



September 17, 2022

Ms. Kelly Orent  
EGLE, Air Quality Division  
Grand Rapids District Office  
350 Ottawa Avenue NW, Unit 10  
Grand Rapids, MI 49503

Subject: Application for ROP Minor Modification for SRN #B2816  
Rule 216(2) Minor Modification Change  
DTE Electric Company – Monroe Power Plant  
Section 1 of MI-ROP-B2816-2019

Dear Ms. Orent / Ms Caryn Owens,

DTE Electric Company hereby submits a ROP minor modification application under Rule 216(2) to ROP No: MI-ROP-B2816-2019 for Monroe Power Plant located at 3500 East Front Street in Monroe, Michigan. Enclosed are the M-001 and C-001 forms, as required. This minor modification change affects EU-UNIT1, EU-UNIT2, EU-UNIT3, and EU-UNIT4 in Section 1 of the ROP.

EGLE granted *verbal* approval for PTI #08-22 on January 27, 2022 (and issued it on a later date) to add new conditions associated with EPA's Consent Decree (CD) for four (4) electric utility steam generating unit boilers (Units 1 through 4) fueled by coal and other fuels. DTE Electric attaches A-001 form and ROP Mark-Up with proposed changes from PTI #08-22.

Should you have any questions regarding this ROP minor modification application, please contact Andrew Fadanelli at [ignatius.fadanelli@dteenergy.com](mailto:ignatius.fadanelli@dteenergy.com) or (313) 235-6384.

Sincerely,

*I Andrew Fadanelli /s/*

I. Andrew Fadanelli  
Principal Environmental Engineer  
DTE Electric Company

Enclosure: MI-ROP-B2816 Minor Modification Application comprised of:

- C-001: ROP Application Certification Form
- M-001: ROP Rule 216 Modification Application Form
- AI-001: Additional Information Form
- AI-001: B2816 Markup - MOD PTI 8-22

Cc (via email):

Caryn Owens, EGLE AQD, Senior Environmental Engineer  
Michael Twomley, DTE Electric Company, Plant Manager – Monroe Power Plant  
Barry Marietta, DTE Electric Company, Manager – Permitting, EM&S

Filed in SharePoint



**RENEWABLE OPERATING PERMIT APPLICATION  
C-001: CERTIFICATION**

*This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.*

**This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.**

Form Type C-001	SRN B2816
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Stationary Source Name <b>Monroe Power Plant</b>	
City <b>Monroe</b>	County <b>Monroe</b>

<b>SUBMITTAL CERTIFICATION INFORMATION</b>	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to <b>1</b>	
3. Submittal Media <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. <b>AI-B2816 Markup – MOD PTI 8-22</b>	

<b>CONTACT INFORMATION</b>	
Contact Name <b>I Andrew Fadanelli</b>	Title <b>Principal Engineer</b>
Phone number <b>313-235-1084</b>	E-mail address <b>ignatius.fadanelli@dteenergy.com</b>

<b>This form must be signed and dated by a Responsible Official.</b>				
Responsible Official Name <b>Mike Twomley</b>			Title <b>Plant Manager</b>	
Mailing address <b>DTE Electric, Monroe Power Plant, 3500 East Front Street</b>				
City <b>Monroe</b>	State <b>MI</b>	ZIP Code <b>48161</b>	County <b>Wayne</b>	Country <b>USA</b>
<b>As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.</b>				
 Signature of Responsible Official			Date <b>9/21/2022</b>	



## RENEWABLE OPERATING PERMIT

### M-001: RULE 215 CHANGE NOTIFICATION

### RULE 216 AMENDMENT/MODIFICATION APPLICATION

*This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment.*

1. SRN B2816	2. ROP Number MI-ROP-B2816-2019, Section 3	3. County Monroe
4. Stationary Source Name DTE Electric Company, Monroe Power Plant		
5. Location Address 3500 E. Front Street		6. City Monroe
<p>7. Submittal Type - <i>The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.</i></p> <p><input type="checkbox"/> Rule 215(1) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(2) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 215(3) Notification of change. <i>Complete Items 8 – 11 and 14</i></p> <p><input type="checkbox"/> Rule 215(5) Notification of change. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. <i>Complete Items 8 – 10 and 14</i></p> <p><input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. <i>Complete Items 8 – 14. Results of testing, monitoring &amp; recordkeeping must be submitted. See detailed instructions.</i></p> <p><input checked="" type="checkbox"/> Rule 216(2) Minor Modification. <i>Complete Items 8 – 12 and 14</i></p> <p><input type="checkbox"/> Rule 216(3) Significant Modification. <i>Complete Items 8 – 12 and 14, and provide any additional information needed on ROP application forms. See detailed instructions.</i></p> <p><input type="checkbox"/> Rule 216(4) State-Only Modification. <i>Complete Items 8 – 12 and 14</i></p>		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> 04-01-2022		9. Change in emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>10. Description of Change - <i>Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).</i></p> <p>EGLE granted verbal approval for PTI #8-22 on January 27, 2022, to add new conditions associated with EPA's Consent Decree (CD) (Civil Action No. 2:10-cv-13101, date of entry July 22, 2022) for four (4) electric utility steam generating unit boilers (Units 1 through 4) fueled by coal and other fuels. The final PTI has not be issued as of the date of this ROP Modification, so the ROP modification is based on EGLE-AQD's last version of the PTI.</p>		
11. New Source Review Permit(s) to Install (PTI) associated with this application?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, enter the PTI Number(s) 08-22		
<p>12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i></p> <p>a. <i>Is the change identified above in compliance with the associated applicable requirement(s)?</i> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>b. <i>Will change identified above continue to be in compliance with associated applicable requirement(s)?</i> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>c. <i>If the change includes a future applicable requirement(s), will timely compliance be achieved?</i> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i>		AI-B2816 Markup MOD PTI 8-22
14. Contact Name I Andrew Fadanelli	Telephone No. 313-235-6384	E-mail Address Ignatius.fadanelli@dteenergy.com
15. <i>This submittal also updates the ROP renewal application submitted on (MM/DD/YY) (If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		___ / ___ / ___ <input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A

**NOTE: A CERTIFICATION FORM (C-001) SIGNED BY A RESPONSIBLE OFFICIAL MUST ACCOMPANY ALL SUBMITTALS**



## RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

*This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.*

SRN: B2796

Section Number (if applicable): 1

1. Additional Information ID

AI-B2816 Markup PTI 8-22-

### Additional Information

2. Is This Information Confidential?

Yes  No

Attached, please find the "red-line" mark up of PTI #8-22 indicating new conditions to add, associated with EPA's Consent Decree for Units 1, 2, 3, and 4 at Monroe Power Plant.

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

EFFECTIVE DATE: October 16, 2019

ISSUED TO

**DTE Electric Company - Monroe Power Plant**

State Registration Number (SRN): B2816

LOCATED AT

3500 East Front Street, Monroe, Michigan 48161

**RENEWABLE OPERATING PERMIT**

Permit Number: **MI-ROP-B2816-2019**

Expiration Date: October 16, 2024

Administratively Complete ROP Renewal Application Due Between April 16, 2023  
and April 16, 2024

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

**Commented [IAF1]:**  
DTE added conditions from PTI 8-22 to the applicable portions of Monroe's Current ROP.

Only those section of the ROP that were affected with the additions are enclosed. Basically:  
EU-Unit1  
EU-Unit2  
EU-Unit3  
EU-Uni4 and the Appendices 1, 3, 8, and 11

**SOURCE-WIDE PERMIT TO INSTALL**

Permit Number: MI-PTI-B2816-2019

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

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Scott Miller, Jackson District Supervisor

## TABLE OF CONTENTS

<b>AUTHORITY AND ENFORCEABILITY .....</b>	<b>5</b>
<b>Section 1 – DTE Electric Company – Monroe Power Plant .....</b>	<b>6</b>
<b>A. GENERAL CONDITIONS.....</b>	<b>7</b>
Permit Enforceability .....	7
General Provisions.....	7
Equipment & Design .....	8
Emission Limits .....	8
Testing/Sampling .....	8
Monitoring/Recordkeeping .....	9
Certification & Reporting .....	9
Permit Shield .....	10
Revisions .....	11
Reopenings.....	11
Renewals .....	12
Stratospheric Ozone Protection .....	12
Risk Management Plan .....	12
Emission Trading .....	12
Permit to Install (PTI) .....	13
<b>B. SOURCE-WIDE CONDITIONS .....</b>	<b>14</b>
<b>C. EMISSION UNIT CONDITIONS .....</b>	<b>15</b>
EMISSION UNIT SUMMARY TABLE .....	15
EU-UNIT1 .....	18
EU-UNIT2 .....	<u>2726</u>
EU-UNIT3 .....	<u>3634</u>
EU-UNIT4 .....	<u>4542</u>
EU-CASCADES .....	<u>5450</u>
EU-TRANSFERHS .....	<u>5955</u>
EU-DUMPERHS .....	<u>6460</u>
EU-CRUSHERHS .....	<u>6864</u>
EU-COALUNLOAD .....	<u>7268</u>
EU-PETCOKE .....	<u>7470</u>
EU-LIMESTONE .....	<u>7773</u>
EU-GYPSUMHAND .....	<u>8076</u>
EU-HYDRATEDLIME .....	<u>8379</u>
EU-FlyAshStorage .....	<u>8682</u>
<b>D. FLEXIBLE GROUP CONDITIONS.....</b>	<b><u>8985</u></b>
FLEXIBLE GROUP SUMMARY TABLE .....	<u>8985</u>
FG-ProjectPC1-4 .....	<u>9187</u>
FG-COALBLRCAM .....	<u>9389</u>
FG-AUXBOILERS .....	<u>9692</u>
FG-WFGD-QP1&2 .....	<u>10197</u>
FG-WFGD-QP3&4 .....	<u>104400</u>
FG-PARTSCLNRS .....	<u>107403</u>
FG-EMERGENS .....	<u>109405</u>
FG-MESBLDG .....	<u>112408</u>

FG-MATS.....	<a href="#">115414</a>
FG-NSPS4I.....	<a href="#">124420</a>
<b>E. NON-APPLICABLE REQUIREMENTS .....</b>	<b><a href="#">127423</a></b>
<b>APPENDICES .....</b>	<b><a href="#">128424</a></b>
Appendix 1-1. Abbreviations and Acronyms.....	<a href="#">128424</a>
Appendix 2-1. Schedule of Compliance .....	<a href="#">129425</a>
Appendix 3-1. Monitoring Requirements .....	<a href="#">135425</a>
Appendix 4-1. Recordkeeping .....	<a href="#">137425</a>
Appendix 5-1. Testing Procedures .....	<a href="#">137426</a>
Appendix 6-1. Permits to Install.....	<a href="#">138426</a>
Appendix 7-1. Emission Calculations .....	<a href="#">138427</a>
Appendix 8-1. Reporting .....	<a href="#">138427</a>
Appendix 9-1. Acid Rain Permit .....	<a href="#">141428</a>
Appendix 10-1. Cross State Air Pollution Rule (CSAPR) Trading Program Title V Requirements ..	<a href="#">156443</a>
<b>Section 2 – DTE Electric Company – Monroe Peakers.....</b>	<b><a href="#">169454</a></b>
<b>A. GENERAL CONDITIONS.....</b>	<b><a href="#">170455</a></b>
Permit Enforceability .....	<a href="#">170455</a>
General Provisions.....	<a href="#">170455</a>
Equipment & Design .....	<a href="#">171456</a>
Emission Limits.....	<a href="#">171456</a>
Testing/Sampling .....	<a href="#">171456</a>
Monitoring/Recordkeeping .....	<a href="#">172457</a>
Certification & Reporting .....	<a href="#">172457</a>
Permit Shield .....	<a href="#">173458</a>
Revisions .....	<a href="#">174459</a>
Reopenings.....	<a href="#">174459</a>
Renewals .....	<a href="#">175460</a>
Stratospheric Ozone Protection .....	<a href="#">175460</a>
Risk Management Plan .....	<a href="#">175460</a>
Emission Trading .....	<a href="#">175460</a>
Permit to Install (PTI) .....	<a href="#">176461</a>
<b>B. SOURCE-WIDE CONDITIONS .....</b>	<b><a href="#">177462</a></b>
<b>C. EMISSION UNIT CONDITIONS .....</b>	<b><a href="#">178463</a></b>
EMISSION UNIT SUMMARY TABLE .....	<a href="#">178463</a>
<b>D. FLEXIBLE GROUP CONDITIONS.....</b>	<b><a href="#">179464</a></b>
FLEXIBLE GROUP SUMMARY TABLE .....	<a href="#">179464</a>
FG-PEAKERS.....	<a href="#">180465</a>
<b>E. NON-APPLICABLE REQUIREMENTS .....</b>	<b><a href="#">183468</a></b>
<b>APPENDICES .....</b>	<b><a href="#">184469</a></b>
Appendix 1-2. Abbreviations and Acronyms.....	<a href="#">184469</a>
Appendix 2-2. Schedule of Compliance .....	<a href="#">185470</a>
Appendix 3-2. Monitoring Requirements .....	<a href="#">185470</a>
Appendix 4-2. Recordkeeping .....	<a href="#">185470</a>
Appendix 5-2. Testing Procedures .....	<a href="#">185470</a>
Appendix 6-2. Permits to Install.....	<a href="#">185470</a>

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

Appendix 7-2. Emission Calculations .....	185170
Appendix 8-2. Reporting .....	186174
<b>Section 3 – Monroe Fuels Company, LLC .....</b>	<b>187172</b>
<b>A. GENERAL CONDITIONS.....</b>	<b>188173</b>
Permit Enforceability .....	188173
General Provisions.....	188173
Equipment & Design .....	189174
Emission Limits.....	189174
Testing/Sampling .....	189174
Monitoring/Recordkeeping .....	190175
Certification & Reporting .....	190175
Permit Shield .....	191176
Revisions .....	192177
Reopenings.....	192177
Renewals .....	193178
Stratospheric Ozone Protection .....	193178
Risk Management Plan .....	193178
Emission Trading .....	193178
Permit to Install (PTI) .....	194179
<b>B. SOURCE-WIDE CONDITIONS .....</b>	<b>195180</b>
<b>C. EMISSION UNIT CONDITIONS .....</b>	<b>196181</b>
EMISSION UNIT SUMMARY TABLE .....	196181
EU-REFHS&BL.....	197182
<b>D. FLEXIBLE GROUP CONDITIONS.....</b>	<b>200185</b>
<b>E. NON-APPLICABLE REQUIREMENTS .....</b>	<b>201186</b>
<b>APPENDICES .....</b>	<b>202187</b>
Appendix 1-3. Abbreviations and Acronyms.....	202187
Appendix 2-3. Schedule of Compliance .....	203188
Appendix 3-3. Monitoring Requirements .....	203188
Appendix 4-3. Recordkeeping .....	203188
Appendix 5-3. Testing Procedures .....	203188
Appendix 6-3. Permits to Install.....	203188
Appendix 7-3. Emission Calculations .....	203188
Appendix 8-3. Reporting .....	204189

