

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

April 26, 2022
REVISED May 25, 2023

PERMIT TO INSTALL
51-22

ISSUED TO
DTE Electric – Belle River Power Plant

LOCATED AT
4905 King Road
China Township, Michigan 48054

IN THE COUNTY OF
St. Clair

STATE REGISTRATION NUMBER
B2796

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: July 20, 2021	
DATE PERMIT TO INSTALL APPROVED: April 26, 2022	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS 2

POLLUTANT / MEASUREMENT ABBREVIATIONS..... 3

GENERAL CONDITIONS 4

EMISSION UNIT SPECIAL CONDITIONS..... 6

 EMISSION UNIT SUMMARY TABLE 6

 FLEXIBLE GROUP SUMMARY TABLE 7

 FG-BOILERS-BR 8

APPENDICES 12

 Appendix 1 Definitions 12

 Appendix 2-BR. Schedule of Compliance..... 17

 Appendix 3-BR. Monitoring Requirements 18

 Appendix 8-BR. Reporting..... 20

 Appendix 11-BR: NO_x and SO₂ Allowances and Limitations..... 22

COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install 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 this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit 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 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. 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 Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. 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). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-BOILER1-BR	Belle River Power Plant Boiler No. 1. 697 MW nominally rated, dry bottom coal-fired boiler equipped with low NO _x burners, over-fire air, dry cold-side ESP, DSI, and ACI.	03-01-1984/ 09-05-2008/ 07-25-2014	FG-BOILERS-BR
EU-BOILER2-BR	Belle River Power Plant Boiler No. 2. 697 MW nominally rated, dry bottom coal-fired boiler equipped with low NO _x burners, over-fire air, dry cold-side ESP, DSI, and ACI.	01-01-1984/ 02-01-2002/ 12-29-2009/ 07-25-2014	FG-BOILERS-BR

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-BOILERS-BR*	Applicable requirements associated with Belle River Power Plant Boiler Nos. 1 and 2.	EU-BOILER1-BR EU-BOILER2-BR
*Other applicable permit requirements for the emission units in this table can be found in the Title V permit, MI-ROP-B2796-2015c.		

**FG-BOILERS-BR
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Applicable requirements associated with Belle River Power Plant Boiler Nos. 1 and 2.

Emission Units:

EU-BOILER1-BR Belle River Boiler No. 1. 697 MW nominally rated, dry bottom coal-fired boiler diesel for ignition) with electrostatic precipitators, low-NO_x burners, overfire air, DSI and ACI
EU-BOILER2-BR Belle River Boiler No. 2. 697 MW nominally rated, dry bottom coal-fired boiler (diesel for ignition) with electrostatic precipitators, low-NO_x burners overfire air, DSI and ACI

POLLUTION CONTROL EQUIPMENT

Electrostatic Precipitators, Low-NO_x burners, overfire air, DSI and ACI

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter (PM)	0.10 pound per MM BTU heat input ²	Test Protocol will specify averaging time	EU-BOILER1-BR EU-BOILER2-BR	SC V.1	40 CFR Part 60, Subpart D; 40 CFR 60.42a(1)
2. Particulate Matter (PM)	0.030 lb/MMBtu ^{2,3,4}	24-hr rolling average for all periods of operation excluding periods of Startup ^{c,2,3,4}	EU-BOILER1-BR EU-BOILER2-BR	SC VI.7 & VI.8	Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24
3. Opacity	20% ^{2, a}	6-minute period	EU-BOILER1-BR EU-BOILER2-BR	SC VI.3	40 CFR Part 60, Subpart D; 40 CFR 60.42a(2)
4. SO ₂	1.2 pounds per MM BTU ^{2, b}	Based upon any 3-hour average	EU-BOILER1-BR EU-BOILER2-BR	SC VI.1	40 CFR Part 60, Subpart D; 40 CFR 60.43a(2)
5. SO ₂	0.680 lb/MMBtu ^{2,3,4}	30-day Rolling Average Emission Rate ^{2,3,4}	EU-BOILER1-BR EU-BOILER2-BR	SC VI.9	Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9
6. NO _x	0.70 pound per MM BTU ^{2, b}	Based upon any 3-hour average	EU-BOILER1-BR EU-BOILER2-BR	SC VI.2	40 CFR Part 60, Subpart D; 40 CFR 60.44a(3)
7. NO _x	0.290 lb/MMBtu ^{2,3,4}	30-day Rolling Average Emission Rate ^{2,3,4}	EU-BOILER1-BR EU-BOILER2-BR	SC VI.9	Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 9

