MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

EFFECTIVE DATE: June 7, 2018
REVISION DATE: March 25, 2019

ISSUED TO

DTE Electric Company - Placid Peaking Facility

State Registration Number (SRN): B2803

LOCATED AT

4912 Edgar, Clarkston, Michigan 48346

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-2803-2018a

Expiration Date: June 7, 2023

Administratively Complete ROP Renewal Application
Due Between December 7, 2021 and December 7, 2022

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.

Michigan Department of Environmental Quality

Joyce Zhu, Southeast Michigan District Supervisor

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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 Environmental Quality (MDEQ) 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 is 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.

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).[2] **(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:" [2] **(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% 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.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(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).[2] **(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))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. 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 60604-3507. **(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))**
    a. 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).
    b. 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.
    c. 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))**:
    a. 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.
    b. 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.[2] **(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))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. 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:
    a. 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))**
    b. 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))**
    c. 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, 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 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, 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):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. 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.[2] **(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.[2] **(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, MDEQ.[2] **(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, MDEQ, 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.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU00001	PLACID DG 12 PEAKERS, 12-1. The engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. The engine was manufactured June 1970 and the serial number is 63856. The unit is equipped with diesel oxidation catalyst.	11/20/1970	FGPEAKERS
EU00002	PLACID DG 12 PEAKERS, 12-2. The engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. The engine was manufactured June 1970 and the serial number is 63858. The unit is equipped with diesel oxidation catalyst.	11/21/1970	FGPEAKERS
EU00003	PLACID DG 12 PEAKERS, 12-3. The engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. The engine was manufactured June 1970 and the serial number is 63854. The unit is equipped with diesel oxidation catalyst.	11/21/1970	FGPEAKERS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU00004	PLACID DG 12 PEAKERS, 12-4. The engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. The engine was manufactured June 1970 and the serial number is 63857. The unit is equipped with diesel oxidation catalyst.	11/21/1970	FGPEAKERS
EU00005	PLACID DG 12 PEAKERS, 12-5. The engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. The engine was manufactured June 1970 and the serial number is 63855. The unit is equipped with diesel oxidation catalyst.	11/21/1970	FGPEAKERS

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group 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 special conditions that apply to more than one emission unit, this section will be left blank.

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
FGPEAKERS	Five peaker engines. Each engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder, which is used to drive a 2.75-megawatt electrical generator. All engines were manufactured June 1970 and installed in November 1970. Each unit is equipped with diesel oxidation catalyst.	EU00001 EU00002 EU00003 EU00004 EU00005

FGPEAKERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group consists of five peaker engines: EU00001, EU00002, EU00003, EU00004 and EU00005. Each engine is a General Motors Electro-Motive Division model MP45-B, 3,600 horsepower, 20-cylinder, 2-stroke compression ignition, reciprocating internal combustion (RICE) diesel engine with a displacement of 10.57 liters per cylinder used to drive a 2.75-megawatt electrical generator connected to each engine. All engines were manufactured June 1970 and installed in November 1970 and modified August 28, 2012.

Emission Units: EU00001, EU00002, EU00003, EU00004 and EU00005

POLLUTION CONTROL EQUIPMENT

Diesel oxidation catalyst

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO	23 ppmv dry at 15% oxygen -OR- 70% reduction or more[a]	During all periods of operation,[b] except during periods of startup	Each engine in FGPEAKERS	SC V.1 SC III.2 SC III.3 SC III.4 SC III. 7 SC VI.10	**40 CFR 63.6603(a) & Table 2d (#3); 40 CFR 63.6620 (d) & Table 4(#1); 40 CFR 63.6640(a) & Table 6(#10)**

[a]During performance verification testing under 63.6620, compliance with the numerical emission limitation is the average of three test runs of at least 1-hour using testing requirements and procedures in Table 4 to this subpart.

[b]For FGPEAKERs, continuous compliance per 63.6640(a) demonstrated using methods in Subpart ZZZZ Table 6, Item #10.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. #2 Fuel Oil	1.5% sulfur by weight with a heat value of 18,000 Btu/lb. [a]	As Fired	FGPEAKERS	SC VI.1	**R 336.1401**

[a] This is equivalent to 1.67 lb. SO2/mmBtu of heat input. The maximum sulfur content in fuel is defined as the average sulfur content in all fuels burned at any one time in a power plant. Compliance with this limit shall be considered compliance with the limit of R336.1401.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee may operate any engine equipped with an add-on control device for up to 200 hours per engine change-out or per maintenance event that requires reseating the piston rings without that control device, consistent with the Startup, Shutdown, Malfunction Plan (SSM). **(R 336.1205, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 63.6, 40 CFR 63.6640(d))**

2. The permittee shall not operate an engine in FGPEAKERS unless the pressure drop across the catalyst does not change by more than two inches of water from the pressure drop across the catalyst that was measured during the initial performance test of the oxidation catalyst. **(40 CFR 63.6603(a), 40 CFR 63 - Table 2b(2))**