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

## AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined, subsumed and/or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

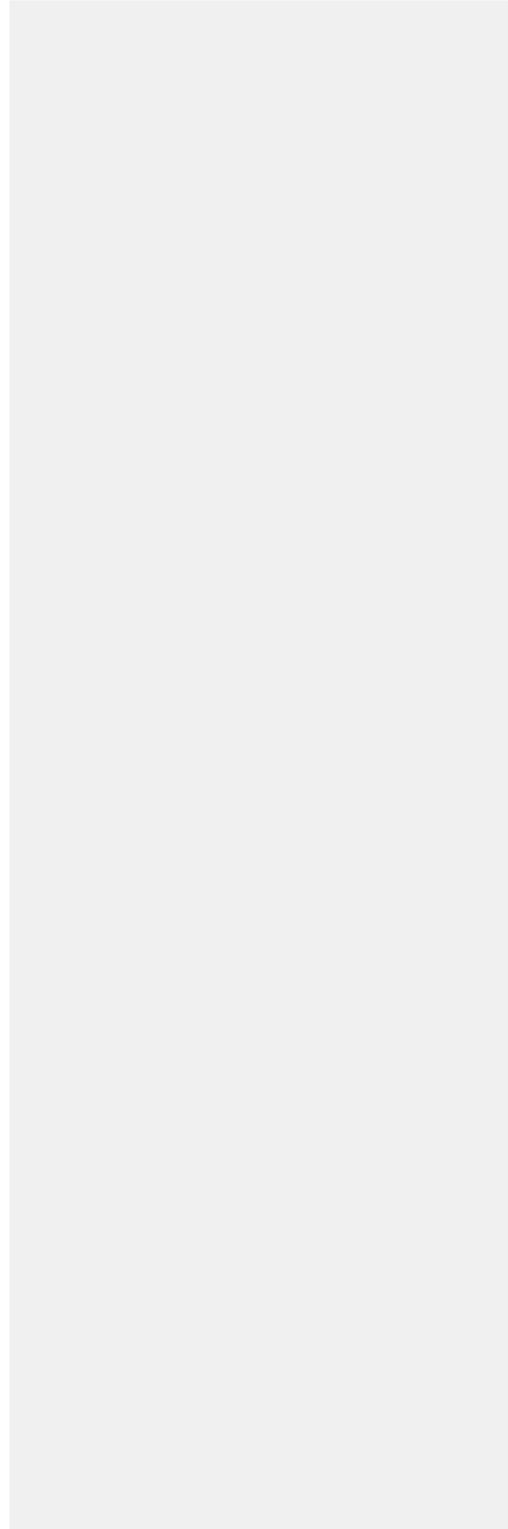
Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

This permit does not relieve the permittee from any responsibilities or obligations imposed on the permittee, at this source, under Consent Order No. AQD 26-2015 entered on September 18, 2015 between the EGLE and the permittee.

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-20XX  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-20XX

**Section 1 – DTE Electric Company – Monroe Power Plant**



## A. GENERAL CONDITIONS

### Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

### General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
  - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
  - c. Inspect, at reasonable times, any of the following:
    - i. Any stationary source.
    - ii. Any emission unit.
    - iii. Any equipment, including monitoring and air pollution control equipment.
    - iv. Any work practices or operations regulated or required under the ROP.
  - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

### Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).<sup>2</sup> **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

### Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"<sup>2</sup> **(R 336.1301(1))**
  - a. A 6-minute average of 20 % opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
  - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
  - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.<sup>1</sup> **(R 336.1901(a))**
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> **(R 336.1901(b))**

### Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).<sup>2</sup> **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

**Monitoring/Recordkeeping**

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
- The date, location, time, and method of sampling or measurements.
  - The dates the analyses of the samples were performed.
  - The company or entity that performed the analyses of the samples.
  - The analytical techniques or methods used.
  - The results of the analyses.
  - The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

**Certification & Reporting**

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
- For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
  - For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
  - For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**:
- Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
  - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.<sup>2</sup> **(R 336.1912)**

### Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
  - The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
- The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
  - The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
  - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
  - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
  - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
  - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
  - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

### Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

### Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
  - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
  - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
  - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

### Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

### Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

### Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
  - Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
  - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). **(40 CFR Part 68)**

### Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

**Permit to Install (PTI)**

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.<sup>2</sup> **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.<sup>2</sup> **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.<sup>2</sup> **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.<sup>2</sup> **(R 336.1201(4))**

**Footnotes:**

<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

## **B. SOURCE-WIDE CONDITIONS**

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

**C. EMISSION UNIT CONDITIONS**

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

**EMISSION UNIT SUMMARY TABLE**

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date/ Modification Date</b>	<b>Flexible Group ID</b>
EU-UNIT1	Boiler Unit No. 1 - Coal-fired boiler nominally rated 817 MW (gross) with low-NOx burners, Reduced Emissions Fuel (REF) sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD). Fires diesel fuel oil for boiler start-up.	01-01-1968 / 03-03-2006 / 12-21-2010	FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS
EU-UNIT2	Boiler Unit No. 2 - Coal-fired boiler nominally rated 823 MW (gross) with low-NOx burners, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD). Fires diesel fuel oil for boiler start-up.	01-01-1969 / 03-23-2005 / 12-21-2010	FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS
EU-UNIT3	Boiler Unit No. 3 - Coal-fired boiler nominally rated 823 MW (gross) with low-NOx burners, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD). Fires diesel fuel oil for boiler start-up.	06-01-1969 / 8-28-2006 / 08-02-2010	FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS
EU-UNIT4	Boiler Unit No. 4 - Coal-fired boiler nominally rated 817 MW (gross) with low-NOx burners, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD). Fires diesel fuel oil for boiler start-up.	06-01-1969 / 11-15-2005 / 08-02-2010	FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS
EU-WFGD-QP1	252 HP diesel fuel-fired engine to operate FGD quench pump and 350-gallon elevated storage tank for diesel fuel servicing the Unit 3 stack.	11-21-2006 / 08-02-2010	FG-ProjectPC1-4, FG-WFGD-QP1&2
EU-WFGD-QP2	252 HP diesel fuel-fired engine to operate FGD quench pump and 350-gallon elevated storage tank for diesel fuel servicing the Unit 4 stack.	11-21-2006 / 08-02-2010	FG-ProjectPC1-4, FG-WFGD-QP1&2
EU-WFGD-QP3	252 HP diesel fuel-fired engine to operate FGD quench pump and 350-gallon elevated storage tank for diesel fuel servicing the Unit 1 stack.	12-1-2013	FG-ProjectPC1-4, FG-WFGD-QP3&4

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-WFGD-QP4	252 HP diesel fuel-fired engine to operate FGD quench pump and 350-gallon elevated storage tank for diesel fuel servicing the Unit 2 stack.	4-1-2014	FG-ProjectPC1-4, FG-WFGD-QP3&4
EU-CASCADES	This emission unit represents coal handling activity in the Cascades room. Coal handling activity emissions are limited by an enclosure, wet dust suppression, and baghouse dust collectors.	01-01-1968 / 11-01-1980 / 08-02-2010	FG-ProjectPC1-4
EU-TRANSFERHS	This emission unit represents coal handling activity in the Transfer House. Coal handling activity emissions are limited by an enclosure, wet dust suppression, and baghouse dust collectors.	01-01-1968 / 11-01-1980 / 08-02-2010	FG-ProjectPC1-4
EU-DUMPERHS	This emission unit represents coal handling activity in the Dumper House. Coal handling activity emissions are limited by an enclosure, wet dust suppression, and baghouse dust collectors.	01-01-1968 / 11-01-1980 / 07-12-2012	FG-ProjectPC1-4
EU-COALUNLOAD	This emission unit represents the coal unloading activities from Great Lakes ships and includes storage and pile maintenance. Coal handling activity emissions are limited by enclosures and wet dust suppression methods.	01-01-1968 / 11-01-1980 / 08-02-2010	FG-ProjectPC1-4
EU-CRUSHERHS	This emission unit represents coal handling activity in the Crusher House. Coal handling activity emissions are limited by an enclosure and baghouse dust collectors.	01-01-1968 / 1-07-2005 / 08-02-2010	FG-ProjectPC1-4
EU-PETCOKE	This emission unit represents petroleum coke handling activity, including roadway traffic and pile maintenance. Emissions are limited by partial enclosures, including a portable wind screen, and wet dust suppression.	9-5-2013	FG-ProjectPC1-4
EU-LIMESTONE	This emission unit represents limestone handling activities and includes the ship unloading process, storage and pile maintenance, and reclaims activities – including any trucking activities, and the Prep building. Limestone handling activity emissions are limited by enclosures, wet dust suppression methods, or bin vent filters.	02-01-2008 / 08-02-2010 / 12-21-2010	FG-ProjectPC1-4
EU-GYPSUMHAND	This emission unit represents gypsum handling activity in the gypsum dewatering building and the gypsum storage and loading building. Gypsum handling activity emissions are limited by a building enclosure.	02-01-2008 / 08-02-2010 / 12-21-2010	FG-ProjectPC1-4
EU-HYDRATEDLIME	Storage and handling of hydrated lime. Hydrated lime is delivered via truck and is stored in a silo.	02-01-2008 / 08-02-2010 / 12-21-2010	FG-ProjectPC1-4
EU-SOUTHAX	South Auxiliary Boiler	01-01-1968 / 08-02-2010 / 12-21-2010	FG-AUXBOILERS, FG-MAJOR SOURCE

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-NORTHAUX	North Auxiliary Boiler	01-01-1968 / 08-02-2010 / 12-21-2010	FG-AUXBOILERS, FG-MAJOR SOURCE
EU-PARTSCLNRS	Parts Cleaning Stations	NA	FG-PARTSCLNRS
EU-FIREPUMP	#2 Screen house, Rule 285(2)(g) exempt, 300 BHp emergency diesel engine – Cummins	NA	FG-EMERGENS
EU-BLR1-MESB	MESB Building Rule 282(2)(b) exempt, 6.3 mmBtu/hr process heater, subject to 40 CFR Part 63 Subpart DDDDD (a.k.a. Boiler MACT)	NA	FG-MESBLDG
EU-BLR2-MESB	MESB Building Rule 282(2)(b) exempt, 6.3 mmBtu/hr process heater, subject to 40 CFR Part 63 Subpart DDDDD (a.k.a. Boiler MACT)	NA	FG-MESBLDG
EU-NSPS4iEngines	MI R336.1285(2) exempted diesel engines, model year 2008 or later, less than 25 Hp. Engines subject to 40 CFR Part 60, Subpart IIII as non-emergency stationary combustion ignition (CI) internal combustion engines (ICE) and meet 40 CFR Part 63 Subpart ZZZZ requirements by meeting the requirements of 40 CFR Part 60 Subpart IIII.	NA	FG-NSPS4I
EU-FlyAshStorage	A fly ash storage facility. The facility consists of two 75-ton surge silos (Nos. 1 and 2), a 3000-ton storage silo, a 200-ton load-out silo, and associated blowers, pressure pumps, compressors, pipe conveyor lines, and spouts. Particulate emissions from the loading of material into surge silo No. 1 are controlled by two filter receivers (FR-101 and FR-102). Particulate emissions from the transferring of material out of surge silo No. 1 are controlled by a bin vent filter (BH-101). Particulate emissions from the loading of material into surge silo No. 2 are controlled by two filter receivers (FR-201 and FR-202). Particulate emissions from the transferring of material out of surge silo No. 2 are controlled by a bin vent filter (BH-201). Particulate emissions from the storage silo will be controlled by a bin vent filter (BH-301). Particulate emissions from the loading of material into and the transfer of material out of (truck or railcar load-out) the load-out silo will be controlled by a bin vent filter (BH-401).	07/16/08	NA

**EU-UNIT1**  
**EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Coal-fired cell burner boiler nominally rated at a maximum heat input of 7,624 MMBtu per hour on a fuel input basis. The boiler serves a steam turbine electric generator nominally rated at 817 MW (gross). Fires diesel fuel oil for boiler start-up and flame stabilization.