^aExcept for one 6-minute period per hour of not more than 27%.²

^bExcess emissions for SO₂ and NO_x are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods, as measured by the continuous monitoring system) exceed the emission limit.² (40 CFR 60.45(g)(2) & (3))

^cExcludes periods of startup as defined as 40 CFR 63.10042^{2,3,4} (Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24)

8. The permittee shall comply with the System-Wide Annual NO_x and SO₂ Tonnage Limitation specified in Appendix 11-BR-1. Emissions from EU-BOILER1-BR and EU-BOILER2-BR shall be counted toward the system-wide total emissions.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)**
9. The permittee shall comply with the SO₂ and NO_x use & surrender allowance and super-compliance allowance provisions listed in Appendix 11-BR-2: Allowance Provisions.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14-22)**

See Appendix 11-BR-1 & 11-BR-2

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The electrostatic precipitators shall be installed and operated in a satisfactory manner.² **(R 336.1910)**
2. The permittee shall maintain and operate EU-BOILER1-BR in a satisfactory manner using efficient combustion practices. Satisfactory operation includes operating EU-BOILER1-BR according to the procedures outlined in the malfunction abatement plan (MAP) and the Carbon Monoxide (CO) Minimization Protocol.² **(R 336.1910, R 336.1911, R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**
3. The permittee shall maintain and implement the approved MAP for FG-BOILERS-BR and the electrostatic precipitators. Alternate formats or revisions to the approved Program must be approved by the AQD District Supervisor. If the Plan inadequately addresses an event, the permittee shall revise the Plan within 45 days of such an event and submit the revised Plan for approval of AQD District Supervisor. The alternate plan shall be deemed approved unless notified by the District Supervisor within 45 days of plan submittal.² **(R 336.1201(3))**
4. The permittee shall use and implement and maintain the AQD approved Carbon Monoxide Minimization Protocol describing reasonable measures to minimize carbon monoxide emissions. Alternate formats or revisions to the approved protocol must be approved by AQD District Supervisor. The alternate plan shall be deemed approved unless notified by the District Supervisor within 45 days of plan submittal.² **(R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**
5. The permittee shall continuously operate each PM Control Device for each boiler in FG-BOILERS-BR and use good air pollution control practices to maximize PM emission reductions at all times when the associated boiler is in operation. The permittee shall meet the requirements of Appendix 3-BR-5 to optimize ESP operation.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 23)**
6. The permittee shall continuously operate the Low NO_x Combustion System (including Overfire Air) for each boiler in FG-BOILERS-BR at all times when the associated boiler is in operation.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 10)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-BOILER1-BR unless the upgraded low-NO_x burner system is installed, maintained, and operated in a satisfactory manner.² **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1201(3))**

1. Once every three years or more frequently upon the request of the AQD District Supervisor, the permittee shall verify and quantify Particulate Matter (PM) emission rates from EU-BOILER1-BR and EU-BOILER2-BR by testing at owner's expense in accordance with EGLE requirements. **(R 336.1201(3), R 336.1213(3))**

2. Annually, the permittee shall verify and quantify Carbon Monoxide (CO) emission rates from EU-BOILER1-BR by testing at owner's expense in accordance with EGLE requirements. Testing must be completed at maximum and an intermediate load. Combustion parameters shall be monitored and recorded during test to determine efficient combustion practices.² **(R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**
3. The permittee shall submit a complete test protocol to the AQD for approval at least 30 days prior to the anticipated test date. AQD must approve the final plan prior to testing. The permittee shall notify the AQD no less than 7 days prior to the anticipated test date. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.² **(R 336.1331, R 336.2001, R 336.2003, R 336.2004, R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1201(3))**