3. The permittee shall not operate an engine in FGPEAKERS unless the oxidation catalyst inlet temperature is greater than or equal to 450°F and less than or equal to 1350°F. **40 CFR 63.6603(a), 40 CFR 63 - Table 2b(2))**

4. The permittee shall operate the CI RICE in compliance with the emission limitations and operating limitations SC I.1 and SC III.2 and III.3 at all times. The CI RICE must be operated and maintained at any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.6605)**

5. The permittee shall minimize the time spent at idle during startup and minimize the startup time of an engine in FGPEAKERS to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply. **(40 CFR 63.6625(h))**

6. The permittee shall prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in below. The permittee may request approval of alternative monitoring system quality assurance and quality control procedures.

   a. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

   b. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

   c. Equipment performance evaluations, system accuracy audits, or other audit procedures;

   d. Ongoing operation and maintenance including ensuring necessary parts for routine repairs of the monitoring system are readily available and completion of manufacturer's written specifications or recommendations for installation, operating, and calibration of the system;

   e. Ongoing reporting and recordkeeping procedures to maintain records in accordance with SC VI.9. **(40 CFR 63.6625(b)(1), 40 CFR 63.8(b), (c)(1)(ii), and (c)(3))**

7. If a CMPS is used to meet SC IV.2, the permittee shall:

   a. Ensure that the continuous parameter monitoring system (CPMS) collects data at least once every 15 minutes. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8°C (5°F) or one percent of the measurement range, whichever is larger. **(40 CFR 63.6625(b)(3) and (4))**

   b. Conduct a performance evaluation of each CPMS in accordance with their site-specific monitoring plan. The permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in their site-specific monitoring plan at least annually. **(40 CFR 63.6625(b)(5) and (6))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate an engine in FGPEAKERS unless the catalytic oxidation system for that engine is installed, maintained, and operated in a satisfactory manner and according to the procedures in their site-specific monitoring plan. **(40 CFR 63.6603(a), 40 CFR 63.6625(b), 40 CFR 63.6640)**

2. The permittee shall install, operate, and maintain a CPMS or have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F. **(40 CFR 63.6625(b), 40 CFR 63 - Table 5(13))**

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 the catalyst system efficiency from each engine, by testing at owner's expense. Testing shall be performed using an approved EPA Method listed in 40 CFR 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. Testing must be conducted every 8,760 hours or three years, whichever comes first. If the catalyst is changed, the permittee shall reestablish the operating parameters measured during the initial test and conduct a subsequent test to demonstrate compliance with the applicable emission limitation. The permittee shall determine compliance with the percent reduction requirement using the equation in 40 CFR 63.6620(e). The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 60 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. 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 shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than seven days prior to the anticipated test date. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2005, 40 CFR 63.6620, 40 CFR 63 Subpart ZZZZ Table 4, 40 CFR 63.6640(b), 40 CFR 63.6645(g)**, **40 CFR 63.6645(a) and (h))**

2. The permittee is not required to start up the engine solely to conduct the performance test. If the engine is non-operational, the permittee shall conduct the performance test when the engine is started up again. **(40 CFR 63.6620(b))**

See Appendix 5

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 maintain a complete record of fuel oil specifications and/or a fuel oil analysis for each delivery, or storage tank of fuel oil. These records may include purchase records for ASTM specification fuel oil, specifications or analyses provided by the vendor at the time of delivery, analytical results from laboratory testing, or any other records adequate to demonstrate compliance with the percent sulfur limit in fuel oil. **(R 336.1213(3)(B), 40 CFR 63.6604, 40 CFR 63.6660)**

2. The permittee shall continuously monitor the catalyst parameters at all times that the stationary RICE is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. This monitoring data shall be kept on file and made available to the Department upon request. **(40 CFR 63.6635(b), 40 CFR 63.6660)**

3. The permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee must, however, use all the valid data collected during all other periods. **(40 CFR 63.6635(c))**

4. The permittee shall maintain a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted. These document copies shall be kept on file and made available to the Department upon request. **(40 CFR 63.6655(a)(1), 40 CFR 63.6660)**

5. The permittee shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or of the air pollution control and monitoring equipment. These records shall be kept on file and made available to the Department upon request. **(40 CFR 63.6655(a)(2), 40 CFR 63.6660)**

6. The permittee shall maintain records of performance tests and performance evaluations. These records shall be kept on file and made available to the Department upon request. **(40 CFR 63.6655(a)(3), 40 CFR 63.6660)**

7. The permittee shall maintain records of all required maintenance performed on the air pollution control and monitoring equipment. These records shall be kept on file and made available to the Department upon request. **(40 CFR 63.6655(a)(4), 40 CFR 63.6660)**

8. The permittee shall maintain records of actions taken during periods of malfunction to minimize, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. These records shall be kept on file and made available to the Department upon request. **(40 CFR 63.6655(a)(5), 40 CFR 63.6660, 40 CFR 63.6605(b))**