**Flexible Group ID:** FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS

**POLLUTION CONTROL EQUIPMENT**

Low-NOx burners, overfire air, Reduced Emission Fuel (REF) sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	10 percent <sup>2</sup>	6-minute average except one 6-minute average per hour of not more than 20 percent	EU-UNIT1	SC V.1, SC V.2, SC VI.2	R 336.1301(1)(c), R 336.2810, 40 CFR 52.21(j)
2. PM	0.011 lb/MMBtu heat input <sup>2</sup>	24-hr rolling average as determined each hour the boiler operates	EU-UNIT1	SC V.1, SC V.2, SC VI.2	R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.2810, 40 CFR 52.21(j) <a href="#">Act 451, Section 324.5503(b): Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24(a)</a>
3. PM10	0.024 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FG-COALBLRCAM SC VI.1	R 336.2810, 40 CFR 52.21(j)
4. PM10	183.0 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FG-COALBLRCAM SC VI.1	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. SO <sub>2</sub>	0.107 lb/MMBtu heat input <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT1	SC VI.3, SC VI.7	R 336.1401, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S
6. SO <sub>2</sub>	815.8 pph <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT1	SC VI.3, SC VI.5, SC VI.7	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S
<del>7.</del> SO <sub>2</sub>	<del>0.100 lb/MMBtu<sup>2,4,5</sup></del>	<del>30-day rolling average emission rate<sup>2,4,5</sup></del>	<del>EU-UNIT1</del>	<del>SC VI.3, SC VI.10</del>	<del>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</del>
<del>78.</del> NO <sub>x</sub>	0.08 lb/MMBtu heat input <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT1	SC VI.3, SC VI.8	R 336.2810, 40 CFR 52.21(j)
<del>89.</del> NO <sub>x</sub>	222.6 ton/month <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT1	SC VI.3, SC VI.5, SC VI.8	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)
<del>10.</del> NO <sub>x</sub>	<del>0.090 lb/MMBtu<sup>2,4,5</sup></del>	<del>30-day rolling average emission rate<sup>2,4,5</sup></del>	<del>EU-UNIT1</del>	<del>SC VI.3, SC VI.10</del>	<del>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</del>
<del>911.</del> CO	0.15 lb/MMBtu heat input excluding periods of start-up and shutdown <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT1	SC VI.3, SC VI.9	R 336.2810, 40 CFR 52.21(j)
<del>4012.</del> CO	27,446.4 lb/day <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT1	SC VI.3, SC VI.5, SC VI.9	R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
<del>4413.</del> VOC	0.0034 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4214. VOC	25.9 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)
4315. Lead (Pb)	1.69 x 10 <sup>-5</sup> lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1901, R 336.2810, 40 CFR 52.21(j)
4416. Lead (Pb)	0.13 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.1901, R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
4517. Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	0.005 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC III.1, SC V.1, SC V.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4618. Hydrogen Chloride (HCl)	0.0024 lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FGMATS SC VI.5	R 336.1224, R 336.1225,
4719. Hydrogen Fluoride (HF)	0.00023 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FG- COALBLRCAM SC VI.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4820. Mercury (Hg)	0.02 lb/GW-hr gross energy output <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT1	SC V.1, SC V.2, SC VI.4, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
4921. Mercury (Hg)	143.1 lb/year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-UNIT1	SC V.1, SC V.2, SC VI.4, SC VI.5, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
2022. Arsenic (As)	6.3 x 10 <sup>-6</sup> lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT1	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1224, R 336.1225(2)

23. The permittee shall comply with the System-Wide Annual SO<sub>2</sub> and NO<sub>x</sub> Tonnage Limitations specified in Appendix 11-1-A. Emissions from EU-Unit1 shall be counted toward the system-wide total emissions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)

24. The permittee shall comply with the SO<sub>2</sub> and NO<sub>x</sub> use & surrender allowance and super-compliance allowance provisions listed in Appendix 11-1-B: Allowance Provisions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14-22)

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**II. MATERIAL LIMIT(S)**

1. The permittee shall only use diesel for the initial start-up fuel, flame stabilization, and overfiring. Start-up is defined in SC III.2. <sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.2810, 40 CFR 52.21(j))
2. The permittee shall only combust bituminous coal, subbituminous coal, and up to 23,652 tons per calendar month of petroleum coke in EU-UNIT1. <sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2810, 40 CFR 52.21(j))

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EU-UNIT1 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of the process and emission control equipment, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
2. Start-up is defined as the period of time from initiation of combustion firing until the unit reaches steady state operation and the SCR is brought into service upon the flue gas reaching a minimum operating temperature for the SCR of 650°F. Shutdown is defined as that period of time beginning when the flue gas temperature entering the SCR drops below the operating temperature of the SCR system. <sup>2</sup> (R 336.1912, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT1 unless an emissions minimization plan for all start-ups and shutdowns is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. <sup>2</sup> (R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

3-4. The permittee shall continuously operate the SCR and FGD systems and each PM control device for EU-Unit1 and use good air pollution control practices to minimize emission reductions at all times when EU-Unit1 is in operation.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 10 & 23)

See Appendix 3-1-C

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**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The maximum design heat input rate of EU-UNIT1 shall not exceed 7,624 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis. <sup>2</sup> (R 336.1205(1)(a) and (1)(b))
2. The permittee shall not operate EU-UNIT1 unless the low-NOx burners, overfire air, SCR system, ESP, and wet FGD system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT1 as required in SC III.1. <sup>2</sup> (R 336.1224, R 336.1225, R 336.1901, R 336.1910, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT1 unless the REF sorbent system is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT1 as required in SC III.1. <sup>2</sup> (R 336.1225, R 336.1910)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a process monitor to measure mercury emissions from the unit and provide real time indicators of potential noncompliance. This process

monitor, because it does not meet EPA Specification 12A, is in addition to the certified mercury monitoring system which provides quality assured data used in emissions reporting and compliance verification under the Mercury Air Toxics rule. Satisfactory manner includes operating the process monitor on a continuous basis to obtain mercury emission data such that the permittee can initiate corrective actions in the event of elevated mercury emissions. Satisfactory manner includes operating and maintaining the process monitor in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201, Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 16)

- The permittee shall install and maintain a halogenated compound application system (e.g. calcium bromide) in a satisfactory manner to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. Satisfactory manner includes operating the application system when the mercury process monitor demonstrates elevated mercury emissions, and as otherwise needed for mercury emissions control in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201 Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 17)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall verify visible emissions, PM, PM10, PM2.5, VOC, Pb, As, H<sub>2</sub>SO<sub>4</sub>, HCl, HF, and Hg emission rates from EU-UNIT1 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Sulfuric Acid Mist	40 CFR Part 60, Appendix A
Total Fluoride	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A
Mercury	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B
HAPs	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. <sup>2</sup> (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

- The permittee shall verify the visible emissions, PM, PM10, VOC, Pb, As, H<sub>2</sub>SO<sub>4</sub>, HCl, HF, and Hg emission rates from EU-UNIT1, at a minimum, every five years from the date of the last test. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall verify the PM2.5 emission rates from EU-UNIT1, and at a minimum, must complete the test once every calendar year for the next ten years of operation after the modification on January 29, 2014. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days of the time and place before performance tests are conducted. (R 336.1213(3), R 336.2001(4))

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 30<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the PM emissions from EU-UNIT1 on a continuous basis. The permittee shall install and operate the CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1-A and 3-1-B. The permittee shall also meet the following requirements:<sup>2</sup> (40 CFR 52.21(j), R 336.1201, R 336.1205, R 336.1301, R 336.1303, R 336.1331, R 336.1901, R 336.1911, R 336.2810, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 25 & 26)
  - a. The MAP required in SC III.1 shall include provisions for alternative monitoring in the event that the PM CEM is out of control based upon the results of quality assurance tests conducted in accordance with Procedure 2 of 40 CFR Part 60 (Appendix F). This alternative monitoring shall, unless alternate methods and frequencies are approved in writing by the AQD District Supervisor, require verification of the presence of visible emissions by taking 6-minute visible emission readings for EU-UNIT1 a minimum of once per calendar day when the boiler is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
    - i. The permittee shall perform the 6-minute visible emission readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.
    - ii. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using federal Reference Test Method 9 (40 CFR Part 60 (Appendix A)).
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner device(s) to monitor and record the SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and oxygen or carbon dioxide (O<sub>2</sub> or CO<sub>2</sub>) content of the exhaust gas from EU-UNIT1 on a continuous basis. Satisfactory manner means the permittee should follow the recommendations of the device vendor/system's designer to ensure proper installation, maintenance, and operation. The permittee shall install and operate each CEM to meet the timelines, requirements, and reported detailed in Appendix 3-1-A.<sup>2</sup> (40 CFR 52.21(j), 40 CFR Part 51, Appendix S, R 336.2902(2)(c), R 336.1205, R 336.2810)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the mercury emissions from EU-UNIT1 on a continuous basis. The permittee shall install and operate an Hg monitor to meet the timelines, requirements and reporting detailed in Appendix 3-1-A.<sup>2</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2))
5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the exhaust gas flow rate from EU-UNIT1 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in Appendix 3-1-A.<sup>2</sup> (R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EU-UNIT1 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in 40 CFR 60.49Da(k).<sup>1</sup> (R 336.1224)
7. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average SO<sub>2</sub> emission rate and mass records for EU-UNIT1, as described in emission limits SC 1.5 and 1.6, respectively. Satisfactory manner means in a manner of that is clear to understand and read. <sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)

8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average NO<sub>x</sub> emission rate and mass records for EU-UNIT1, as described in emission limits SC I.7, and I.8. <sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
9. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average CO emission rate and mass records for EU-UNIT1, as described in emission limits SC I.9 and I.10. <sup>2</sup> (R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j))

10. For purposes of determining compliance with the 30-day rolling average emission rates for SO<sub>2</sub> and NO<sub>x</sub> as found in SC I.7 and SC I.10, the permittee shall use emission data obtained from a CEMS in accordance with the procedures of 40 CFR part 75, except that the emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 12)

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40-11. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records for EU-UNIT1, as described in emission limits SC I.18 and SC I.19. If the monitoring required by SC VI.4 is only capable of detecting gaseous mercury, the permittee shall use the testing required by SC V.9 to develop a correction factor to adjust the mercury monitoring data to total mercury. Based on the available testing and monitoring data, the correction factor may be adjusted upon review and approval of the AQD District Supervisor. <sup>1</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b))

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44-12. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:

- a. Compliance tests and any testing required under the special conditions of this permit;
- b. Monitoring data;
- c. Heat input calculations required to show compliance with SC IV.1;
- d. Identification, type and the amounts of all fuels combusted in EU-UNIT1 on a calendar month basis;
- e. Total gigawatt-hours of energy produced on a monthly basis;
- f. Records of the duration of all times EU-UNIT1 is operated under start-up or shutdown conditions as defined in SC III.2;
- g. All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and made available to the Department upon request. <sup>2</sup> (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.1301, R 336.1331, R 336.1401, R 336.1702(a), R 336.1901, R 336.1912, R 336.2802(4), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

See Appendix 3-1-A and 3-1-B

## VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit an excess emission report (EER) and summary report in an acceptable format to the AQD District Supervisor and the TPU Supervisor within 30 days following the end of each calendar quarter as specified in 40 CFR 60.7(c) and (d). The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information: <sup>2</sup> **(R 336.1205, R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804, R 336.2810, R 336.2902(2)(c), 40 CFR Part 51, Appendix S, 40 CFR 52.21(c), (d), and (j), 40 CFR 60.7(c) and (d))**
  - a. A report of each exceedance above the limits specified in the emission limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
  - b. A report of all periods of the Continuous Emission Monitoring and Continuous Emission Rate Monitoring System (CEMS/CERMS), and if applicable Predictive Emission Monitoring System (PEMS), downtime and corrective action.
  - c. A report of the total operating time of the boiler during the reporting period.
  - d. A report of any periods that the CEMS/CERMS, and if applicable PEMS, exceed the instrument range.
  - e. If no exceedances or CEMS/CERMS, and if applicable PEMS, downtime occurred during the reporting period, the permittee shall report that fact.

5. The permittee shall submit any performance test reports, including RATA reports, to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. <sup>2</sup> **(R 336.1213(3)(c), R 336.2001(5), R 336.2156(c))**

5.6. The permittee shall submit a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December) to demonstrate compliance with the Consent Decree as specified in Appendix 8-1-B.<sup>2,4,5</sup> **(R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 48)**

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See Appendix 8-1

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV015-001	336 <sup>2</sup>	579 <sup>2</sup>	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the acid rain permitting provisions of 40 CFR Part 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-1733-2019 is hereby incorporated into this ROP as Appendix 9-1. **(R 336.1902(1)(q))**
2. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1902(1)(q) and 40 CFR Part 72.9(c)(1)(i). **(R 336.1213(10))**

3. An affected existing EGU shall meet the requirements of Part 15 Emission Limitations and Prohibitions – Mercury. **(R 336.2503(1))**
4. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NOx Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart AAAAA)**
5. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NOx Ozone Season Group 2 Trading Program, as specified in 40 CFR Part 97, Subpart EEEEE, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart EEEEE)**
6. The permittee shall comply with the provisions of the Cross State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart CCCCC)**

**Footnotes:**

<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

<sup>3</sup>This condition is federally enforceable and was originally established in the consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of the consent decree.

<sup>4</sup>This condition is federally enforceable and was originally established in the consent decree settling “U.S. v. DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of this consent decree.

<sup>5</sup>Definitions specific to this condition may be found in Appendix 1-1-B.

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**EU-UNIT2  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Coal-fired cell burner boiler nominally rated at a maximum heat input of 7,624 MMBtu per hour on a fuel input basis. The boiler serves a steam turbine electric generator nominally rated at 823 MW (gross). Fires No. 2 fuel oil for boiler start-up and flame stabilization.