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the SO₂ emissions on a continuous basis and in accordance with the Emission and Fuel Monitoring section of 40 CFR 60 and/or 75.² **See Appendix 3.1-BR and 3.2-BR. (40 CFR Parts 60 & 75, Appendix B)**
2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the gas flow, CO₂, and NO_x emissions on a continuous basis and in accordance with the Emission and Fuel Monitoring section of Part 60 and/or 40 CFR 75.² **See Appendix 3.2 BR. (40 CFR Part 60, Subpart D; 40 CFR Parts 60 & 75, Appendix B)**
3. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the visible emissions on a continuous basis and in accordance with 40 CFR 60.² **See Appendix 3.3-BR. (R 336.1201, 40 CFR Part 60 Subpart D, 40 CFR 60.13, 40 CFR Part 60 Appendix B)**
4. For each electrostatic precipitator, the permittee shall monitor the parameters specified in the SS & MAP.² **(R 336.1201)**
5. The permittee shall keep monthly and previous 12-month CO mass emission calculation records for EU-BOILER1-BR. After five years of operation of the low-NO_x burner system, the permittee may submit a written request to change the CO emission calculation recordkeeping, to the AQD District Supervisor for review and approval. The permittee may only change the CO emission calculation recordkeeping with written approval of the AQD District Supervisor.² **(R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**
6. The permittee shall conduct monitoring and keep written records, as required in the approved Carbon Monoxide Minimization Protocol to demonstrate that CO is being minimized on an ongoing basis. After five years of operation of the low-NO_x burner system, the permittee may submit a written request to change the monitoring and recordkeeping to the AQD District Supervisor for review and approval. The permittee may only change the monitoring and recordkeeping with the written approval of the AQD District Supervisor. ² **(R 336.2804, R 336.2810(3), 40 CFR 52.21(d) & (j))**
7. In calculating each 24-Hour Rolling Average Emission Rate for PM, any hour that includes periods of Startup as defined in 40 C.F.R. § 63.10042, shall not be considered an Operating Hour for purposes of that calculation.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 24)**
8. The permittee shall maintain and continuously operate a PM CEMS pursuant to the conditions contained in Appendix 3-BR-4: PM CEMS.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraphs 25 & 26)**
9. For purposes of determining compliance with the 30-Day Rolling Average Emission Rates for NO_x and SO₂ as found in SC 1.5 and 1.7, 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%

CO₂) shall be applied to the emission rate for any hours where the measured CO₂ concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 12)**

See Appendix 3-BR

VII. REPORTING

1. The permittee shall submit quarterly Excess Emission and Monitoring System Performance (MPS) reports and operating information pursuant to 40 CFR 60, Subpart D, within 30 days following the end of the quarter in which data was collected.² **See Appendix 8.B-BR, (40 CFR 60, Subpart D)**
2. 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-BR-B-3.^{2,3,4} **(R 336.1201, Act 451, Section 324.5503(b); Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 48)**

See Appendix 8-BR

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. SV-BOILER1-BR	306	660	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SV-BOILER2-BR	306	660	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the NO_x standards which have been promulgated in a federal implementation plan under section 110(c) or required under section 126 of the CAA. **(R 336.1801(14))**
2. As would apply to any other condition in this permit, nothing in this permit shall preclude the use, including exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.² **(40 CFR 60.11(g))**
3. The permittee shall comply with applicable requirements of the federal National Emissions Standards for Hazardous Air Pollutants as set forth in 40 CFR 63, Subparts A and UUUUU (Coal- and Oil-Fired Electric Utility Steam Generating Units) for FG-BOILERS-BR. The permittee shall comply with all notice requirements, emissions standards and continuous emissions monitoring, recordkeeping, and reporting requirements as required in 40 CFR 63, Subparts A and UUUUU. All emission and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request. **(40 CFR 63 Subparts A & UUUUU)**

Footnotes:

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

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

³This 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 the consent decree.

⁴Definitions specific to this condition may be found in Appendix 1-BR-2.

APPENDICES

Appendix 1 Definitions

1-BR-1. 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 4a)**
- 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 4b)**
- 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 4c)**
- 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 4d)**
- 5) “CEMS” or “Continuous Emission Monitoring System” means, for obligations involving the monitoring of NO_x, SO₂, and PM emissions under the Consent Decree, the devices defined in 40 C.F.R. §72.2 and installed and 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 4g)**
- 6) “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 4h)**

- 7) "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 4i)**
- 8) "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 4j)**
- 9) "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 NO_x Combustion System), it shall be operated at all times such Unit is in operation (except as otherwise provided by Section XII (Force Majeure)), 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 4k)**
- 10) "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 4l)**
- 11) "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 4n)**
- 12) "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 4o)**
- 13) "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 4p)**
- 14) "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 4q)**
- 15) "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 SO₂ emissions. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4t)**
- 16) "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 4u)**
- 17) "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 4w)**
- 18) "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 4x)**
- 19) "Low NO_x 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_x 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 4y)**

