

CONFIDENTIAL SETTLEMENT DOCUMENT PER MCR 408

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
OFFICE OF THE DIRECTOR

In the matter of administrative proceedings
against **GREDE, LLC**, a corporation,
organized under the laws of the State of
Michigan and doing business at 801 South
Carpenter Avenue in the City of Kingsford,
County of Dickinson, State of Michigan

AQD No. 2021-01

SRN: B1577

STIPULATION FOR ENTRY OF FINAL ORDER
BY CONSENT

This proceeding resulted from allegations by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) against Grede, LLC (Company), a corporation organized under the laws of the State of Michigan and doing business at 801 South Carpenter Avenue, City of Kingsford, County of Dickinson, State of Michigan, with State Registration Number (SRN) B1577 (Facility). EGLE alleges that the Company is in violation of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, MCL 324.5501 *et seq.*, Mich Admin Code, R 336.1370 (Rule 370), R 336.1901 (Rule 901), and R. 336.1910 (Rule 910); and the conditions of Renewable Operating Permit (ROP) No. MI-ROP-B1577-2014a. Specifically, EGLE alleges the following violations by the Company: failed to timely conduct performance testing for FGMACT-EEEEEE; failed to timely submit visible emissions test results; failed to timely submit the semi-annual monitoring and deviation report for January 1 – June 30, 2018; caused unreasonable interference with the comfortable enjoyment of life and property; failed to properly maintain and operate the Module Torit Collector; failed to properly collect and dispose of air contaminants from the Module Torit Collector; exceeded the limits in ROP No. MI-ROP-B1577-2014a for emissions of Particulate Matter less than ten (10) microns in diameter (PM10) and Carbon Monoxide (CO) from the cupola furnace (EU-P009 CUPOLA); failed to correctly operate the cupola furnace in a manner that is consistent with good air pollution control practices; failed to timely conduct performance testing for Particulate Matter (PM), PM10, Sulfur Dioxide (SO2), and CO from the cupola furnace; failed to conduct a valid test for SO2 from the cupola furnace; failed to conduct a valid test for PM from the

Main Plant Pouring and Cooling (EU-P016 MAIN PLANT POURING AND COOLING) and from the Module Pouring and Cooling (EU-P036 MODULE POURING AND COOLING); failed to notify of a change in Responsible Official; failed to notify of change of ownership; failed to provide consent of purchaser to assume all obligations of Consent Order AQD No. 23-2016; failed to adequately collect and dispose of air contaminants; and failed to maintain and operate an air cleaning device as cited herein and in the Violation Notices dated August 6, 2018, September 19, 2018, November 30, 2018, September 9, 2019, and September 11, 2019. The Company and EGLE stipulate to the termination of this proceeding by entry of this Stipulation for Entry of a Final Order by Consent (Consent Order).

The Company and EGLE stipulate as follows:

1. The Natural Resources and Environmental Protection Act (NREPA) MCL 324.101 *et seq.*, is an act that controls pollution to protect the environment and natural resources in this State.
2. Article II, Pollution Control, Part 55 of the NREPA (Part 55), MCL 324.5501 *et seq.*, provides for air pollution control regulations in this State.
3. Executive Order 2019-06 renamed the Michigan Department of Environmental Quality as EGLE, and EGLE and has all statutory authority, powers, duties, functions and responsibilities to administer and enforce all provisions of Part 55.
4. The EGLE Director has delegated authority to the Director of the AQD (AQD Director) to enter into this Consent Order.
5. The termination of this matter by a Consent Order pursuant to Section 5528 of Part 55, MCL 324.5528, is proper and acceptable.
6. The Company and EGLE agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the Company that the law has been violated.
7. This Consent Order becomes effective on the date of execution (effective date of this Consent Order) by the AQD Director.
8. The Company shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in this Consent Order.

COMPLIANCE PROGRAM AND IMPLEMENTATION SCHEDULE

9. Rules

A. On and after the effective date of this Consent Order, the Company shall comply with 40 CFR 63.7710(a) and 40 CFR 63.7710(b).

10. Permit

A On and after the effective date of this Consent Order, the Company shall comply with the CO and PM10 emission limits as specified in EU-P009 CUPOLA, Conditions I.1, I.3, and I.5 of ROP No. MI-ROP-B1577-2020, as amended.

B. On and after the effective date of this Consent Order, the Company shall comply with the monitoring and recordkeeping requirements as specified in EU-P009 CUPOLA, Conditions VI.12 and VI.13 of ROP No. MI-ROP-B1577-2020, as amended.