**Flexible Group ID:** FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS

**POLLUTION CONTROL EQUIPMENT**

Low-NOx burners, overfire air, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	10 percent <sup>2</sup>	6-minute average except one 6-minute average per hour of not more than 20 percent	EU-UNIT2	SC V.1, SC V.2 SC VI.2	R 336.1301(1)(c), R 336.2810, 40 CFR 52.21(j)
2. PM	0.011 lb/MMBtu heat input <sup>2</sup>	24-hr rolling average as determined each hour the boiler operates	EU-UNIT2	SC V.1, SC V.2 SC VI.2	R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.2810, 40 CFR 52.21(j) <a href="#"><u>Act 451, Section 324.5503(b): Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24(a)</u></a>
3. PM10	0.024 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2810, 40 CFR 52.21(j)
4. PM10	183.0 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)
5. SO <sub>2</sub>	0.107 lb/MMBtu heat input <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT2	SC VI.3, SC VI.7	R 336.1401, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. SO <sub>2</sub>	815.8 pph <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT2	SC VI.3, SC VI.5, SC VI.7	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S
7. SO <sub>2</sub>	<u>0.100 lb/MMBtu<sup>2,4,5</sup></u>	<u>30-day rolling average emission rate<sup>2,4,5</sup></u>	<u>EU-UNIT1</u>	<u>SC VI.3, SC VI.10</u>	<u>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</u>
78. NOx	0.08 lb/MMBtu heat input <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT2	SC VI.3, SC VI.8	R 336.2810, 40 CFR 52.21(j)
89. NOx	222.6 ton/month <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT2	SC VI.3, SC VI.5, SC VI.8	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)
10. NO <sub>x</sub>	<u>0.090 lb/MMBtu<sup>2,4,5</sup></u>	<u>30-day rolling average emission rate<sup>2,4,5</sup></u>	<u>EU-UNIT1</u>	<u>SC VI.3, SC VI.10</u>	<u>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</u>
911. CO	0.15 lb/MMBtu heat input excluding periods of start-up and shutdown <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT2	SC VI.3, SC VI.9	R 336.2810, 40 CFR 52.21(j)
4012. CO	27,446.4 lb/day <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT2	SC VI.3, SC VI.5, SC VI.9	R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
4413. VOC	0.0034 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)
4214. VOC	25.9 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4315. Lead (Pb)	1.69 x 10 <sup>-5</sup> lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1901, R 336.2810, 40 CFR 52.21(j)
4416. Lead (Pb)	0.13 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.1901, R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
4517. Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	0.005 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC III.1, SC V.1, SC V.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4618. Hydrogen Chloride (HCl)	0.0024 lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FGMATS SC VI.5	R 336.1224, R 336.1225,
4719. Hydrogen Fluoride (HF)	0.00023 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FG- COALBLRCAM SC VI.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4820. Mercury (Hg)	0.02 lb/GW-hr gross energy output <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT2	SC V.1, SC V.2, SC VI.4, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
4921. Mercury (Hg)	144.2 lb/year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-UNIT2	SC V.1, SC V.2, SC VI.4, SC VI.5, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
2022. Arsenic (As)	6.3 x 10 <sup>-6</sup> lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT2	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1224, R 336.1225(2)

23. The permittee shall comply with the System-Wide Annual SO<sub>2</sub> and NO<sub>x</sub> Tonnage Limitations specified in Appendix 11-1-A. Emissions from EU-Unit1 shall be counted toward the system-wide total emissions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)
24. The permittee shall comply with the SO<sub>2</sub> and NO<sub>x</sub> use & surrender allowance and super-compliance allowance provisions listed in Appendix 11-1-B: Allowance Provisions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14-22)

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**II. MATERIAL LIMIT(S)**

1. The permittee shall only use diesel for the initial start-up fuel, flame stabilization, and overfiring. Start-up is defined in SC III.2.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.2810, 40 CFR 52.21(j))

2. The permittee shall only combust bituminous coal, subbituminous coal, and up to 23,652 tons per calendar month of petroleum coke in EU-UNIT2.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2810, 40 CFR 52.21(j))

### III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-UNIT2 unless a MAP as described in Rule 911(2), for operation of the process and emission control equipment, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
2. Start-up is defined as the period of time from initiation of combustion firing until the unit reaches steady state operation and the SCR (after start-up and shakedown) is brought into service upon the flue gas reaching a minimum operating temperature for the SCR of 650°F. Shutdown is defined as that period of time beginning when the flue gas temperature entering the SCR drops below the operating temperature of the SCR system.<sup>2</sup> (R 336.1912, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT2 unless an emissions minimization plan for start-ups and shutdowns has been implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices.<sup>2</sup> (R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
4. The permittee shall continuously operate the SCR and FGD systems and each PM control device for EU-Unit1 and use good air pollution control practices to minimize emission reductions at all times when EU-Unit1 is in operation.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 10 & 23)

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See Appendix 3-1-C

### IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input rate of EU-UNIT2 shall not exceed 7,624 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis.<sup>2</sup> (R 336.1205(1)(a) and (1)(b))
2. The permittee shall not operate EU-UNIT2 unless the low-NOx burners, overfire air, SCR system, ESP, and wet FGD system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT2 as required in SC III.1.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1901, R 336.1910, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT2 unless the REF sorbent system is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT2 as required in SC III.1.<sup>2</sup> (R 336.1225, R 336.1910)

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a process monitor to measure mercury emissions from the unit and provide real time indicators of potential noncompliance. This process monitor, because it does not meet EPA Specification 12A, is in addition to the certified mercury monitoring system which provides quality assured data used in emissions reporting and compliance verification under the Mercury Air Toxics rule. Satisfactory manner includes operating the process monitor on a continuous basis to obtain mercury emission data such that the permittee can initiate corrective actions in the event of elevated mercury emissions. Satisfactory manner includes operating and maintaining the process monitor in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201, Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 16)
5. The permittee shall install and maintain a halogenated compound application system (e.g. calcium bromide) in a satisfactory manner to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. Satisfactory manner includes operating the application system when the mercury process monitor demonstrates elevated mercury emissions, and as otherwise needed for mercury emissions control in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201 Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 17)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall verify visible emissions, PM, PM10, PM2.5, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT2 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Sulfuric Acid Mist	40 CFR Part 60, Appendix A
Total Fluoride	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A
Mercury	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B
HAPs	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. <sup>2</sup> (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

2. The permittee shall verify the visible emissions, PM, PM10, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT2, at a minimum, every five years from the date of the last test. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
3. The permittee shall verify the PM2.5 emission rates from EU-UNIT2, and at a minimum, must complete the test once every calendar year for the next ten years of operation after the modification on November 13, 2014. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days of the time and place before performance tests are conducted. (R 336.1213(3), R 336.2001(4))

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 30<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the PM emissions from EU-UNIT2 on a continuous basis. The permittee shall install and operate the CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1-A and 3-1-B. The permittee shall also meet the following requirements:<sup>2</sup> (40 CFR 52.21(j), R 336.1201, R 336.1205, R 336.1301, R 336.1303, R 336.1331, R 336.1901, R 336.1911, R 336.2810, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 25 & 26)
  - a. The MAP required in SC III.1 shall include provisions for alternative monitoring in the event that the PM CEM is out of control based upon the results of quality assurance tests conducted in accordance with Procedure 2 of 40 CFR Part 60 (Appendix F). This alternative monitoring shall, unless alternate methods and frequencies are approved in writing by the AQD District Supervisor, require verification of the presence of visible emissions by taking 6-minute visible emission readings for EU-UNIT2 a minimum of once per calendar day when the boiler is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
    - i. The permittee shall perform the 6-minute visible emission readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.
    - ii. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using federal Reference Test Method 9 (40 CFR Part 60 (Appendix A)).
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner device(s) to monitor and record the SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and oxygen or carbon dioxide (O<sub>2</sub> or CO<sub>2</sub>) content of the exhaust gas from EU-UNIT2 on a continuous basis. The permittee shall install and operate each CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1-A.<sup>2</sup> (R 336.1205, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the mercury emissions from EU-UNIT2 on a continuous basis. The permittee shall install and operate an Hg monitor to meet the timelines, requirements and reporting detailed in Appendix 3-1-A.<sup>2</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2))
5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the exhaust gas flow rate from EU-UNIT2 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in Appendix 3-1-A.<sup>2</sup> (R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EU-UNIT2 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in 40 CFR 60.49Da(k).<sup>1</sup> (R 336.1224)
7. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average SO<sub>2</sub> emission rate and mass records for EU-UNIT2, as described in emission limits SC I.5 and I.6, respectively.<sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)

8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average NO<sub>x</sub> emission rate and mass records for EU-UNIT2, as described in emission limits SC I.7, and I.8.<sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
9. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average CO emission rate and mass records for EU-UNIT2, as described in emission limits SC I.9 and I.10.<sup>2</sup> (R 336.2804, R 336.2810, 40 CFR 52.21(d), and (j))

10. For purposes of determining compliance with the 30-day rolling average emission rates for SO<sub>2</sub> and NO<sub>x</sub> as found in SC I.7 and SC I.10, the permittee shall use emission data obtained from a CEMS in accordance with the procedures of 40 CFR part 75, except that the emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 12)

40-11. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records for EU-UNIT2, as described in emission limits SC I.18 and SC I.19. If the monitoring required by SC VI.4 is only capable of detecting gaseous mercury, the permittee shall use the testing required by SC V.9 to develop a correction factor to adjust the mercury monitoring data to total mercury. Based on the available testing and monitoring data, the correction factor may be adjusted upon review and approval of the AQD District Supervisor.<sup>1</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b))

44-12. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:

- a. Compliance tests and any testing required under the special conditions of this permit;
- b. Monitoring data;
- c. Heat input calculations required to show compliance with SC IV.1;
- d. Identification, type and the amounts of all fuels combusted in EU-UNIT2 on a calendar month basis;
- e. Total gigawatt-hours of energy produced on a monthly basis;
- f. Records of the duration of all times EU-UNIT2 is operated under start-up or shutdown conditions as defined in SC III.2;
- g. All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and made available to the Department upon request.<sup>2</sup> (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.1301, R 336.1331, R 336.1401, R 336.1702(a), R 336.1901, R 336.1912, R 336.2802(4), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

See Appendix 3-1-A and 3-1-B

## VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit an excess emission report (EER) and summary report in an acceptable format to the AQD District Supervisor and the TPU Supervisor within 30 days following the end of each calendar quarter as specified in 40 CFR 60.7(c) and (d). The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:<sup>2</sup> **(R 336.1205, R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804, R 336.2810, R 336.2902(2)(c), 40 CFR Part 51, Appendix S, 40 CFR 52.21(c), (d), and (j), 40 CFR 60.7(c) and (d))**
  - a. A report of each exceedance above the limits specified in the emission limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
  - b. A report of all periods of the Continuous Emission Monitoring and Continuous Emission Rate Monitoring System (CEMS/CERMS), and if applicable Predictive Emission Monitoring System (PEMS), downtime and corrective action.
  - c. A report of the total operating time of the boiler during the reporting period.
  - d. A report of any periods that the CEMS/CERMS, and if applicable PEMS, exceed the instrument range.
  - e. If no exceedances or CEMS/CERMS, and if applicable PEMS, downtime occurred during the reporting period, the permittee shall report that fact.
5. The permittee shall submit any performance test reports including RATA reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5), R 336.2156(c))**
6. The permittee shall submit a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December) to demonstrate compliance with the Consent Decree as specified in Appendix 8-1-B.<sup>2,4,5</sup> **(R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 48)**

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6. See Appendix 8-1

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV015-002	336 <sup>2</sup>	579 <sup>2</sup>	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the acid rain permitting provisions of 40 CFR Part 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-1733-2019 is hereby incorporated into this ROP as Appendix 9-1. **(R 336.1902(1)(q))**
2. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1902(1)(q) and 40 CFR Part 72.9(c)(1)(i). **(R 336.1213(10))**
3. An affected existing EGU shall meet the requirements of Part 15 Emission Limitations and Prohibitions – Mercury. **(R 336.2503(1))**
4. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart AAAAA)**
5. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Ozone Season Group 2 Trading Program, as specified in 40 CFR Part 97, Subpart EEEEE, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart EEEEE)**
6. The permittee shall comply with the provisions of the Cross State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart CCCCC)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

<sup>3</sup>This condition is federally enforceable and was originally established in the consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of the consent decree.

<sup>4</sup>[This condition is federally enforceable and was originally established in the consent decree settling “U.S. v. DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020” and also pursuant to Act 451, Section 324.5503\(b\), and will remain in effect after termination of this consent decree.](#)

<sup>5</sup>[Definitions specific to this condition may be found in Appendix 1-1-B.](#)

**EU-UNIT3  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Coal-fired cell burner boiler nominally rated at a maximum heat input of 7,624 MMBtu per hour on a fuel input basis. The boiler serves a steam turbine electric generator nominally rated at 823 MW (gross). Fires No. 2 fuel oil for boiler start-up and flame stabilization.

**Flexible Group ID:** FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS

**POLLUTION CONTROL EQUIPMENT**

Low-NOx burners, overfire air, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	10 percent <sup>2</sup>	6-minute average except one 6-minute average per hour of not more than 20 percent	EU-UNIT3	SC V.1, SC V.2, SC VI.2	R 336.1301(1)(c) R 336.2810 40 CFR 52.21(j)
2. PM	0.011 lb/MMBtu heat input <sup>2</sup>	24-hr rolling average as determined each hour the boiler operates	EU-UNIT3	SC V.1, SC V.2, SC VI.2	R 336.1224 R 336.1225 R 336.1331(1)(c) R 336.2810 40 CFR 52.21(j) <a href="#">Act 451, Section 324.5503(b): Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24(a)</a>
3. PM10	0.024 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2810 40 CFR 52.21(j)
4. PM10	183.0 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2803 R 336.2804 R 336.2810, 40 CFR 52.21(c), (d), and (j)
5. SO <sub>2</sub>	0.107 lb/MMBtu heat input <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT3	SC VI.3, SC VI.7	R 336.1401 R 336.2810 40 CFR 52.21(j) R 336.2902(2)(c) 40 CFR Part 51, Appendix S

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
6. SO <sub>2</sub>	815.8 pph <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT3	SC VI.3, SC VI.5, SC VI.7	R 336.2803 R 336.2804 R 336.2810 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c) 40 CFR Part 51, Appendix S
7. SO <sub>2</sub>	<u>0.100 lb/MMBtu<sup>2,4,5</sup></u>	<u>30-day rolling average emission rate<sup>2,4,5</sup></u>	<u>EU-UNIT1</u>	<u>SC VI.3, SC VI.10</u>	<u>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</u>
78. NOx	0.08 lb/MMBtu heat input <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT3	SC VI.3, SC VI.8	R 336.2810 40 CFR 52.21(j)
89. NOx	222.6 ton/month <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT3	SC VI.3, SC VI.5, SC VI.8	R 336.2803 R 336.2804 R 336.2810 40 CFR 52.21(c), (d), and (j)
10. NO <sub>x</sub>	<u>0.090 lb/MMBtu<sup>2,4,5</sup></u>	<u>30-day rolling average emission rate<sup>2,4,5</sup></u>	<u>EU-UNIT1</u>	<u>SC VI.3, SC VI.10</u>	<u>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</u>
911. CO	0.15 lb/MMBtu heat input excluding periods of start-up and shutdown <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT3	SC VI.3, SC VI.9	R 336.2810 40 CFR 52.21(j)
4012. CO	27,446.4 lb/day <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT3	SC VI.3, SC VI.5, SC VI.9	R 336.2804 R 336.2810 40 CFR 52.21(d) and (j)
4413. VOC	0.0034 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC III.1, SC V.1, SC V.2	R 336.1122(f) R 336.1224 R 336.1225 R 336.1702(a) R 336.2810 40 CFR 52.21(j)
4214. VOC	25.9 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC III.1, SC V.1, SC V.2	R 336.1122(f) R 336.1224 R 336.1225 R 336.1702(a) R 336.2810 40 CFR 52.21(j)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4315. Lead (Pb)	1.69 x 10 <sup>-5</sup> lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1901 R 336.2810 40 CFR 52.21(j)
4416. Lead (Pb)	0.13 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.1901 R 336.2804 R 336.2810 40 CFR 52.21(d) and (j)
4517. Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	0.005 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC III.1, SC V.1, SC V.2	R 336.1224 R 336.1225 R 336.2810 40 CFR 52.21(j)
4618. Hydrogen Chloride (HCl)	0.0024 lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FGMATS SC VI.5	R 336.1224 R 336.1225
4719. Hydrogen Fluoride (HF)	0.00023 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FG- COALBLRCAM SC VI.2	R 336.1224 R 336.1225 R 336.2810 40 CFR 52.21(j)
4820. Mercury (Hg)	0.02 lb/GW-hr gross energy output <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT3	SC V.1, SC V.2, SC VI.4, SC VI.6, SC VI.10	R 336.1224 R 336.1228 R 336.1229(2)(b) R 336.2503(2)
4921. Mercury (Hg)	144.2 lb/year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-UNIT3	SC V.1, SC V.2, SC VI.4, SC VI.5, SC VI.6, SC VI.10	R 336.1224 R 336.1228 R 336.1229(2)(b) R 336.2503(2)
2022. Arsenic (As)	6.3 x 10 <sup>-6</sup> lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT3	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1224 R 336.1225(2)