- 20) "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 4z)**
- 21) "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 4aa)**
- 22) "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 4bb)**
- 23) "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 4cc)**
- 24) "NO_x" 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 4ff)**
- 25) "NO_x Allowance" means an authorization to emit a specified amount of NO_x 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 "NO_x 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 4gg)**
- 26) "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 4ii)**
- 27) "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 4jj)**
- 28) "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 4kk)**
- 29) "Over-Fire Air" or "OFA" means and in-furnace staged combustion control to reduce NO_x emissions. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4ll)**
- 30) "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 4mm)**
- 31) "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 4nn)**
- 32) "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 emissions. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4oo)**

- 33) "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 4pp)**
- 34) "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 4qq)**
- 35) "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 4tt)**
- 36) "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 4uu)**
- 37) "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 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 4vv)**
- 38) "Retrofit" means that the Unit must install and Continuously Operate both an FGD and an SCR, or equivalent pollution control technologies approved by EPA, and achieve and maintain the following 30-Day Rolling Average Emission Rates: NO_x: 0.080 lb/MMBtu, SO₂: 0.060 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 4ww)**
- 39) "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 4xx)**
- 40) "SCR" or "Selective Catalytic Reduction" means an air pollution control device for reducing NO_x emissions in which ammonia ("NH₃") is added to the flue gas and then passed through layers of a catalyst material. The ammonia and NO_x in the flue gas stream react on the surface of the catalyst, forming nitrogen ("N₂") and water vapor. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 4yy)**
- 41) "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 4zz)**
- 42) "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 4aaa)**

- 43) "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 4bbb)**
- 44) "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 4ccc)**
- 45) "Surrender" or "Surrender of Allowances" means, for purposes of SO₂ and NO_x 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 4ddd)**
- 46) "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 4eee)**
- 47) "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 4fff)**
- 48) "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 4ggg)**
- 49) "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 4hhh)**
- 50) "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 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 4iii)**

Appendix 2-BR. Schedule of Compliance

The permittee shall retrofit, refuel or repower EU-BOILER1-BR and EU-BOILER2-BR by no later than December 31, 2030. The permittee shall notify the EPA in writing which option they elect to use for EU-BOILER1-BR and EU-BOILER2-BR at least 365 days before the compliance deadline. If the permittee elects to retrofit EU-BOILER1-BR and EU-BOILER2-BR, the permittee shall install and continuously operate both an FGD and an SCR, or equivalent pollution control technologies approved by the EPA, and shall achieve and maintain the following 30-Day Rolling Average Emission Rates for NO_x (0.080 lb/MMBtu) and SO₂ (0.060 lb/MMBtu) as specified in the definition of "retrofit" in Appendix 1-BR-2. If the permittee retires EU-BOILER1-BR or EU-BOILER2-BR by the compliance date, the permittee shall have no further obligations under 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan for the applicable emission unit(s). **(R 336.1213(4)(a), R 336.1119(a)(ii), R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2:10-cv-13101-BAF-RSW, E.D. Michigan, paragraphs 4ww, 7, 8 & 43)**

Appendix 3-BR. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-BOILERS-BR.

3-BR-1. Continuous Emission Monitoring Systems (SO₂)

The Continuous Emissions Monitoring Systems (CEMS) performance specifications defined in 40 CFR Part 75, Appendix B are adopted. The Certified SO₂ monitors will be used to determine sulfur dioxide emissions. The data reduction procedures defined in R 336.2175 will be used to convert SO₂ emission monitoring data in parts per million to pounds SO₂/MM BTU. After the last day of each calendar month, the CEMS data recording system will generate and record a monthly average (pounds SO₂/MM BTU) from validated data reported for Part 75 for the previous month.

3-BR-2. Continuous Emissions Monitoring System (Title IV)

The CEMS performance specifications defined in 40 CFR Part 75, Appendix B are adopted.

Methods of measurement, frequency of measurement and record keeping methods for CEMS required under 40 CFR 75 are outlined in the most recent version of the DTE CEMS QA/QC Plan.