9. The permittee shall maintain the following records for each CPMS on file and make available to the Department upon request:
   a. All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

   b. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

   c. The date and time identifying each period during which the CMS was out of control. A CMS is out of control if—(1) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or (2) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or (3) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

   d. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

   e. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

   f. Records required by the startup, shutdown, and malfunction plan.

   g. Previous (i.e., superseded) versions of the performance evaluation plan for a period of five years after each revision of the plan.

   h. Requests for alternatives to the relative accuracy test for CPMS, if applicable. **(40 CFR 63.6655(b), 40 CFR 63.6660, 40 CFR 63.10(b)(2) and (c), 40 CFR 63.8(f)(6))**

10. The permittee shall maintain the following records as required to demonstrate continuous compliance with the operating limitations in SC III.2 and SC III.3 These records shall be kept on file and made available to the Department upon request:

    a. Catalyst inlet temperature data reduced to 4-hour rolling averages if CPMS is used to comply with SC IV.2; and
    b. Pressure drop across the catalyst measured monthly. **(40 CFR 63.6655(d), 40 CFR 63.6660, 40 CFR 63 – Table 6(10))**

See Appendix 7

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 two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. **(R 336.2001(5), 40CFR 63.7(g))**

5. The permittee shall report each instance in which they did not meet each emission limitation in SC I.1 or operating limitation in SC III.1 and SC III.2. These instances are deviations and must be reported. **(40 CFR 63.6640(b))**

6. The permittee shall include the following information in each Compliance report:
   a. Company name and address.
   b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
   c. Date of report and beginning and ending dates of the reporting period.
   d. If a malfunction occurred during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with SC VI.8, including actions taken to correct a malfunction.
   e. If there are no deviations from any emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period.
   f. If there were no periods during which the CPMS, was out-of-control, a statement that there were no periods during which the continuous monitoring system (CMS) was out-of-control during the reporting period.
   g. If there was a deviation from an emission or operating limitation, the following information must be included.
      i. The date and time that each malfunction started and stopped.
      ii. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
      iii. The date, time, and duration that each CMS was out-of-control, including the information in 40 CFR 63.8(c)(8).
      iv. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
      v. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
      vi. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
      vii. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
      viii. An identification of each parameter and pollutant that was monitored at the stationary RICE.
      ix. A brief description of the stationary RICE.
      x. A brief description of the CMS.
      xi. The date of the latest CMS certification or audit.
      xii. A description of any changes in CMS, processes, or controls since the last reporting period. **(40 CFR 63.6650(c) and (e))**

7. The permittee shall report all deviations in the semiannual monitoring report. If the permittee submits a Compliance report pursuant to of this 40 CFR subpart ZZZZ along with, or as part of, the semiannual monitoring report, and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. **(40 CFR 63.6650(f))**

See Appendix 8

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)

1. 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. **(40CFR, Part 63, Subparts A and ZZZZ)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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. Acronyms and Abbreviations

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_2e	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 Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

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

Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that 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 not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4. Recordkeeping

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

Appendix 5. Testing Procedures

The permittee shall use the following approved test plans, procedures, and averaging to measure the pollutant emissions for the applicable requirements referenced in FGPEAKERS:

Equations to determine compliance with the "percent reduction requirement:" (**40 CFR 63.6620(e))**

1. The permittee must use Equation 1 to determine compliance with the percent reduction requirement:

   Equation 1

$$\frac{C_i - C_o}{C_i} \times 100 = R$$

   Where:
   C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,
   C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and
   R = percent reduction of CO, THC, or formaldehyde emissions.

2. The permittee must normalize the CO concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO2 concentration is measured in lieu of oxygen concentration measurement, a CO2 correction factor is needed. Calculate the CO2 correction factor as described below.

   i. Calculate the fuel-specific F_0 value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c}$$

   Where:
   F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.
   0.209 = Fraction of air that is oxygen, percent/100.
   F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/10^6 Btu).
   Fc = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/10^6 Btu)

   ii. Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o}$$

Where:
X_{CO2} = CO_2 correction factor, percent.
5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

iii. Calculate the CO gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2}$$

Where:
C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.
C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.
X_{CO2} = CO_2 correction factor, percent.
$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(40 CFR 63.6620(e)(2))

Appendix 6. Permits to Install

At the time of permit issuance, no Permits to Install have been issued to this facility. Therefore, this appendix is not applicable.

Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FGPEAKERS condition III.1 above.

If the heat value of the fuel oil is other than 18,000 btu/pound, the maximum allowed sulfur content shall be determined by the following equation:

Maximum allowed Sulfur content in percent by weight =

$$\frac{1.67 \text{ pound}}{1{,}000{,}000 \text{ BTU}} \times (\text{actual heat value of fuel oil in BTU per pound}) \times 100\% \times \frac{1 \text{ pound S}}{2 \text{ pounds SO2}}$$

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, 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.

B. Other Reporting

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.