

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
B2918

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2918-
2010

Consumers Energy Company Thetford Combustion Turbine Plant

SRN: B2918

Located at

10500 North Genesee Road, Mt. Morris, Genesee County, Michigan 48458

Permit Number: MI-ROP-B2918-2010

Staff Report Date: June 21, 2010

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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Michigan Department of Environmental Quality
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RENEWABLE OPERATING PERMIT

ROP Number

B2918

MI-ROP-B2918-2010

DRAFT 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:	Consumers Energy Company Thetford Combustion Turbine Plant 10500 North Genesee Road Mt. Morris, Michigan 48458
Source Registration Number (SRN):	B2918
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:	200900094
Responsible Official:	Garrick J. Rochow, Peaking Business Manager 616-772-6641
AQD Contact:	Daniel McGeen, EQA 517-335-6347
Date Permit Application Received:	June 22, 2009
Date Application Was Administratively Complete:	June 22, 2009
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	June 21, 2010
Deadline for Public Comment:	July 21, 2010

Source Description

The Thetford Combustion Turbine Station is a power plant that produces electricity on an intermittent basis, during periods of peak load demand. The facility uses nine (9) combustion turbine engines to power generators to produce electricity. Combustion Turbines 1-4 are fueled by natural gas or fuel oil. Combustion Turbines 5-9 are fueled by natural gas, with start-up engines fueled by fuel oil.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System in the **2008** submittal.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	5
Lead (Pb)	0
Nitrogen Oxides (NO _x)	29
Particulate Matter (PM)	0
Sulfur Dioxide (SO ₂)	0
Volatile Organic Compounds (VOCs)	0
Individual Hazardous Air Pollutants (HAPs) **	
Formaldehyde	0
Total Hazardous Air Pollutants (HAPs)	0

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

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 Genesee 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 per year. The stationary source is also considered a major 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 (formaldehyde), is more than 10 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR, Part 52.21 because the process equipment was constructed/installed prior to the promulgation of the PSD regulations.

The nine (9) combustion turbine engines were installed prior to August 15, 1967. As a result, this equipment is considered "grandfathered" and is not subject to New Source Review (NSR) permitting requirements. However, future modifications of this equipment may be subject to NSR.

EUCOMBTURB1 through 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 through 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 through EUCOMBTURB4 at the stationary source are 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 DEQ "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units are subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64, because all emission units at the stationary source either do not have a control device or those with a control device do not have potential pre-control emissions over the major source thresholds. Also, the stationary source is subject to the MACT Subpart YYYY for combustion turbines, identified as 40 CFR 63.6100. Thus, the nine combustion turbines are exempt from CAM requirements.

The facility has five fuel oil-fired reciprocating internal combustion engines (RICE). The RICEs at this facility are currently subject to the Maximum Achievable Control Technology (MACT) Standards for RICE codified in 40 CFR 63, Subpart ZZZZ. Any RICE located at a major or area source of HAP emissions is subject to 40 CFR 63, Subpart ZZZZ.

On February 25, 2009 (published in FR March 5, 2009) the Environmental Protection Agency (EPA) proposed an amendment to Subpart ZZZZ for RICEs that were not covered in the 40 CFR 63, Subpart ZZZZ promulgated on February 24, 2004. On March 3, 2010 (75 FR 9674, Eff. Date: May 3, 2010), the USEPA promulgated final rules for MACT Standards for RICE in 40 CFR 63, Subpart ZZZZ. In the final rule, EPA promulgated regulations for existing stationary compression ignition (CI) engines that are less than or equal to 500 HP and located at major sources and existing stationary CI engines that are located at area sources. The facility's five startup CI engines are subject to 40 CFR 63, Subpart A and Subpart ZZZZ.

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-B2918-2005 are identified in Appendix 6 of the ROP.

PTI Number			
NA	NA	NA	NA

Equivalent Requirements

This permit does not include any equivalent requirements pursuant to Rule 212(5). Equivalent requirements are enforceable applicable requirements that are equivalent to the applicable requirements contained in the original PTI, a Consent Order/Judgment, and/or the State Implementation Plan.

