changes to the APRIL 1, 2019 Draft ROP**

No changes were made to the draft ROP.

State Registration Number

N6626

## RENEWABLE OPERATING PERMIT

July 16, 2020 - STAFF REPORT FOR RULE  
216(1)(a)(v) ADMINISTRATIVE AMENDMENT

ROP Number

MI-ROP-N6626-2019a

### Purpose

On July 1, 2019, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N6626-2019 to Consumers Energy Company - Jackson Generating Station 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)(v).

### General Information

Responsible Official:	Jason L. Ricketts, Plant Manager 517-841-5710
AQD Contact:	Caryn E. Owens, Environmental Engineer 231-878-6688
Application Number:	202000086
Date Application for Administrative Amendment was Submitted:	May 12, 2020

### Regulatory Analysis

The stationary source has requested that the Permit to Install (PTI) No. 118-18, issued on April 2, 2019, be incorporated into their ROP. The AQD has determined that the change requested meets the following criteria for an Administrative Amendment pursuant to Rule 216(1)(a)(v): the PTI includes terms and conditions that comply with the permit content requirements contained in Rule 213; the procedure used to issue the PTI was substantially equivalent to the requirements of Rule 214 regarding public participation and review by affected states; and the process or process equipment is in compliance with, and no changes are required to, the terms and conditions of the PTI that are to be incorporated into the ROP. Also, the permittee notified the AQD in writing within 30 days of commencing operation of the processes covered by the PTI and has submitted certified results of all required testing, monitoring and recordkeeping performed to demonstrate compliance with the PTI.

PTI 118-18 was required to go through the public participation process because the source is an existing major PSD source and the project was subject to permitting requirements of EGLE's Rules for Air Pollution Control and state and federal PSD regulations.

### Description of Changes to the ROP

Administrative Amendment No. 202000086 was to incorporate PTI 118-18 into the ROP, which modified the existing natural gas combined cycle (NGCC) power plant by increasing the allowed utilization of the existing six (6) GE LM6000 Combustion Turbine Generators (CTG) (FGLMDB1-6) by increasing the 12-month rolling NOx limits and includes an annual Greenhouse Gas (GHG) limit. Additionally, to ensure compliance with applicable PSD increments and NAAQS, the six (6) GE LM6000 stack heights increased from 105 feet to 140 feet above ground level. Through this Administrative Amendment, Source-Wide Limits were added for Formaldehyde for the entire facility, and historic Emission Units (EULM1, EUDB1, EULM2, EUDB2, EULM3, EUDB3, EULM4, EUDB4, EULM5, EUDB5, EULM6, EUDB6, EUEA, EUDB7), as well as

Flexible Groups FGLMDB1, FGLMDB2, FGLMDB3, FGLMDB4, FGLMDB5, FGLMDB6, FGEADB7 were re-structured. The Emission Unit EUEADB7 for the GE 7EA CTG was split out into its own emission unit with corresponding emission limits. No changes in allowed utilization were made for this unit.

### **Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the change as of the date of approval of the Administrative Amendment to the ROP.

### **Action Taken by EGLE**

The AQD proposes to approve an Administrative Amendment to ROP No. MI-ROP-N6626-2019, as requested by the stationary source. A final decision on the Administrative Amendment to the ROP will not be made until 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 Administrative Amendment 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 the USEPA.