23. The permittee shall comply with the System-Wide Annual SO<sub>2</sub> and NO<sub>x</sub> Tonnage Limitations specified in Appendix 11-1-A. Emissions from EU-Unit1 shall be counted toward the system-wide total emissions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)
24. The permittee shall comply with the SO<sub>2</sub> and NO<sub>x</sub> use & surrender allowance and super-compliance allowance provisions listed in Appendix 11-1-B: Allowance Provisions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14-22)

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**II. MATERIAL LIMIT(S)**

- The permittee shall only use diesel for the initial start-up fuel, flame stabilization, and overfiring. Start-up is defined in SC III.2.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.2810, 40 CFR 52.21(j))

- The permittee shall only combust bituminous coal, subbituminous coal, and up to 23,652 tons per calendar month of petroleum coke in EU-UNIT3.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2810, 40 CFR 52.21(j))

### III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate EU-UNIT3 unless a MAP as described in Rule 911(2), for operation of the process and emission control equipment, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
- Start-up is defined as the period of time from initiation of combustion firing until the unit reaches steady state operation and the SCR is brought into service upon the flue gas reaching a minimum operating temperature for the SCR of 650°F. Shutdown is defined as that period of time beginning when the flue gas temperature entering the SCR drops below the operating temperature of the SCR system.<sup>2</sup> (R 336.1912, R 336.2810, 40 CFR 52.21(j))
- The permittee shall not operate EU-UNIT3 unless an emissions minimization plan for start-ups and shutdowns has been implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices.<sup>2</sup> (R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
- The permittee shall continuously operate the SCR and FGD systems and each PM control device for EU-Unit1 and use good air pollution control practices to minimize emission reductions at all times when EU-Unit1 is in operation.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 10 & 23)

See Appendix 3-1-C

### IV. DESIGN/EQUIPMENT PARAMETER(S)

- The maximum design heat input rate of EU-UNIT3 shall not exceed 7,624 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis.<sup>2</sup> (R 336.1205(1)(a) and (1)(b))
- The permittee shall not operate EU-UNIT3 unless the low-NOx burners, overfire air, SCR system, ESP, and wet FGD system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT3 as required in SC III.1.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1901, R 336.1910, R 336.2810, 40 CFR 52.21(j))
- The permittee shall not operate EU-UNIT3 unless the REF sorbent system is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT3 as required in SC III.1.<sup>2</sup> (R 336.1225, R 336.1910)
- The permittee shall install, calibrate, maintain and operate in a satisfactory manner a process monitor to measure mercury emissions from the unit and provide real time indicators of potential noncompliance. This process monitor, because it does not meet EPA Specification 12A, is in addition to the certified mercury monitoring system which provides quality assured data used in emissions reporting and compliance verification under the Mercury

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Air Toxics rule. Satisfactory manner includes operating the process monitor on a continuous basis to obtain mercury emission data such that the permittee can initiate corrective actions in the event of elevated mercury emissions. Satisfactory manner includes operating and maintaining the process monitor in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201, Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 16)

- The permittee shall install and maintain a halogenated compound application system (e.g. calcium bromide) in a satisfactory manner to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. Satisfactory manner includes operating the application system when the mercury process monitor demonstrates elevated mercury emissions, and as otherwise needed for mercury emissions control in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201 Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 17)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall verify visible emissions, PM, PM10, PM2.5, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT3 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Sulfuric Acid Mist	40 CFR Part 60, Appendix A
Total Fluoride	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A
Mercury	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B
HAPs	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. <sup>2</sup> (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

- The permittee shall verify the visible emissions, PM, PM10, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT3, at a minimum, every five years from the date of the last test. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall verify the PM2.5 emission rates from EU-UNIT3, and at a minimum, must complete the test once every calendar year for the next ten years of operation after the modification in November 2009. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days of the time and place before performance tests are conducted. (R 336.1213(3), R 336.2001(4))

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 30<sup>th</sup> day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)**
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the PM emissions from EU-UNIT3 on a continuous basis. The permittee shall install and operate the CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1-A and 3-1-B. The permittee shall also meet the following requirements:<sup>2</sup> **(R 336.1201, R 336.1205, R 336.1301, R 336.1303, R 336.1331, R 336.1901, R 336.1911, R 336.2810, 40 CFR 52.21(j), 40 CFR 64.6(c)(1)(iii), Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 25 & 26)**
  - a. The MAP required in SC III.1 shall include provisions for alternative monitoring in the event that the PM CEM is out of control based upon the results of quality assurance tests conducted in accordance with Procedure 2 of 40 CFR Part 60 (Appendix F). This alternative monitoring shall, unless alternate methods and frequencies are approved in writing by the AQD District Supervisor, require verification of the presence of visible emissions by taking 6-minute visible emission readings for EU-UNIT3 a minimum of once per calendar day when the boiler is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
    - i. The permittee shall perform the 6-minute visible emission readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.
    - ii. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using federal Reference Test Method 9 (40 CFR Part 60 (Appendix A)).
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner device(s) to monitor and record the SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and oxygen or carbon dioxide (O<sub>2</sub> or CO<sub>2</sub>) content of the exhaust gas from EU-UNIT3 on a continuous basis. The permittee shall install and operate each CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1-A.<sup>2</sup> **(R 336.1205, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S, 40 CFR 64.6(c)(1)(iii))**
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the mercury emissions from EU-UNIT3 on a continuous basis. The permittee shall install and operate an Hg monitor to meet the timelines, requirements and reporting detailed in Appendix 3-1-A.<sup>2</sup> **(R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2))**
5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the exhaust gas flow rate from EU-UNIT3 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in Appendix 3-1-A.<sup>2</sup> **(R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)**
6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EU-UNIT3 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in 40 CFR 60.49Da(k).<sup>1</sup> **(R 336.1224)**
7. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average SO<sub>2</sub> emission rate and mass records for EU-UNIT3, as described in emission limits SC I.5 and I.6, respectively.<sup>2</sup> **(R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)**
8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average NO<sub>x</sub> emission rate and mass records for EU-UNIT3, as described in emission limits SC I.7, and I.8. <sup>2</sup> **(R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))**

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9. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average CO emission rate and mass records for EU-UNIT3, as described in emission limits SC I.9 and I.10. <sup>2</sup> (R 336.2804, R 336.2810, 40 CFR 52.21(d), and (j))

10. For purposes of determining compliance with the 30-day rolling average emission rates for SO<sub>2</sub> and NO<sub>x</sub> as found in SC I.7 and SC I.10, the permittee shall use emission data obtained from a CEMS in accordance with the procedures of 40 CFR part 75, except that the emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 12)

40.11. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records for EU-UNIT3, as described in emission limits SC I.18 and SC I.19. If the monitoring required by SC VI.4 is only capable of detecting gaseous mercury, the permittee shall use the testing required by SC V.9 to develop a correction factor to adjust the mercury monitoring data to total mercury. Based on the available testing and monitoring data, the correction factor may be adjusted upon review and approval of the AQD District Supervisor.<sup>1</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b))

44.12. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:

- a. Compliance tests and any testing required under the special conditions of this permit;
- b. Monitoring data;
- c. Heat input calculations required to show compliance with SC IV.1;
- d. Identification, type and the amounts of all fuels combusted in EU-UNIT3 on a calendar month basis;
- e. Total gigawatt-hours of energy produced on a monthly basis;
- f. Records of the duration of all times EU-UNIT3 is operated under start-up or shutdown conditions as defined in SC III.2;
- g. All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and made available to the Department upon request.<sup>2</sup> (R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.1301, R 336.1331, R 336.1401, R 336.1702(a), R 336.1901, R 336.1912, R 336.2802(4), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

See Appendix 3-1-A and 3-1-B

## VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

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4. The permittee shall submit an excess emission report (EER) and summary report in an acceptable format to the AQD District Supervisor and the TPU Supervisor within 30 days following the end of each calendar quarter as specified in 40 CFR 60.7(c) and (d). The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:<sup>2</sup> **(R 336.1205, R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804, R 336.2810, R 336.2902(2)(c), 40 CFR Part 51, Appendix S, 40 CFR 52.21(c), (d), and (j), 40 CFR 60.7(c) and (d))**
  - a. A report of each exceedance above the limits specified in the emission limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
  - b. A report of all periods of the Continuous Emission Monitoring and Continuous Emission Rate Monitoring System (CEMS/CERMS), and if applicable Predictive Emission Monitoring System (PEMS), downtime and corrective action.
  - c. A report of the total operating time of the boiler during the reporting period.
  - d. A report of any periods that the CEMS/CERMS, and if applicable PEMS, exceed the instrument range.
  - e. If no exceedances or CEMS/CERMS, and if applicable PEMS, downtime occurred during the reporting period, the permittee shall report that fact.
5. The permittee shall submit any performance test reports including RATA reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5), R 336.2156(c))**

**6. The permittee shall submit a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December) to demonstrate compliance with the Consent Decree as specified in Appendix 8-1-B.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 48).**

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See Appendix 8-1

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV016-003	336 <sup>2</sup>	579 <sup>2</sup>	<b>R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)</b>

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the acid rain permitting provisions of 40 CFR Part 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-1733-2019 is hereby incorporated into this ROP as Appendix 9-1. **(R 336.1902(1)(q))**
2. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1902(1)(q) and 40 CFR Part 72.9(c)(1)(i). **(R 336.1213(10))**

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

3. An affected existing EGU shall meet the requirements of Part 15 Emission Limitations and Prohibitions – Mercury. **(R 336.2503(1))**
4. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart AAAAA)**
5. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Ozone Season Group 2 Trading Program, as specified in 40 CFR Part 97, Subpart EEEEE and identified in Appendix 10-1. **(40 CFR Part 97, Subpart EEEEE)**
6. The permittee shall comply with the provisions of the Cross State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart CCCCC)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

<sup>3</sup>This condition is federally enforceable and was originally established in the consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of the consent decree.

<sup>4</sup>This condition is federally enforceable and was originally established in the consent decree settling “U.S. v. DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of this consent decree.

<sup>5</sup>Definitions specific to this condition may be found in Appendix 1-1-B.

**EU-UNIT4**

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**EMISSION UNIT CONDITIONS**

**DESCRIPTION**

Coal-fired cell burner boiler nominally rated at a maximum heat input of 7,624 MMBtu per hour on a fuel input basis. The boiler serves a steam turbine electric generator nominally rated at 817 MW (gross). Fires No. 2 fuel oil for boiler start-up and flame stabilization.

Flexible Group ID: FG-ProjectPC1-4, FG-COALBLRCAM, FG-MATS

**POLLUTION CONTROL EQUIPMENT**

Low-NOx burners, overfire air, REF sorbent system, selective catalytic reduction (SCR), dry wire electrostatic precipitators (ESP), and wet flue gas desulfurization (FGD).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	10 percent <sup>2</sup>	6-minute average except one 6-minute average per hour of not more than 20 percent	EU-UNIT4	SC V.1, SC V.2, SC VI.2	R 336.1301(1)(c), R 336.2810, 40 CFR 52.21(j)
2. PM	0.011 lb/MMBtu heat input <sup>2</sup>	24-hr rolling average as determined each hour the boiler operates	EU-UNIT4	SC V.1, SC V.2, SC VI.2	R 336.1224, R 336.1225, R 336.1331(1)(c), R 336.2810, 40 CFR 52.21(j) <a href="#">Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24(a)</a>
3. PM10	0.024 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2810, 40 CFR 52.21(j)
4. PM10	183.0 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
 Expiration Date: October 16, 2024  
 PTI No: MI-PTI-B2816-2019

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. SO <sub>2</sub>	0.107 lb/MMBtu heat input <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT4	SC VI.3, SC VI.7	R 336.1401, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S
6. SO <sub>2</sub>	815.8 pph <sup>2</sup>	24-hour rolling average as determined each hour the boiler operates	EU-UNIT4	SC VI.3, SC VI.5, SC VI.7	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S
<del>7.</del> SO <sub>2</sub>	<del>0.100 lb/MMBtu<sup>2,4,5</sup></del>	<del>30-day rolling average emission rate<sup>2,4,5</sup></del>	<del>EU-UNIT1</del>	<del>SC VI.3, SC VI.10</del>	<del>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</del>
<del>78.</del> NOx	0.08 lb/MMBtu heat input <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT4	SC VI.3, SC VI.8	R 336.2810, 40 CFR 52.21(j)
<del>89.</del> NOx	222.6 ton/month <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT4	SC VI.3, SC VI.5, SC VI.8	R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j)
<del>10.</del> NO <sub>x</sub>	<del>0.090 lb/MMBtu<sup>2,4,5</sup></del>	<del>30-day rolling average emission rate<sup>2,4,5</sup></del>	<del>EU-UNIT1</del>	<del>SC VI.3, SC VI.10</del>	<del>Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9</del>
<del>911.</del> CO	0.15 lb/MMBtu heat input excluding periods of start-up and shutdown <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT4	SC VI.3, SC VI.9	R 336.2810, 40 CFR 52.21(j)
<del>4012.</del> CO	27,446.4 lb/day <sup>2</sup>	30-day rolling average as determined each calendar day the boiler operates	EU-UNIT4	SC VI.3, SC VI.5, SC VI.9	R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
<del>4413.</del> VOC	0.0034 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
4214. VOC	25.9 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC III.1, SC V.1, SC V.2	R 336.1122(f), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(j)
4315. Lead (Pb)	1.69 x 10 <sup>-5</sup> lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1901, R 336.2810, 40 CFR 52.21(j)
4416. Lead (Pb)	0.13 pph <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FG- COALBLRCAM SC VI.1	R 336.1901, R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j)
4517. Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	0.005 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC III.1, SC V.1, SC V.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4618. Hydrogen Chloride (HCl)	0.0024 lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FGMATS SC VI.5	R 336.1224, R 336.1225
4719. Hydrogen Fluoride (HF)	0.00023 lb/MMBtu heat input <sup>2</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FG- COALBLRCAM SC VI.2	R 336.1224, R 336.1225, R 336.2810, 40 CFR 52.21(j)
4820. Mercury (Hg)	0.02 lb/GW-hr gross energy output <sup>2</sup>	12-month rolling average as determined each calendar month	EU-UNIT4	SC V.1, SC V.2, SC VI.4, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
4921. Mercury (Hg)	143.1 lb/year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-UNIT4	SC V.1, SC V.2, SC VI.4, SC VI.5, SC VI.6, SC VI.10	R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2)
2022. Arsenic (As)	6.3 x 10 <sup>-6</sup> lb/MMBtu heat input <sup>1</sup>	Test protocol will specify averaging time	EU-UNIT4	SC V.1, SC V.2, FGMATS SC VI.3	R 336.1224, R 336.1225(2)