Data Reporting: AQD may approve alternative data reporting or reduction procedures if it can be demonstrated that such procedures are at least as accurate as the procedures identified in R 336.2175.

3-BR-3. Continuous Opacity Monitoring Systems

The permittee shall conduct an annual audit of the Continuous Opacity Monitoring System (COMS) The COMS performance specifications defined in 40 CFR Part 60, Appendix B are adopted. **(R 336.1213(3))**

Cycling time for opacity: complete a minimum of one cycle of sampling/analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period. **(R 336.2152)**

Zero and Drift: The COMS must be subject to the manufacturer's zero and span check at least once daily. **R 336.2153)**

Location: The location of the COMS or the monitoring devices must be such that representative measurement of emissions or process parameters are obtained. **(R 336.2155)**

Alternative Systems: AQD may approve the use of an alternative monitoring system if one is available that meets COMS objectives and if, because of physical limitations or other reasons, COMS cannot be installed or give accurate measurements. **(R 336.2159)**

Monitoring and reporting requirements shall not apply during any period of monitoring system malfunction if it can be demonstrated to the satisfaction of AQD that the cause of the malfunction could not have been avoided by any reasonable action and necessary repairs are being made as expeditiously as practicable. **(R 336.2190)**

3-BR-4. 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-B: Definitions. **(Act 451, Section 324.5503(b))**

4.1 In determining the PM Emissions Rates for each unit under the Consent Decree, 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 concentration 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)**

4.2 In maintaining and operating the PM CEMS required under the Consent Decree, DTE shall use the criteria set forth in 40 CFR Part 60, Appendix B, Performance Specification 11, and 40 CFR 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, 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 maintains a PM CEMS, DTE may use the procedures specified in 40 CFR § 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 CFR 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 CFR 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-BR-5. 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-B: Definitions. **(Act 451, Section 324.5503(b))**

DTE Shall:

5.1. 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 cycle time, cycle frequency, rapper vibrator intensity, and number of strikes per cleaning event; and

BR-5.2. During the next planned Unit outage (or unplanned outage of sufficient length), optimize the PM controls on that Unit by inspecting for and repairing or failed ESP section and any openings in ESP casings, ductwork, and expansion joints to minimize air leakage.

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.

Appendix 8-BR. Reporting

8-1-A. 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-BR-8.3. 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

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-BR: Definitions. **(Act 451, Section 324.5503(b))**

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 for each Unit covered by the Consent Decree:
 - a) All information necessary to determine compliance during the reporting period with the requirements of paragraphs 9-26 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 each of the units,
 - (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 NO_x and SO₂ tonnages for the calendar year, and
 - (4) specific calculations demonstrating the basis and specific amounts of NO_x and SO₂ Allowances to be Surrendered as specified in Appendix 11-BR-2.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 NO_x and SO₂ Allowances that DTE claims to have generated in accordance with Appendix 11-BR 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 supercompliant NO_x and SO₂ Allowances claimed at each Unit; and
 - d) an identification of all periods when the Low NO_x Combustion system (including overfire air) required by the Consent Decree for any unit covered by the Consent Decree (paragraph 10) 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)**
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)**
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 agree 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)**
6. All paper notifications, communications, or submissions made pursuant to this Section 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)**

Appendix 11-BR: NO_x and SO₂ Allowances and Limitations

11-BR-1: System Wide NO_x and SO₂ Tonnage Limitations

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-BR: Definitions. **(Act 451, Section 324.5503(b))**

System-Wide Annual NO_x and SO₂ Tonnage Limitations

The DTE System, collectively, shall operate so as not to exceed the following System-Wide Annual NO_x and SO₂ Annual Limitations:

For the Calendar Year Specified Below:	System-Wide Annual NO _x Tonnage Limitation	System-Wide Annual SO ₂ Tonnage Limitation:
2020-2022	23,850	54,400
2023-2030	15,400	31,800
2031 and later years	6,400	4,650

(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 11)

1. For purposes of determining compliance with any System-Wide Annual Tonnage Limitation, DTE shall use NO_x and SO₂ emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. If a Unit is Refueled, SO₂ emissions shall be calculated using methods set forth in EPA document AP-42 or by use of a stack test emission factor. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 13)**

11-BR-2. NO_x and SO₂ Allowance Provisions

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-B: Definitions. **(Act 451, Section 324.5503(b))**

