

Michigan Department of Environmental Quality
Air Quality Division

State Registration Number
B2798

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2798-2011

Detroit Edison Delray Power Plant

SRN: B2798

Located at

6603 W. Jefferson, Detroit, Wayne, Michigan 48217

Permit Number: MI-ROP-B2798-2011

Staff Report Date: August 1, 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).

TABLE OF CONTENTS

August 1, 2011 STAFF REPORT	3
September 13, 2011 STAFF REPORT ADDENDUM	7
November 1, 2011 STAFF REPORT ADDENDUM	8

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August 1, 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:	Detroit Edison Delray Power Plant 6603 W. Jefferson Detroit, Michigan 48217
Source Registration Number (SRN):	B2798
North American Industry Classification System (NAICS) Code:	22111
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201000126
Responsible Official:	Nader Rajabian, Plant Manager - Peakers 313-897-1492
AQD Contact:	Jorge Acevedo, Senior Environmental Engineer 313-456-4679
Date Permit Application Received:	December 10, 2010
Date Application Was Administratively Complete:	December 10, 2010
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	August 01, 2011
Deadline for Public Comment:	August 31, 2011

Source Description

Detroit Edison's Delray Power Plant is located at 6603 West Jefferson, in the City of Detroit, County of Wayne. The property is bordered on the East by the Detroit River, on the West by Jefferson Avenue, on the South by the yellow freight Company, and on the North by Fort Wayne. The nearest residence is 1/2 mile to the West across Jefferson Avenue.

Detroit Edison's Delray Power Plant is the site of a former steam / electricity generating plant which was shut down in 1988. Prior to installation of the two combustion turbine generators (CTG's) the site functioned only as a substation and all previously used combustion sources had been decommissioned and removed from the site. The CTG's do not operate continuously but are activated during periods of peak demand.

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

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	2.0
Nitrogen Oxides (NO _x)	7.1
Particulate Matter (PM)	1.08

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.

Wayne County is currently designated by the U.S. Environmental Protection Agency (USEPA) as a non-attainment area with respect to the PM 2.5 standard.

The stationary source is subject to Title 40 Code of Federal Regulations, Part 70 because it is an affected source as defined in section 402 of the clean air act. Detroit Edison Delray Power Plant has emission units subject to the federal Acid Rain program promulgated in Title 40 of the Code of Federal Regulations, Part 72.

The stationary source is considered a "synthetic minor" source in regards to the Prevention of Significant Deterioration regulations of 40 CFR, PART 52.21 because the stationary source accepted legally enforceable permit conditions limiting the potential to emit of each criteria pollutant to less than 250 tons per year.

The stationary source is subject to the New Source Performance Standards for Stationary Gas Turbines promulgated in Title 40 of the Code of Federal Regulations, Part 60, Subparts A and GG. 40 CFR Part 60, Subpart GG was amended on July 8, 2004. The subpart was amended to allow the use of most of the methods specified in sections 2.2.5 and 2.3.3.1.2 of 40 CFR part 75, appendix D to determine the total sulfur content of gaseous fuel. Therefore, the custom fuel sampling and analysis plan approved by U.S. EPA on October 13, 1999 is no longer mandatory. 40 CFR 60.334(h)(3) states:

“Notwithstanding the provisions of paragraph (h)(1) of this section, the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in §60.331(u), regardless of whether an existing custom schedule approved by the administrator for subpart GG requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

- (i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or
- (ii) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.”

Also, in the July 8, 2004 amendments, the subpart deleted the test method for measuring Hydrogen Sulfide, which was one of the conditions of the 1999 custom fuel sampling and analysis plan. Conditions were placed in the draft ROP to reflect the monitoring changes that took place in the subpart.

EU01 and EU02 at the stationary source are subject to the federal Acid Rain program promulgated in 40 CFR of, Part 72.

EU01 and EU02 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.

EU01 and EU02 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.

EU01 and EU02 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 "Procedure for Evaluating Periodic Monitoring Submittals."

No emission units are subject to the federal Compliance Assurance Monitoring 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.

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-B2798-2011 are identified in Appendix 6 of the ROP.

PTI Number			
373-98			

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

There were no processes listed in the ROP application as exempt devices under Rule 212(4). Exempt devices are not subject to any process-specific emission limits or standards in any applicable requirement.

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 Chris Ethridge, Acting Southeast Michigan 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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**September 13, 2011 STAFF REPORT
ADDENDUM**

Purpose

A Staff Report dated August 01, 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:	Nader Rajabian, Plant Manager - Peakers 313-897-1492
AQD Contact:	Jorge Acevedo, Senior Environmental Engineer 313-456-4679

Summary of Pertinent Comments

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

Changes to the August 01, 2011 Draft ROP

No changes were made to the draft ROP.

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**November 1, 2011 STAFF REPORT
ADDENDUM**

Purpose

A Staff Report dated September 13, 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 45-day EPA comment period as described in R 336.1214(6). In addition, this addendum describes any changes to the proposed ROP resulting from these pertinent comments.

General Information

Responsible Official:	Nader Rajabian, Plant Manager - Peakers 313-897-1492
AQD Contact:	Jorge Acevedo, Senior Environmental Engineer 313-456-4679

Summary of Pertinent Comments

Comments were received from US Environmental Protection Agency on October 7, 2011.

Comment: A Comment was made inquiring if area residents had any concerns with the facility considering the facility is located an Environmental Justice Area as defined by the US Environmental Protection Agency.

Response: No public comments were received during the public comment period. The facility has not been a source of citizen complaints throughout the years. The facility is defined as a peaking unit and operates only during peak electrical demand.

No revision was made in the staff report or Proposed ROP based on this comment.

Comment: Comment was received regarding how the facility will be able to show compliance with the Sulfur Dioxide limit of .015 percent on a dry gas basis and at 15% oxygen.

Response: The company is required to demonstrate that they combust gaseous fuels that meet the definition of natural gas as specified in 40 CFR 60 Subpart GG. The sulfur content indicated in the definition of natural gas is 20 grains per 100 standard cubic feet or less in gas. The facility meets the Sulfur Dioxide limit of .015 percent on a dry gas basis and at 15% oxygen by combusting gaseous fuels that meet the definition of natural gas. Combusting fuel with a sulfur content of 20 grains per 100 standard cubic feet, Sulfur Dioxide emissions would be 11 ppm or .0011 percent and thus much lower than the .015 percent limit.

No revision was made in the staff report. A note was made in the Proposed ROP to indicate that ensuring compliance with Special Condition VI.2 would show compliance with Special Condition I.6.

Comment: A comment was made regarding the Continuous Compliance Protocol that the source submitted separately and how the applicable portions should be fully incorporate into the permit.

Response: The Continuous Compliance Protocol was required as a condition under Permit to Install 373-98. The protocol identifies how Detroit Edison will operate the combustion turbines so that meet the Nitrogen Oxide and Carbon Monoxide emission limits. The protocol was submitted on March 16, 2000. For both Nitrogen Oxide and Carbon Monoxide, Detroit Edison used initial testing procedures outlined in Appendix E of 40 CFR Part 75. In the proposed ROP, the facility must comply with the testing conditions of 40 CFR Part 75, Appendix E initially, and once every 20 calendar quarters. Therefore by complying with the Testing Conditions outlined in the ROP, the facility is complying with the Continuous Compliance Protocol.

No revision was made in the staff report or Proposed ROP based on this comment.