23. The permittee shall comply with the System-Wide Annual SO<sub>2</sub> and NO<sub>x</sub> Tonnage Limitations specified in Appendix 11-1-A. Emissions from EU-Unit1 shall be counted toward the system-wide total emissions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)
24. The permittee shall comply with the SO<sub>2</sub> and NO<sub>x</sub> use & surrender allowance and super-compliance allowance provisions listed in Appendix 11-1-B: Allowance Provisions.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14-22)

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**II. MATERIAL LIMIT(S)**

1. The permittee shall only use diesel for the initial start-up fuel, flame stabilization, and overfiring. Start-up is defined in SC III.2.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.2810, 40 CFR 52.21(j))
2. The permittee shall only combust bituminous coal, subbituminous coal, and up to 23,652 tons per calendar month of petroleum coke in EU-UNIT4.<sup>2</sup> (R 336.1205(1)(a) and (1)(b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2810, 40 CFR 52.21(j))

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EU-UNIT4 unless a MAP as described in Rule 911(2), for operation of the process and emission control equipment, is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))
2. Start-up is defined as the period of time from initiation of combustion firing until the unit reaches steady state operation and the SCR is brought into service upon the flue gas reaching a minimum operating temperature for the SCR of 650°F. Shutdown is defined as that period of time beginning when the flue gas temperature entering the SCR drops below the operating temperature of the SCR system.<sup>2</sup> (R 336.1912, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT4 unless an emissions minimization plan for start-ups and shutdowns has been implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices.<sup>2</sup> (R 336.1911, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

4. The permittee shall continuously operate the SCR and FGD systems and each PM control device for EU-Unit1 and use good air pollution control practices to minimize emission reductions at all times when EU-Unit1 is in operation.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 10 & 23)

See Appendix 3-1-C

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The maximum design heat input rate of EU-UNIT4 shall not exceed 7,624 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis.<sup>2</sup> (R 336.1205(1)(a) and (1)(b))
2. The permittee shall not operate EU-UNIT4 unless the low-NOx burners, overfire air, SCR system, ESP, and wet FGD system are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT4 as required in SC III.1.<sup>2</sup> (R 336.1224, R 336.1225, R 336.1901, R 336.1910, R 336.2810, 40 CFR 52.21(j))
3. The permittee shall not operate EU-UNIT4 unless the REF sorbent system is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for EU-UNIT4 as required in SC III.1.<sup>2</sup> (R 336.1225, R 336.1910)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a process monitor to measure mercury emissions from the unit and provide real time indicators of potential noncompliance. This process

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monitor, because it does not meet EPA Specification 12A, is in addition to the certified mercury monitoring system which provides quality assured data used in emissions reporting and compliance verification under the Mercury Air Toxics rule. Satisfactory manner includes operating the process monitor on a continuous basis to obtain mercury emission data such that the permittee can initiate corrective actions in the event of elevated mercury emissions. Satisfactory manner includes operating and maintaining the process monitor in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201, Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 16)

- The permittee shall install and maintain a halogenated compound application system (e.g. calcium bromide) in a satisfactory manner to promote mercury oxidation and maintain compliance with the unit's mercury emission limits. Satisfactory manner includes operating the application system when the mercury process monitor demonstrates elevated mercury emissions, and as otherwise needed for mercury emissions control in accordance with an approved malfunction abatement plan. <sup>2, 3</sup> (R 336.1201 Act 451 324.5503(b), EPA-5-2018-113(a)-MI-07 paragraph 17)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

- The permittee shall verify visible emissions, PM, PM10, PM2.5, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT4 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Sulfuric Acid Mist	40 CFR Part 60, Appendix A
Total Fluoride	40 CFR Part 60, Appendix A
Hydrogen Chloride	40 CFR Part 60, Appendix A
Mercury	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B
HAPs	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. <sup>2</sup> (R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)

- The permittee shall verify the visible emissions, PM, PM10, VOC, Pb, As, H2SO4, HCl, HF, and Hg emission rates from EU-UNIT4, at a minimum, every five years from the date of the last test. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall verify the PM2.5 emission rates from EU-UNIT4, and at a minimum, must complete the test once every calendar year for the next ten years of operation after the modification on July 12, 2012. <sup>2</sup> (R 336.2001, R 336.2003, R 336.2004)
- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days of the time and place before performance tests are conducted. (R 336.1213(3), R 336.2001(4))

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.<sup>2</sup> (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)
2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the PM emissions from EU-UNIT4 on a continuous basis. The permittee shall install and operate the CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1. The permittee shall also meet the following requirements:<sup>2</sup> (R 336.1201, R 336.1205, R 336.1301, R 336.1303, R 336.1331, R 336.1901, R 336.1911, R 336.2810, 40 CFR 52.21(j) Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 25 & 26)
  - a. The MAP required in SC III.1 shall include provisions for alternative monitoring in the event that the PM CEM is out of control based upon the results of quality assurance tests conducted in accordance with Procedure 2 of 40 CFR Part 60 (Appendix F). This alternative monitoring shall, unless alternate methods and frequencies are approved in writing by the AQD District Supervisor, require verification of the presence of visible emissions by taking 6-minute visible emission readings for EU-UNIT4 a minimum of once per calendar day when the boiler is operating. Either a certified or non-certified reader shall take each visible emission reading during routine operating conditions. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:
    - i. The permittee shall perform the 6-minute visible emission readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.
    - ii. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using federal Reference Test Method 9 (40 CFR Part 60 (Appendix A)).
3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner device(s) to monitor and record the SO<sub>2</sub>, NO<sub>x</sub>, and CO emissions, and oxygen or carbon dioxide (O<sub>2</sub> or CO<sub>2</sub>) content of the exhaust gas from EU-UNIT4 on a continuous basis. The permittee shall install and operate each CEM to meet the timelines, requirements and reporting detailed in Appendix 3-1. A.<sup>2</sup> (R 336.1205, R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the mercury emissions from EU-UNIT4 on a continuous basis. The permittee shall install and operate an Hg monitor to meet the timelines, requirements and reporting detailed in Appendix 3-1. A.<sup>2</sup> (R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2503(2))
5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the exhaust gas flow rate from EU-UNIT4 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in Appendix 3-1. A.<sup>2</sup> (R 336.2810, 40 CFR 52.21(j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the gross energy output from EU-UNIT4 on a continuous basis. The monitor shall be operated in accordance with procedures outlined in 40 CFR 60.49Da(k).<sup>1</sup> (R 336.1224)
7. The permittee shall keep, in a satisfactory manner, hourly and 24-hour rolling average SO<sub>2</sub> emission rate and mass records for EU-UNIT4, as described in emission limits SC I.5 and I.6, respectively.<sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j), R 336.2902(2)(c), 40 CFR Part 51, Appendix S)
8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average NO<sub>x</sub> emission rate and mass records for EU-UNIT4, as described in emission limits SC I.7, and I.8.<sup>2</sup> (R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))

9. The permittee shall keep, in a satisfactory manner, daily and 30-day rolling average CO emission rate and mass records for EU-UNIT4, as described in emission limits SC I.9 and I.10.<sup>2</sup> **(R 336.2804, R 336.2810, 40 CFR 52.21(d) and (j))**

10. For purposes of determining compliance with the 30-day rolling average emission rates for SO<sub>2</sub> and NO<sub>x</sub> as found in SC I.7 and SC I.10, the permittee shall use emission data obtained from a CEMS in accordance with the procedures of 40 CFR part 75, except that the emissions data need not be bias adjusted and the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO<sub>2</sub>) shall be applied to the emission rate for any hours where the measured CO<sub>2</sub> concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1,<sup>2,4,5</sup> **(R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 12)**

10.11. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average mercury emission rate records, expressed on a basis of gross energy output, and monthly and 12-month rolling time period mercury mass emission rate records for EU-UNIT4, as described in emission limits SC I.18 and SC I.19. If the monitoring required by SC VI.4 is only capable of detecting gaseous mercury, the permittee shall use the testing required by SC V.9 to develop a correction factor to adjust the mercury monitoring data to total mercury. Based on the available testing and monitoring data, the correction factor may be adjusted upon review and approval of the AQD District Supervisor.<sup>1</sup> **(R 336.1224, R 336.1228, R 336.1229(2)(b))**

11.12. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to the following:

- a. Compliance tests and any testing required under the special conditions of this permit;
- b. Monitoring data;
- c. Heat input calculations required to show compliance with SC IV.1;
- d. Identification, type and the amounts of all fuels combusted in EU-UNIT4 on a calendar month basis;
- e. Total gigawatt-hours of energy produced on a monthly basis;
- f. Records of the duration of all times EU-UNIT4 is operated under start-up or shutdown conditions as defined in SC III.2;
- g. All calculations necessary to show compliance with the limits contained in this permit.

All of the above information shall be stored in a format acceptable to the Air Quality Division and made available to the Department upon request.<sup>2</sup> **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1228, R 336.1229(2)(b), R 336.1301, R 336.1331, R 336.1401, R 336.1702(a), R 336.1901, R 336.1912, R 336.2802(4), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(c), (d), and (j))**

See Appendix 3-1-A and 3-1-B

## VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit an excess emission report (EER) and summary report in an acceptable format to the AQD District Supervisor and the TPU Supervisor within 30 days following the end of each calendar quarter as

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specified in 40 CFR 60.7(c) and (d). The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:<sup>2</sup> (R 336.1205, R 336.1224, R 336.1228, R 336.1229(2)(b), R 336.2803, R 336.2804, R 336.2810, R 336.2902(2)(c), 40 CFR Part 51, Appendix S, 40 CFR 52.21(c), (d), and (j), 40 CFR 60.7(c) and (d))

- a. A report of each exceedance above the limits specified in the emission limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
  - b. A report of all periods of the Continuous Emission Monitoring and Continuous Emission Rate Monitoring System (CEMS/CERMS), and if applicable Predictive Emission Monitoring System (PEMS), downtime and corrective action.
  - c. A report of the total operating time of the boiler during the reporting period.
  - d. A report of any periods that the CEMS/CERMS, and if applicable PEMS, exceed the instrument range.
  - e. If no exceedances or CEMS/CERMS, and if applicable PEMS, downtime occurred during the reporting period, the permittee shall report that fact.
5. The permittee shall submit any performance test reports including RATA reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5), R 336.2156(c))

6. The permittee shall submit a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December) to demonstrate compliance with the Consent Decree as specified in Appendix 8-1-B.<sup>2,4,5</sup> (R336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 48)

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See Appendix 8-1

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV016-004	336 <sup>2</sup>	579 <sup>2</sup>	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d)

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with the acid rain permitting provisions of 40 CFR Part 72.1 to 72.94, as outlined in a complete Phase II, Acid Rain Permit issued by the AQD. Phase II, Acid Rain Permit No. MI-AR-1733-2019 is hereby incorporated into this ROP as Appendix 9-1. (R 336.1902(1)(q))
2. The permittee shall not allow the emission of an air pollutant to exceed the amount of any emission allowances that an affected source lawfully holds as of the allowance transfer deadline pursuant to R 336.1902(1)(q) and 40 CFR Part 72.9(c)(1)(i). (R 336.1213(10))
3. An affected existing EGU shall meet the requirements of Part 15 Emission Limitations and Prohibitions – Mercury. (R 336.2503(1))

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

4. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Annual Trading Program, as specified in 40 CFR Part 97, Subpart AAAAA, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart AAAAA)**
5. The permittee shall comply with the provisions of the Cross State Air Pollution Rule NO<sub>x</sub> Ozone Season Group 2 Trading Program, as specified in 40 CFR Part 97, Subpart EEEEE, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart EEEEE)**
6. The permittee shall comply with the provisions of the Cross State Air Pollution Rule SO<sub>2</sub> Group 1 Trading Program, as specified in 40 CFR Part 97, Subpart CCCCC, and identified in Appendix 10-1. **(40 CFR Part 97, Subpart CCCCC)**

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

<sup>3</sup> This condition is federally enforceable and was originally established in the consent decree settling, “U.S. v DTE Energy Company, Civil Action No. EPA-5-2018-113(a)-MI-07” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of the consent decree.

<sup>4</sup> This condition is federally enforceable and was originally established in the consent decree settling “U.S. v. DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020” and also pursuant to Act 451, Section 324.5503(b), and will remain in effect after termination of this consent decree.

<sup>5</sup> Definitions specific to this condition may be found in Appendix 1-1-B.