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	ROP Exemption	PTI Permit Exemption
EUFOHEATER	1,750,000 BTU/Hour Fuel Oil Heater	212(4)(b)	282(b)(i)
EUSPACEHTRS	3 Natural Gas Fired Space Heaters, Each Rated at 60,000 BTU/Hour	212(4)(b)	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 Mr. Gerald Avery, Field Operations 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.

State Registration Number

B2918

RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-B1918-2010

July 28, 2010 STAFF REPORT ADDENDUM

Purpose

A Staff Report dated June 21, 2010, 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:	Garrick J. Rochow, Peaking Business Manager 616-772-6641
AQD Contact:	Daniel McGeen, EQA 517-335-6347

Summary of Pertinent Comments

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

Changes to the June 21, 2010 Draft ROP

No changes were made to the draft ROP.

State Registration Number
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RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-B2918-2010

April 25, 2011 STAFF REPORT ADDENDUM FOR RULE 217(2) REOPENING

Purpose

On October 7, 2010, the Department of Environmental Quality, Air Quality Division (AQD) approved and issued Renewable Operating Permit (ROP) No. MI-ROP-B2918-2010 to Consumers Energy Company Thetford Combustion Turbine Plant pursuant to R 336.1214. Once issued, the AQD is required to reopen the ROP as described in R 336.1217. 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:	Garrick J. Rochow, Peaking Business Manager 616-772-6641
AQD Contact:	Daniel McGeen, Environmental Quality Analyst 517-335-6347
Date Public Comment Begins:	April 25, 2011
Deadline for Public Comment:	May 25, 2011

Regulatory Analysis

The AQD has determined that the ROP must be reopened in order to incorporate applicable requirements associated with the Clean Air Interstate Rule.

Description of Changes to the ROP

The CAIR Annual Sulfur Dioxide Budget Permit for this facility is incorporated into the ROP as Appendix 9. The CAIR Annual Nitrogen Oxide Budget Permit for this facility is incorporated into the ROP as Appendix 10. The CAIR Ozone Nitrogen Oxide Budget Permit for this facility is incorporated into the ROP as Appendix 11. The requirements to comply with the CAIR Annual Sulfur Dioxide Budget Permit, CAIR Annual Nitrogen Oxide Budget Permit, and CAIR Ozone Nitrogen Oxide Budget Permit and the requirements to have the appropriate amount of allowances in their accounts were added to Section IX of FGCOMBTURBS1-4.

Action Taken by the Department

The AQD proposes to approve this change to ROP No. MI-ROP-B2918-2010, which was reopened by the AQD in order to incorporate applicable requirements associated with the Clean Air Interstate Rule. 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 Ms. Teresa Seidel, Acting Field Operations 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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RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-B2918-2010

**June 28, 2011 STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

Purpose

A Staff Report dated April 25, 2011, 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 draft ROP reopening resulting from these pertinent comments.

General Information

Responsible Official:	Garrick J. Rochow, Peaking Business Manager 616-772-6641
AQD Contact:	Daniel McGeen, Environmental Quality Analyst 517-335-6347

Summary of Pertinent Comments

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

Changes to the April 25, 2011 Draft ROP Reopening

No changes were made to the draft ROP reopening.

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RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-B2918-2010

**August 18, 2011 STAFF REPORT ADDENDUM
FOR RULE 217(2) REOPENING**

Purpose

A Staff Report dated June 28, 2011, 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 proposed ROP reopening during the 45-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 draft ROP reopening resulting from these pertinent comments.

General Information

Responsible Official:	Garrick J. Rochow, Peaking Business Manager 616-772-6641
AQD Contact:	Daniel McGeen, Environmental Quality Analyst 517-335-6347

Summary of Pertinent Comments

No pertinent comments were received during the US EPA's 45-day comment period.

Changes to the June 28, 2011 Draft ROP Reopening

No changes were made to the proposed ROP reopening.