11. Testing

A. FGMACT-EEEEEE Testing

1. Within thirty (30) days after the effective date of this Consent Order, the Company shall submit a test plan for performance testing as specified in FGMACT-EEEEEE Condition V.1 and V.2 of ROP No. MI-ROP-B1577-2020, as amended, that meets the requirements specified in Exhibit A of this Consent Order to the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor for review and approval prior to testing.

2. No later than sixty (60) days following the AQD approval of a test plan submitted by the Company pursuant to paragraph 11.A.1, the Company shall conduct FGMACT-EEEEEE performance testing.

3. Not less than seven (7) days prior to testing, the Company or an authorized agent shall notify the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor, in writing, of the time and place of the performance tests and who shall conduct them. A representative of the AQD shall have the opportunity to witness the tests.

4. Within sixty (60) days after the completion of the FGMACT-EEEEEE performance testing, the Company shall submit to the AQD Marquette District Supervisor and the

AQD Technical Programs Unit Supervisor a test report, which includes test data and results, in accordance with the requirements specified in ROP No. MI-ROP-B1577-2020, as amended.

5. The Company shall conduct FGMACT-EEEEEE performance testing within three (3) years after the most recent successful performance test. The Company shall subsequently conduct testing pursuant to FGMACT-EEEEEE performance testing schedule specified in ROP No. MI-ROP-B1577-2020, as amended.

6. If the Company is unable to conduct any test described in paragraphs 11.A.2 or 11.A.5, the Company shall submit a written request for extension no later than fourteen (14) days prior to the scheduled test date in the approved test plan to the AQD Marquette District Supervisor. The written request shall include the reason for the missed test and a proposed new test date.

B. ROP Testing

1. Within thirty (30) days after the effective date of this Consent Order, the Company shall submit a test plan for performance testing from the cupola as specified in EU-P009 CUPOLA Condition V.1 and V.2 of ROP No. MI-ROP-B1577-2020, as amended, that meets the requirements specified in Exhibit A of this Consent Order to the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor for review and approval prior to testing.

2. No later than sixty (60) days following AQD approval of a test plan submitted by the Company pursuant to paragraph 11.B.1, the Company shall conduct performance testing from the cupola.

3. Not less than seven (7) days prior to testing, the Company or its authorized agent shall notify the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor, in writing, of the time and place of the performance tests and who shall conduct them. A representative of the AQD shall have the opportunity to witness the tests.

4. Within sixty (60) days after the completion of the performance testing from the cupola, the Company shall submit to the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor a test report, which includes test data and results, in accordance with the requirements specified in ROP No. MI-ROP-B1577-2020, as amended.

5. If the Company is unable to conduct any test described in paragraphs 11.B.2 or 11.B.4 above, the Company shall submit a written request for extension no later than fourteen (14) days prior to the scheduled test date in the approved test plan to the AQD Marquette District Supervisor. The written request shall include the reason for the missed test and a proposed new test date.

C. Visible Emissions Testing

1. Not less than seven (7) days prior to testing, the Company or its' authorized agent shall notify the AQD Marquette District Supervisor and the AQD Technical Programs Unit Supervisor, in writing, of the time and place of the visible emissions testing and who shall conduct them. A representative of the AQD shall have the opportunity to witness the tests.

2. On and after the effective date of this Consent Order, the Company shall conduct visible emissions testing from the Cupola, shall document the readings, and shall keep records as specified in ROP No. MI-ROP-B1577-2020, as amended. This information shall be kept on file at the plant for a period of at least five (5) years, and shall be made available to EGLE upon written request.

12. Reporting

A. On and after the effective date of this Consent Order, the Company shall timely submit the semi-annual monitoring and deviation report and the visible emissions test report as specified in ROP No. MI-ROP-B1577-2020, as amended.

B. On and after the effective date of this Consent Order, the Company shall monitor and keep separate records of the pressure drop and fan amperage as required in ROP No. MI-ROP-B1577-2020, as amended. This information shall be kept on file at the plant for a period of at least five (5) years, and shall be made available to EGLE upon written request.

13. Plans

A. The Company shall operate in compliance with the approved Fugitive Dust Control Plan (FDCP) and the Operation and Maintenance Plan (OMP) as required by MI-ROP-

B1577-2020, as amended, and maintain the records and procedures demonstrating that each plan is being implemented according to its terms and conditions. Any subsequent revision to either plan shall be incorporated by reference into this Consent Order and shall be made an enforceable part of this Consent Order.

14. Process Operation

A. On and after the effective date of this Consent Order, the Company shall operate the Module Torit Collector in accordance with MI-ROP-B1577-2020, as amended.