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit a notification specifying any engine of FG-NSPS4I which is operated in a non-certified manner to the AQD District Supervisor, in writing, within 30 days of changing the manner of operation to non-certified. **(40 CFR Part 60.4214)**

See Appendix 8-1

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

**IX. OTHER REQUIREMENT(S)**

3. The permittee shall comply with all applicable provisions of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines as they apply to emission units subject to 40 CFR Part 60, Subpart IIII. **(R 336.1213(3), 40 CFR Part 60, Subparts A and IIII)**
4. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines. **(40 CFR Part 63, Subparts A and ZZZZ, 40 CFR 63.6590(c)(7))**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).  
<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

Section 1 DTE Electric Company – Monroe Power Plant

ROP No: MI-ROP-B2816-2019  
Expiration Date: October 16, 2024  
PTI No: MI-PTI-B2816-2019

### **E. NON-APPLICABLE REQUIREMENTS**

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

## APPENDICES

### Appendix 1-1-A. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2</sub> e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
EGLE	Michigan Department of Environment, Great Lakes, and Energy	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM <sub>10</sub>	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM <sub>2.5</sub>	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

**1-1-B. Definitions Applicable to Specified Permit Conditions.**

The following definitions apply to permit conditions originally established in the consent decree settling "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020." This Appendix is also federally enforceable pursuant to Section 324.5503(b) of the Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, Rule 201(1)(a), and Rule 214(a), and will remain in effect after termination of the consent decree. (Act 451, Section 324.5503(b)).

For the purpose of the Consent Decree, every term expressly defined by this Section shall have the meaning given that term herein. Every other term used in the Consent Decree that is also a term used under the Act or in a regulation implementing the Act, including regulations approved as part of the Michigan SIP, shall mean in the Consent Decree what such term means under the Act or those regulations. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4).

1. A "30-Day Rolling Average Emission Rate" for a Unit shall be expressed as lb/MMBtu and calculated in accordance with the following procedure: First, sum the total pounds of the pollutant in question emitted from the Unit during an Operating Day and the previous 29 Operating Days; second, sum the total heat input to the Unit in MMBtu during the Operating Day and the previous 29 Operating Days; and third, divide the total number of pounds of the pollutant emitted during the 30 Operating Days by the total heat input during the 30 Operating Days. A new 30-Day Rolling Average Emission Rate shall include all emissions of the applicable pollutant that occur during all periods within any Operating Day, including emissions from startup, shutdown, and malfunction. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(a)).

2. A "24-Hour Rolling Average Emission Rate" for a Unit shall be expressed as lb/MMBtu and calculated in accordance with the following procedure: First, sum the total pounds of the pollutant emitted from the Unit during an operating hour and the previous 23 operating hours; second, sum the total heat input to the Unit in MMBtu during the operating hour and the previous 23 operating hours; and third, divide the total number of pounds of the pollutant emitted during the 24 operating hours by the total heat input during the 24 operating hours. A new 24-Hour Rolling Average Emission Rate shall be calculated for each new operating hour. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(b)).

3. "Baghouse" means a full stream (fabric filter or membrane) particulate emissions control device. In this context, full stream means that it captures the entire stream of exhaust gas with no concurrent bypass. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(c)).

4. "Belle River" means DTE's Belle River Power Plant consisting of two electric utility steam-generating units designated as Unit 1 (638 MW) and Unit 2 (602 MW) and related equipment, located in East China Township, Michigan. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(d)).

5. "Boiler Island" means a Unit's (a) fuel combustion system (including bunker, coal pulverizers, crusher, stoker, and fuel burners); (b) combustion air system; (c) steam generating system (firebox, boiler tubes, and walls); and (d) draft system (excluding the stack), all as further described in "Interpretation of Reconstruction," by John B. Rasic, U.S. EPA (November 25, 1986) and attachments thereto. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(e)).

6. "Capital Expenditures" means all capital expenditures, as defined by Generally Accepted Accounting Principles ("GAAP"), as those principles exist at the Date of Entry of this Consent Decree, excluding the cost of installing or upgrading pollution control devices. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(f)).

7. "CEMS" or "Continuous Emission Monitoring System" means, for obligations involving the monitoring of NOx, SO2, and PM emissions under the Consent Decree, the devices defined in 40 C.F.R. §72.2 and installed and

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- maintained as required by 40 C.F.R. Part 75. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(g)).

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- 8. “Clean Air Act”, “CAA”, or “Act” means the federal Clean Air Act, 42 U.S.C. §§ 7401-7671q, and its implementing regulations. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(h)).

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- 9. “Complaints” shall mean the amended complaints filed by the United States and Sierra Club in this case on April 9, 2014, and May 22, 2014, respectively. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(i)).

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- 10. “Consent Decree” means Consent Decree (“U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020”) and its Appendices. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(j)).

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- 11. “Continuously Operate” or “Continuous Operation” means that when a pollution control technology or combustion control is required to be continuously used at a Unit pursuant to the Consent Decree (including, but not limited to, SCR, FGD, ESP, Baghouse, or Low NOx Combustion System), it shall be operated at all times such Unit is in operation (except as otherwise provided by Section XII (Force Majeure) of the Consent Decree), consistent with the technological limitations, manufacturers’ specifications, good engineering and maintenance practices, and good air pollution control practices for minimizing emissions (as defined in 40 C.F.R. §60.11(d)) for such equipment and the Unit. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(k)).

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- 12. “Date of Entry” means the date the Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court’s docket. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(l)).

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- 13. “Date of Lodging” means the date this Consent Decree is filed for lodging with the Clerk of the Court for the United States District Court for the Eastern District of Michigan. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(m)).

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- 14. “Day” means calendar day unless otherwise specified in the consent decree. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(n)).

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- 15. “Defendants” or “DTE” mean DTE Energy and Detroit Edison Company. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(o)).

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- 16. “Electrostatic Precipitator” or “ESP” means a device for removing particulate matter from combustion gases by imparting an electric charge to the particles and then attracting them to a metal plate or screen of opposite charge before the combustion gases are exhausted to the atmosphere. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(p)).

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- 17. “Emission Rate” for a given pollutant means the number of pounds of that pollutant emitted per million British thermal units of heat input (lb/MMBtu), measured in accordance with the Consent Decree. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(q)).

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- 18. “Environmental Mitigation Project” or “Project” means the project set forth in Section VI (Environmental Mitigation Project) and Appendix A of the Consent Decree, and any other project undertaken for the purpose of fulfilling Defendants’ obligations under Section VI and Appendix A and approved for that purpose by EPA

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- pursuant to Section X of the Consent Decree (Review and Approval of Submittals). (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(r)).
19. "EPA" means the United States Environmental Protection Agency. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(s)).
20. "Flue Gas Desulfurization System" or "FGD" means a pollution control device that removes sulfur compounds from a flue gas stream, including an absorber or absorbers utilizing lime or limestone, or a sodium based material, for the reduction of SO<sub>2</sub> emissions. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(t)).
21. "Fossil Fuel" means any hydrocarbon fuel, including but not limited to coal, metallurgical coke, petroleum coke, petroleum oil, natural gas, or any other fuel made or derived from the foregoing. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(u)).
22. "Greenhouse Gases" means the air pollutant defined at 40 C.F.R. §86.1818-12(a) as of the Date of Lodging of this Consent Decree as the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. This definition continues to apply even if 40 C.F.R. §86.1818-12(a) is subsequently revised, stayed, vacated or otherwise modified. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(v)).
23. "KW" means Kilowatt or one thousand watts net. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(w)).
24. "lb/MMBtu" means pounds of a pollutant per million British thermal units of heat input. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(x)).
25. "Low NO<sub>x</sub> Combustion System" means burners and associated combustion air control equipment, including Overfire Air (if installed at the Unit), which control mixing characteristics of Fossil Fuel and oxygen, thus restraining the formation of NO<sub>x</sub> during combustion of fuel in the boiler. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(y)).
26. "Malfunction" means any sudden, infrequent, and no reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not Malfunctions. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(z)).
27. "MW" means a megawatt or one million units. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(aa)).
28. "Michigan SIP" means the Michigan State Implementation Plan, and any amendments thereto, as approved by EPA pursuant to Section 110 of the Act, 42 U.S.C. §7410. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(bb)).
29. "Monroe" means DTE's Monroe Power Plant consisting of four electric utility steam-generating units designated as Unit 1 (764 MW), Unit 2 (772 MW), Unit 3 (773 MW), and Unit 4 (765 MW) and related equipment, located in Monroe, Michigan. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(cc)).
30. "Natural Gas" means natural gas received directly or indirectly through a connection to an interstate pipeline transporting natural gas governed by a tariff approved by the Federal Energy Regulatory Commission. The Parties recognize that Natural Gas is expected to contain no more than 0.5 grains of sulfur per 100 standard

cubic feet of Natural Gas. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(dd)).

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31. “Netting” shall mean the process of determining whether a particular physical change or change in the method of operation of a major stationary source results in a “net emissions increase” or “net significant emissions increase” as those terms are defined at 40 C.F.R. 52.21 (b)(3)(i) and (ii) and in the Michigan SIP. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ee)).

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32. “NOx” means oxides of nitrogen. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ff)).

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33. “NOx Allowance” means an authorization to emit a specified amount of NOx that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or the Michigan SIP, provided, however, that with respect to any such program that first applies to emissions occurring after December 31, 2018, a “NOx Allowance” shall include an allowance created and allocated under such program only for control periods starting on or after the first anniversary of the Date of Entry of the Consent Decree. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(gg)).

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34. “Nonattainment NSR” means the new source review program within the meaning of Part D of Subchapter I of the Act, 42 U.S.C. 7501-7515 and 40 C.F.R. Part 51, and corresponding provisions of the federally enforceable Michigan SIP. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(hh)).

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35. “Operating Day” or “Operating Days” means any calendar day(s) during which a Unit fires any fuel. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ii)).

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36. “Operating Hour” or “Operating Hours” means any clock hour during which a Unit first any fuel. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ij)).

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37. “Operational or Ownership Interest” means part or all of DTE’s legal or equitable operational or ownership interest in any operating, not-Retired Unit. The Parties recognize that under this definition, Section XVII (Sales or Transfers or Operational or Ownership Interests) of the Consent Decree does not apply to salvage, scrap, or demolition of a Retired Unit. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(kk)).

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38. “Over-Fire Air” or “OFA” means and in-furnace staged combustion control to reduce NOx emissions. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ll)).

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39. “Parties” means the United States of America, the Sierra Club, and Defendants. “Party” means one of the named “Parties”. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(mm)).

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40. “PM” means total filterable particulate matter. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(nn)).

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41. “PM CEMS” or “PM Continuous Emission Monitoring System” means the equipment that samples, analyzes, measures, and provides, by readings taken at frequent intervals, an electronic or paper record of PM

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- emissions. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(oo)).

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- 42. “PM Control Device” means any device, including an ESP or Baghouse, which reduces emissions of PM. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(pp)).

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- 43. “PM Emission Rate” means the number of pounds of PM emitted per million BTU of heat input (lb/MMBtu). (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(qq)).

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- 44. “Prevention of Significant Deterioration” or “PSD” means the new source review program within the meaning of Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§7470-7492 and 40 C.F.R. Part 52, and corresponding provisions of the federally enforceable Michigan SIP. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(rr)).

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- 45. “Project Dollars” means Defendants’ expenditures and payments incurred or made in carrying out the Environmental Mitigation Project identified in Section VI (Environmental Mitigation Project) of this Consent Decree to the extent that such expenditures or payments both: (a) comply with the requirements set forth in Section VI (Environmental Mitigation Project) and Appendix A of this Consent Decree, and (b) constitute Defendants’ direct payments for such project or Defendants’ external costs for contractors, vendors, and equipment. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ss)).

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- 46. “Refuel” or “Refueled” means the modification of a Unit such that the modified unit generates electricity solely through the combustion of Natural Gas. Nothing herein shall prevent the reuse of any equipment at any existing Unit provided that the unit owner(s) applies for, and obtains, all required permits, including, if applicable, a PSD or Nonattainment NSR permit. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(tt)).

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- 47. “Repower” or “Repowered” means the removal and replacement of the Unit components such that the replaced unit generates electricity solely through the combustion of Natural Gas through the use of a combined cycle combustion turbine technology. Nothing herein shall prevent the reuse of any equipment at any existing unit or new emissions unit, provided that the Unit owner(s) applies for, and obtains, all required permits, including, if applicable, a PSD or Nonattainment NSR permit. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(uu)).

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- 48. “Retire”, “Retired”, or “Retirement” means to permanently shut down and cease to operate the Unit, and to comply with applicable state and federal requirements for permanently ceasing operation of the Unit, including removing the Unit from Michigan’s air emissions inventory, and amending all applicable permits so as to reflect the permanent shutdown status of each Unit. The terms “Retire”, “Retired”, or “Retirement” shall not be construed to apply to electric synchronization motors, capacitors, switch gears, transformers, interconnection equipment and other non-combustion equipment and activities at the sites of System Units, regardless of DTE whether such equipment was part of the System Units. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(vv)).

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- 49. “River Rouge” means Defendants’ River Rouge Power Plant consisting of one electric utility steam-generating unit designated as Unit 3 (276 MW) and related equipment, located in River Rouge, Michigan. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(xx)).

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- 50. “SCR” or “Selective Catalytic Reduction” means an air pollution control device for reducing NOx emissions in which ammonia (“NH3”) is added to the flue gas and then passed through layers of a catalyst material. The ammonia and NOx in the flue gas stream react on the surface of the catalyst, forming nitrogen (“N2”) and water

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vapor. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(yv)).

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51. "SO2" means sulfur dioxide. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(zz)).

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52. "SO2 Allowance" means an authorization to emit a specified amount of SO2 that is allocated or issued under an emissions trading or marketable permit program of any kind established under the Clean Air Act or the Michigan SIP; provided, however, that with respect to any such program that first applies to emissions occurring after December 31, 2018, an "SO2 Allowance" shall include an allowance created and allocated under such program only for control period starting on or after the first anniversary of the Date of Entry of the Consent Decree. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(aaa)).

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53. "State" means the State of Michigan. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(bbb)).

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54. "St. Clair" means, for purposes of this Consent Decree, Defendants' St. Clair Power Plant consisting of five electric utility steam-generating units designated as Unit 1 (152 MW), Unit 2 (160 MW), Unit 3 (165 MW), Unit 6 (319 MW) and Unit 7 (452 MW) and related equipment, located in East China Township, Michigan, (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ccc)).

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55. "Surrender" or "Surrender of Allowances" means, for purposes of SO2 and NOx Allowances, permanently surrendering allowances from the accounts administered by EPA and the State of Michigan, if applicable, so that such allowances can never be used thereafter to meet any compliance requirements under the CAA, a state implementation plan, or the Consent Decree. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ddd)).