Use and Surrender of NO_x & SO₂ Allowances

1. DTE shall not use NO_x or SO₂ Allowances to comply with any requirement of the Consent Decree, as enumerated in this permit, including by claiming compliance with any emission limitation required by the Consent Decree, as provided in this permit, by using, tendering, or otherwise applying NO_x or SO₂ Allowances to offset any excess emissions. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 14)**
2. Except as provided by Appendix 11-B-2: Allowance Provisions, DTE shall not sell, bank, trade, or transfer their interest in any NO_x or SO₂ Allowances allocated to Units in the System. Nothing in the Consent Decree shall restrict DTE's ability to transfer NO_x or SO₂ Allowances among their own facility or general accounts. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 15)**

3. Beginning in 2021 and continuing in each calendar year thereafter, DTE shall Surrender all NO_x and SO₂ Allowances allocated to the Units in the System for that calendar year that DTE does not need to meet federal and/or state CAA regulatory requirements for the System Units. However, NO_x and SO₂ Allowances allocated to the System may be used by DTE to meet their own federal and/or state CAA regulatory requirements for such Units. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 16)**
4. Nothing in the Consent Decree shall prevent DTE from purchasing or otherwise obtaining NO_x or SO₂ Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 17)**

Super-Compliant NO_x and SO₂ Allowances

5. Beginning with the year 2021 and continuing in each calendar year thereafter, DTE may sell, bank, use, trade, or transfer NO_x or SO₂ Allowances made available in that calendar year solely as a result of:
 - a) achievement and maintenance of an Emission Rate below a 30-Day Rolling Average Emission Rate (per individual unit) of 0.290 lb/MMBtu for NO_x and 0.680 lb/MMBtu for SO₂,
 - b) compliance with the Consent Decree through Retrofit, Refuel or Repowering by the Unit specific dates specified in the Consent Decree paragraph 7, provided that DTE is also in compliance for that calendar year with all emission limitations for NO_x or SO₂ set forth in the Consent Decree as provided in this permit. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 19)**

Method for Surrender of NO_x and SO₂ Allowances

6. DTE shall Surrender, or transfer to a non-profit third-party selected by DTE for Surrender, all NO_x and SO₂ Allowances required to be Surrendered pursuant to Appendix 11-BR by June 30 of the immediately following calendar year. Such Surrender need not include the specific Allowances that were allocated to DTE System Units, so long as DTE surrenders Allowances that are from the same year or an earlier year and that are equal to the number required to be Surrendered under the Consent Decree as provided in this permit. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 20)**
7. If any NO_x or SO₂ Allowances required to be Surrendered under Appendix 11-BR: Allowance Provisions are transferred directly to a non-profit third-party, DTE shall include a description of such transfer in the next report submitted to EPA pursuant to the Periodic Reporting provisions of the Consent Decree (beginning at paragraph 48 of the Consent Decree). Such report shall:
 - a) identify the non-profit third-party recipient(s) of the Allowances and list the serial numbers of the transferred Allowances; and
 - b) include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the Allowances and will not use any of the Allowances to meet any obligation imposed by any environmental law;
 - c) include specific calculations demonstrating the basis and specific amounts of NO_x and SO₂ Allowances to be surrendered.

No later than the third periodic report due after the transfer of any Allowances, DTE shall include a statement that the third-party recipient(s) Surrendered the Allowances for permanent Surrender to EPA in accordance with the provisions of Appendix 11-BR, "Method for Surrender of NO_x and SO₂ Allowances," within one year after DTE transferred the Allowances to them. DTE shall not have complied with the Allowance Surrender requirements of NO_x and SO₂ Allowance Surrender requirements of Appendix 11-BR, "Method for Surrender of NO_x and SO₂ Allowances," until all third-party recipient(s) have actually Surrendered the transferred Allowances to EPA. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraphs 21 and 48a(4))**

8. For all Allowances required to be Surrendered, DTE or the third-party recipient(s) (as the case may be) shall, with respect to the Allowances that DTE is to Surrender, ensure that an Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such Allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, DTE shall ensure that the transfer of their Allowances is irrevocably authorized and that the source and location of the Allowances being Surrendered are identified by name of account and any applicable serial or other identification numbers or station names. **(R 336.1201, Act 451, Section 324.5503(b); 2020 Civil Action No. 2-10-cv-13101-BAF-RSW, E.D. Michigan, paragraph 22)**