B. On and after the effective date of the Consent Order, the Company shall not open the cupola cap while there is molten/ignited material in the cupola, including during periods when the cupola is off blast, unless such opening is required for safe operation and maintenance of the cupola and related pollution control equipment. Opening of the cupola cap due to an abnormal condition or malfunction, or as required for safe operation and maintenance of the cupola and related pollution control equipment, while there is molten/ignited material in the cupola shall be reported as a deviation in accordance with the reporting requirements for EU-P009 CUPOLA in Section VII of MI-ROP-B1577-2020 and 40 CFR Part 63 Subpart EEEEE.

C. On and after the effective date of this Consent Order, when operating the Isocure and/or Module Isocure processes, the Company shall maintain the acid scrubber liquid pH and flow rate within the parameters specified in ROP No. MI-ROP-B1577-2020, as amended.

15. Force Majeure

A. The Company shall perform the requirements of this Consent Order within the time limits established herein, unless performance is prevented or delayed by events that constitute a "Force Majeure." Any delay in the performance attributable to a "Force Majeure" shall not be deemed a violation of the Company's obligations under this Consent Order in accordance with this section.

B. For the purpose of this Consent Order, "Force Majeure" means an occurrence or nonoccurrence arising from causes not foreseeable, beyond the control of, and without the fault of the Company, such as but not limited to: an Act of God, natural disasters, national

emergencies, untimely review of permit applications or submissions by EGLE or other applicable authority, and acts or omissions of third parties that could not have been avoided or overcome by the Company's diligence and that delay the performance of an obligation under this Consent Order. "Force Majeure" does not include, among other things, unanticipated or increased costs, changed financial circumstances, or failure to obtain a permit or license as a result of the Company's actions or omissions.

C. The Company shall notify EGLE, by telephone or email, within forty-eight (48) hours of discovering any event that may cause a delay in its compliance with any provision of this Consent Order. Verbal notice shall be followed by written notice within ten (10) calendar days and shall describe, in detail, the anticipated length of delay, the precise cause or causes of delay, the measures taken by the Company to prevent or minimize the delay, and the timetable by which those measures shall be implemented. The Company shall adopt all reasonable measures to avoid or minimize any such delay.

D. Failure of the Company to comply with the notice requirements and time provisions under paragraph 15.C to the extent practicable shall render this paragraph 15 void and of no force and effect as to the particular incident involved. EGLE may, at its sole discretion and in appropriate circumstances, waive in writing the notice requirements of paragraph 15.C above.

E. If the parties agree that the delay or anticipated delay were beyond the control of the Company, this may be so stipulated, and the parties to this Consent Order may agree upon an appropriate modification of this Consent Order. However, EGLE is the final decision-maker on whether or not the matter at issue constitutes a "Force Majeure". The burden of proving that any delay was beyond the reasonable control of the Company, and that all the requirements of this paragraph 15 have been met by the Company, rests with the Company.

F. An extension of one compliance date based upon a particular incident does not necessarily mean that the Company qualifies for an extension of a subsequent compliance date without providing proof regarding each incremental step or other requirement for which an extension is sought.

GENERAL PROVISIONS

16. This Consent Order in no way affects the Company's responsibility to comply with any other applicable state, federal, or local laws or regulations, including without limitation, any amendments to the federal Clean Air Act, 42 USC 7401 *et seq.*, Part 55, or their rules and regulations, or to the State Implementation Plan.

17. This Consent Order constitutes a civil settlement and satisfaction as to the resolution of the violations specifically addressed herein; however, it does not resolve any criminal action that may result from these same violations.

18. Within thirty (30) days after the effective date of this Consent Order, the Company shall pay to the General Fund of the State of Michigan, in the form of a check made payable to the "State of Michigan" and mailed to the Michigan Department of Environment, Great Lakes, and Energy, Accounting Services Division, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157, a settlement amount of \$130,000.00, which includes AQD costs for investigation and enforcement. This total settlement amount shall be paid within thirty (30) days after the effective date of this Consent Order. To ensure proper credit, all payments made pursuant to this Consent Order shall include the "Payment Identification Number AQD40254" on the front of the check and/or in the cover letter with the payment. This settlement amount is in addition to any fees, taxes, or other fines that may be imposed on the Company by law.