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56. "System" means the Belle River, Monroe, River Rouge, St. Clair, and Trenton Channel facilities as defined herein. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(eee)).

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57. "System-Wide Annual Tonnage Limitation" for a pollutant means the sum of the tons of the pollutant emitted from all the Units in Defendants' System including, without limitations, all tons of that pollutant emitted during periods of startup, shutdown, and Malfunction, in the designated year. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(fff)).

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58. "Title V Permit" means the permit required of major sources pursuant to Subchapter V of the Act, 42 U.S.C. §§ 7661-7661e. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(ggg)).

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59. "Trenton Channel" means Defendants' Trenton Channel Power Plant consisting of one electric utility steam-generating unit designated as Unit 9 (536 MW) and related equipment, located in Trenton, Michigan, (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4(hhh)).

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60. "Unit" means collectively, the coal pulverizer, stationary equipment that feeds coal to the boiler, the boiler that produces steam for the steam turbine, the steam turbine, the generator, the equipment necessary to operate the generator, steam turbine, and boiler, and all ancillary equipment, including pollution control equipment and systems necessary for production of electricity. An electric steam generating station may be comprised of one

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or more Units. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101- BAF-RSW, E.D. Michigan, paragraph 4(iii))

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**Appendix 2-1. Schedule of Compliance**

The permittee certified in this ROP application that this stationary source is in compliance with all applicable requirements of this ROP except for the following: EU-LIMESTONE and EU-HYDRATEDLIME. As a result, the permittee was required to submit a Schedule of Compliance as defined in Rule 119(a), pursuant to Rule 210(2) and Rule 213(4).

A Schedule of Compliance for any applicable requirements that the permittee is not in compliance with at the time of the ROP issuance is supplemental to, and shall not sanction non-compliance with, the underlying applicable requirements on which it is based.

The permittee has completed the Schedule of Compliance prior to the start of the public comment period. The permittee at this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is no longer required. (R 336.1213(4)(a), R 336.1119(a)(ii))

**Appendix 3-1. Monitoring Requirements**

**3-1-A** The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in EU-UNIT1, EU-UNIT2, EU-UNIT3 and EU-UNIT4.

**NOx, SO<sub>2</sub>, CO, PM, CO<sub>2</sub>/O<sub>2</sub>, Mercury Monitoring  
 Continuous Emission Monitoring and Continuous Emission Rate Monitoring System (CEMS/CERMS)  
 Requirements**

1. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS/CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS
NOx/SO <sub>2</sub>	2
CO	4
CO <sub>2</sub> /O <sub>2</sub>	3
CERMS	6
PM	11
Mercury	12A*
*Or other PS as approved by the AQD	

2. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.
3. The CEMS/CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2, 3, 6, 11, and 12A (see No. 1 above) of Appendix B to 40 CFR Part 60 or 40 CFR Part 75, Appendices A and B, as applicable.
4. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS/CERMS set forth in Appendix F of 40 CFR Part 60 or 40 CFR Part 75, Appendix B. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F of 40 CFR Part 60).

**3-1-B. PM CEMS**

This Appendix is federally enforceable and was established pursuant to Rule 201(1)(a). This Appendix was originally established in the consent decree settling "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020" and also pursuant to Section 324.5503(b) of the Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, and will remain in effect after termination of the consent decree. Definitions specific to this Appendix may be found in Appendix 1-1-B: Definitions. (Act 451, Section 324.5503(b))

1. In determining the PM Emissions Rates, DTE shall use the PM CEMS installed at each unit. The PM CEMS shall be comprised of a continuous particle mass monitor measuring filterable particulate matter concentration, directly or indirectly, on an hourly average basis and a diluent monitor used to convert the concentration to units expressed in lb/MMBtu. The PM CEMS installed at each Unit must be appropriate for the anticipated stack conditions and capable of measuring filterable PM concentrations on an hourly average basis. DTE shall maintain, in an electronic database, the hourly average emission values of all PM CEMS in lb/MMBtu. Except for period of monitor malfunction, maintenance, or repair, DTE shall operate the PM CEMS at all times when the Unit it serves is operating. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 25)

2. In maintaining and operating the PM CEMS required under the Consent Decree, DTE shall use the criteria set forth in 40 C.F.R. Part 60, Appendix B, Performance Specification 11, and 40 C.F.R. Part 60, Appendix F, Procedure 2. With respect to relative correlation audits, DTE must conduct such audits no less frequently than once every 12 operating quarters in which the boiler operates 168 hours or more in each calendar quarter, or earlier if the characteristics of the PM or gas change such that the PM CEMS measurement technology is no longer valid. For each Unit at which DTE installs, certifies, operates, and maintain a PM CEMS, DTE may use the procedures specified in 40 C.F.R. § 63.10010(i)(1)-(3) (including the specified temperature) for purposes of correlating the PM CEMS under the Consent Decree. Diluent capping (i.e.: 5% CO2) will be applied to the PM rate data for any hours where the measured CO2 concentration is less than 5% following the procedures in 40 C.F.R. Part 75, Appendix F, Section 3.3.4.1. DTE shall operate the PM CEMS in accordance with all EPA reviewed QA/QC protocols. Compliance with the PM CEMS correlation and quality assurance procedures in 40 C.F.R. Part 63, Subpart UUUUU constitutes compliance with this condition. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 26)

**3-1-C. Optimization of ESPs**

This Appendix is federally enforceable and was established pursuant to Rule 201(1)(a). This Appendix was originally established in the consent decree settling "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020" and also pursuant to Section 324.5503(b) of the Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, and will remain in effect after termination of the consent decree. Definitions specific to this Appendix may be found in Appendix 1-1-B: Definitions. (Act 451, Section 324.5503(b))

DTE Shall:

1. At a minimum, to the extent practicable: (i) fully energize each section of the ESP for each Unit, where applicable; (ii) operate automatic control systems on each ESP to maximize PM collection efficiency, where applicable; (iii) maintain power levels delivered to the ESPs, consistent with manufacturers' specifications, the operational design of the Unit, and good engineering practices; and (iv) evaluate and restore the plate-cleaning and discharge-electrode cleaning systems for the ESPs at each Unit by varying the time cycle, cycle frequency, rapper vibrator intensity, and number of strikes per cleaning event; and

2. During the next planned Unit outage (or unplanned outage of sufficient length), optimize the PM controls on that Unit by inspecting for and repairing any failed ESP section and any openings in ESP casings, ductwork, and expansion joints to minimize air leakage.

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The above requirements are found in "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020" paragraph 23

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**Appendix 4-1. Recordkeeping**

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in FG-ProjectPC1-4. Alternative formats must be approved by the AQD District Supervisor.

**Recordkeeping Provisions for a Nonattainment Source Using Actual-to-Projected-Actual Applicability Test**

All information in this appendix shall be maintained pursuant to R 336.2902 and 40 CFR Part 51, Appendix S for ten years after the modification, and shall be made available to the Department upon request.

1. Project Description:

The project is to increase the capacity to use subbituminous coal and add petroleum coke to provide additional fuels for EU-UNIT1, EU-UNIT2, EU-UNIT3 and EU-UNIT4; installation of four (4) wet FGD quench pumps (EU-WFGD-QP1, EU-WFGD-QP2, EU-WFGD-QP3, and EU-WFGD-QP4); modifications to the fuel handling systems (EU-CASCADES, EU-TRANSFERHS, EU-DUMPERHS, EU-COALUNLOAD, and EU-CRUSHERHS); the installation of new material handling systems for limestone and gypsum (EU-LIMESTONE, EU-GYPSUMHAND, and EU-HYDRATEDLIME); and the installation of a new fuel handling system for petroleum coke (EU-PETCOKE).

2. Applicability Test Description:

Minor modifications are not subject to nonattainment. The actual-to-projected-actual hybrid applicability test as described in the table below was used to demonstrate that nonattainment does not apply to these modifications.

3. Emission Projections:

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual Emissions (tpy)	Projected Actual Emissions (tpy)	Excluded Emissions (tpy)	
FG-ProjectPC1-4	PM2.5	5,315	2,730	381	FG-ProjectPC1-4 was capable of accommodating emissions up to 381 tpy. There is no projected emissions increase, therefore the project is less than the significant level of 10 tpy.
FG-ProjectPC1-4	SO <sub>2</sub>	117,940	11,753	1,757	FG-ProjectPC1-4 was capable of accommodating emissions up to 1,757 tpy. There is no projected emissions increase, therefore the project is less than the significant level of 40 tpy.

**Appendix 5-1. Testing Procedures**

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

**Appendix 6-1. Permits to Install**

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B2816-2009. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (\*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-B2816-2009a is being reissued as Source-Wide PTI No. MI-PTI-B2816-2019.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	201100075	Correction of typographical errors.	NA
27-13A	NA	Installation of pollution control equipment on Units 1 through 4, installation of quench pumps for each stack, upgrades to coal handling equipment, installation of limestone handling, gypsum handling, and pet coke handling systems, and installation of storage silos for hydrated lime.	EU-UNIT1, EU-UNIT2, EU-UNIT3, EU-UNIT4, EU-WFGD-QP1, EU-WFGD-QP2, EU-WFGD-QP3, EU-WFGD-QP4, EU-CASCADES, EU-TRANSFERHS, EU-DUMPERHS, EU-COALUNLOAD, EU-CRUSHERHS, EU-PETCOKE, EU-LIMESTONE, EU-GYPSUMHAND, EU-HYDRATEDLIME
27-13B	NA	Limits usage of each auxiliary boiler to meet the "limited-use boiler or process boiler" to meet the definition under 40 CFR 63.7575	EU-NORTHAUX, EU-SOUTHUX, FGAUXBOILERS
27-13C	201900017*	Incorporating the conditions of EPA Consent Decree EPA-5-2018-113(a)-MI-07 for Units 1 through 4.	EU-UNIT1, EU-UNIT2, EU-UNIT3, EU-UNIT4
178-08	NA	A flyash storage and transfer facility	EU-FlyAshStorage

**Appendix 7-1. Emission Calculations**

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

**Appendix 8-1. Reporting**

**8-1-AA. Annual, Semiannual, and Deviation Certification Reporting**

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

**8-1-B. Other Reporting**

Reporting requirements per "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101- BAF-RSW, E.D. Michigan, 2020" paragraph 48

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This appendix is federally enforceable and was established pursuant to Rule 201(1)(a). This Appendix was originally established in the consent decree settling, "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020" and also pursuant Section 324.5503(b) of the Natural Resources and Environmental Protection Act, 1994 Act 451, as amended, and will remain in effect after termination of the consent decree. Definitions specific to this Appendix may be found in Appendix 1-1-B: Definitions. (Act 451, Section 324.5503(b))

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1. DTE shall submit a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December). The report shall include the following information:

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a) All information necessary to determine compliance during the reporting period with the requirements of paragraphs 9-22 of the Consent Decree concerning emissions and monitoring and surrender of Allowances. This information includes but is not limited to,

(1) spreadsheets of all 30-Day Rolling Average Emission Rates and 24-Hour Rolling Average Emission Rates for EU-UNIT1 through EU-UNIT4,

(2) a list of any notifications associated with the retrofit, refuel, or repower options as specified in Appendix 2-BR (Consent Decree paragraph 8),

(3) total System-Wide Annual NOx and SO2 tonnages for the calendar year, and

(4) specific calculations demonstrating the basis and specific amounts of NOx and SO2 Allowances to be Surrendered as specified in Appendix 11-1-B SC8;

b) All period of PM CEMS malfunction, maintenance, and/or repair as provided in paragraph 25 of the Consent Decree

c) All information relating to super-compliant NOx and SO2 Allowances that DTE claims to have generated in accordance with Appendix 11-1-B of this permit (requirements of paragraph 19 of the Consent Decree), including a detailed description of the basis for such claim and the specific amount of super compliant NOx and SO2 Allowances claimed at each Unit; and

d) An identification of all period when any pollution control device (FGD system, SCR system and ESPs) required by the Consent Decree was not Continuously Operated while the associated boiler was in operation, the reason(s) for the equipment not being Continuously Operated, and the basis for DTE's compliance or non-compliance with the Continuous Operation requirements of the Consent Decree.

The above requirements are found in "U.S. v DTE Energy and Detroit Edison Company, Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, 2020" paragraphs 8-22 and 48.

2. In any periodic report submitted pursuant to the Periodic Reporting requirements found in Section IX of the Consent Decree, DTE may incorporate by reference information previously submitted under their Title V permitting requirements, provided that DTE attaches the Title V Permit report (or the pertinent portions of such report) and provide a specific reference to the provisions of the Title V Permit report that are responsive to the information required in the periodic report. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 49);

3. If DTE violates or deviates from any provision of the Consent Decree, DTE shall submit a report of any violation or deviation from any provision of the Consent Decree within 10 business days after DTE knew or should have known of the event. In the report, DTE shall explain the cause or causes of the violation or deviation and all

measures taken or to be taken by DTE to cure the reported violation or deviation or to prevent such violations or deviations in the future. If at any time the provisions of the Consent Decree are included in Title V Permits, consistent with the requirements for such inclusion in the Consent Decree, then the deviation reports required under applicable Title V regulations shall be deemed to satisfy the Consent Decree requirement. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 50)

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4. Each report required by the Consent Decree shall be signed by the Responsible Official as defined in Title V of the Clean Air Act for the appropriate System Unit(s), and shall contain the following certification: "This information was prepared either by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my evaluation, or the direction and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, I hereby certify under penalty of law that, to the best of my knowledge and belief, this information is true, accurate, and complete. I understand that there are significant penalties for submitting false, inaccurate, or incomplete information to the United States." (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 51)

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5. Unless otherwise provided herein, whenever notifications, submissions, or communications are required by the Consent Decree, they shall be made in both paper and electronic format to the addresses identified in paragraph 99 of the Consent Decree unless otherwise superseded. Electronic submittals shall not be the only form of notification, submission, or communication unless agreed upon by both the submitting and receiving Parties. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 99)

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6. All paper notifications, communications, or submissions made pursuant to the Consent Decree shall be sent either by: (a) overnight mail or overnight delivery service with signature required for delivery or (b) certified or registered mail, return receipt requested. All notifications, communications, and transmissions (a) sent by overnight, certified, or registered mail shall be deemed submitted on the date they are postmarked, or (b) sent by overnight delivery service shall be deemed submitted on the date they are delivered to the delivery service. (R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 101)

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~~Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.~~