19. On and after the effective date of this Consent Order, if the Company fails to comply with paragraphs 11.A.2 or 11.B.2, of this Consent Order, the Company is subject to a stipulated fine of up to \$2,500.00 per violation per day. On and after the effective date of this Consent Order, if the Company fails to comply with paragraphs 9.A, 10.A, 11.A.5, 11.C.2, 13.A, 14.A, or 14.B of this Consent Order, the Company is subject to a stipulated fine of up to \$1,000.00 per violation per day. On and after the effective date of this Consent Order, if the Company fails to comply with paragraphs 10.B, 11.A.1, 11.A.3, 11.A.4, 11.A.6, 11.B.1, 11.B.3, 11.B.4, 11.B.5, 11.C.1, 12.A, 12.B, or 14.C of this Consent Order, the Company is subject to a stipulated fine of up to \$500.00 per violation per day. The amount of the stipulated fines imposed pursuant to this paragraph shall be within the discretion of EGLE. Stipulated fines submitted under this Consent Order shall be by check, payable to the State of Michigan within thirty (30) days after written demand and shall be mailed to the

Michigan Department of Environment, Great Lakes, and Energy, Accounting Services Division, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments shall include the "Payment Identification Number AQD40254-S" on the front of the check and/or in the cover letter with the payment. Payment of stipulated fines shall not alter or modify in any way the Company's obligation to comply with the terms and conditions of this Consent Order.

20. The AQD, at its discretion, may seek stipulated fines or statutory fines for any violation of this Consent Order which is also a violation of any provision of applicable federal and state law, rule, regulation, permit, or EGLE administrative order. However, the AQD is precluded from seeking both a stipulated fine under this Consent Order and a statutory fine for the same violation.

21. To ensure timely payment of the settlement amount assessed in paragraph 18 and any stipulated fines assessed pursuant to paragraph 19 of this Consent Order, the Company shall pay an interest penalty to the State of Michigan each time it fails to make a complete or timely payment under this Consent Order. The interest penalty shall be determined at a rate of twelve percent (12%) per year compounded annually, using the full increment of amount due as principal, calculated from the due date specified in this Consent Order until the date that delinquent payment is finally paid in full. Payment of an interest penalty by the Company shall be made to the State of Michigan in accordance with paragraph 18 of this Consent Order. Interest payments shall be applied first towards the most overdue amount or outstanding interest penalty owed by the Company before any remaining balance is applied to subsequent payment amount or interest penalty.

22. The Company agrees not to contest the legal basis for the settlement amount assessed pursuant to paragraph 18. The Company also agrees not to contest the legal basis for any stipulated fines assessed pursuant to paragraph 19 of this Consent Order but reserves the right to dispute in a court of competent jurisdiction the factual basis upon which a demand by EGLE of stipulated fines is made. In addition, the Company agrees that said fines have not been assessed by EGLE pursuant to Section 5529 of Part 55, MCL 324.5529, and therefore are not reviewable under Section 5529 of Part 55.

23. This compliance program is not a variance subject to the 12-month limitation specified in Section 5538 of Part 55, MCL 324.5538.

24. This Consent Order shall remain in full force and effect for a period of at least five (5) years. Thereafter, this Consent Order shall terminate only upon written notice of termination issued by the AQD Director. Prior to issuance of a written notice of termination, the Company shall submit a request, to the AQD Director at the Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division, P.O. Box 30260, Lansing, Michigan 48909-7760, consisting of a written certification that the Company has fully complied with all the requirements of this Consent Order and has made all payments including all stipulated fines required by this Consent Order. Specifically, this certification shall include: (i) the date of compliance with each provision of the compliance program and the date any payments or stipulated fines were paid; (ii) a statement that all required information has been reported to the AQD Marquette District Supervisor; (iii) confirmation that all records required to be maintained pursuant to this Consent Order are being maintained at the facility; and, (iv) such information as may be requested by the AQD Director.

25. In the event Grede, LLC sells or transfers the Facility it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within thirty (30) calendar days, the Company shall also notify the AQD Marquette District Supervisor, in writing, of such sale or transfer, the identity and address of any purchaser or transferee, and confirm the fact that notice of this Consent Order has been given to the purchaser and/or transferee. As a condition of the sale, Grede, LLC must obtain the consent of the purchaser and/or transferee, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the AQD Marquette District Supervisor within thirty (30) days after assuming the obligations of this Consent Order.

26. Prior to the effective date of this Consent Order and pursuant to the requirements of Sections 5511 and 5528(3) of Part 55, MCL 324.5511 and MCL 324.5528(3), the public was notified of a 30-day public comment period and was provided the opportunity for a public hearing.

27. Section 5530 of Part 55, MCL 324.5530, may serve as a source of authority but not a limitation under which this Consent Order may be enforced. Further, Part 17 of the NREPA, MCL 324.1701 *et seq.*, and all other applicable laws and any other legal basis or applicable statute may be used to enforce this Consent Order.

28. Upon entry of this Consent Order, the Stipulation for Entry of Final order by Consent, AQD No. 23-2016, shall be null and void, and of no further force or effect.

29. The Company hereby stipulates that entry of this Consent Order is a result of an action by EGLE to resolve alleged violations of its facility located at 801 South Carpenter Avenue, City of Kingsford, County of Dickinson, State of Michigan. The Company further stipulates that it will take all lawful actions necessary to fully comply with this Consent Order, even if the Company files for bankruptcy in the future. The Company will not seek discharge of the settlement amount and any stipulated fines imposed hereunder in any future bankruptcy proceedings, and the Company will take necessary steps to ensure that the settlement amount and any future stipulated fines are not discharged. The Company, during and after any future bankruptcy proceedings, will ensure that the settlement amount and any future stipulated fines remain an obligation to be paid in full by the Company to the extent allowed by applicable bankruptcy law.

The undersigned certifies that he/she is fully authorized by the Company to enter into this Consent Order and to execute and legally bind the Company to it.

GREDE, LLC

Tyler Hill Plant Manager

Print Name and Title

[Signature]

Signature

Dated: 1/5/21

Subscribed and sworn to by the above signatory before me on this 5th day of

January, 2021.

Robin L. Strauss

Notary Public Signature

Robin L. Strauss

Notary Public Printed Name

May 14, 2026

My Commission Expires

ROBIN L. STRAUSS
Notary Public, Dickinson Co., MI
My Comm. Expires May 14, 2026

Approved as to Content:

Approved as to Form:

Mary Ann Dolehanty

Mary Ann Dolehanty, Director
AIR QUALITY DIVISION
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES,
AND ENERGY

Dated: 1/14/2021

Neil Gordon

Neil Gordon, Section Head
ENVIRONMENTAL REGULATION SECTION
ENVIRONMENT, NATURAL RESOURCES,
AND AGRICULTURE DIVISION
DEPARTMENT OF ATTORNEY GENERAL

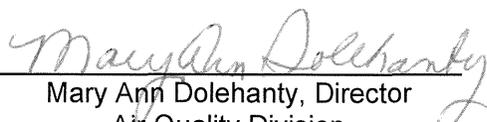
Dated: 1/14/2021

FINAL ORDER

The Director of the Air Quality Division having had opportunity to review this Consent Order and having been delegated authority to enter into Consent Orders by the Director of the Michigan Department of Environment, Great Lakes, and Energy pursuant to the provisions of Part 55 of the NREPA and otherwise being fully advised on the premises,

HAS HEREBY ORDERED that this Consent Order is approved and shall be entered in the record of EGLE as a Final Order.

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY



Mary Ann Dolehanty, Director
Air Quality Division

Effective Date: 1/14/2021

Submittal of Source Emission Test Plans and Reports

INTRODUCTION

The source emission test is often the ultimate determination of compliance. The results of a test are of great significance to both the regulatory agency and the source. Since the results may determine the course of future enforcement discussions between the agency and the source, it is important that the test be performed in a valid and representative manner. The complex nature of the various sampling methods places great responsibility on both agency and testing personnel to assure each test is an accurate representation of a source's actual emissions.

The objective of this document is to describe the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) technical submittal requirements for a source test. The format described applies to the requirements of the Michigan Air Pollution Control Rules R. 336.2001 *et seq.*, federal regulations (Part 60-New Source Performance Standards, Part 61- National Emission Standards for Hazardous Air Pollutants (NESHAP), Part 63-Maximum Achievable Control Technology) and to any other emission test submitted for reasons such as a permit requirement, a consent order, consent judgment, or at the request of the AQD.

TEST PLAN SUBMITTAL

In order to establish uniform requirements and help ensure proper test methods and procedures are employed, the information specified below should be submitted to the appropriate AQD District Office and the Technical Programs Unit in Lansing, at least thirty (30) days prior to the scheduled test date. A complete submittal will minimize the possibility of a test rejection as a result of improper sampling or data collection methods. The proposed test date(s) must be included in the test plan to be considered complete.

Testing shall be performed in strict accordance with the procedures specified in Title 40 of the Code of Federal Regulations, Part 60 (Standards of Performance for New Stationary Sources, Appendix A, as amended), Part 61 (NESHAP, Appendix B), and Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans, Appendix M); and the Michigan Air Pollution Control Rules, Part 10, Intermittent Testing and Sampling. Any variations in the sampling or analytical procedures must be described in the test plan and receive approval from the AQD prior to testing. If state or federal test methods are not available for the pollutants of concern, or the nature of the test site makes it impractical to use them, other methods may be proposed as necessary.

While the specific items in the test plan will vary depending on the source and pollutants of interest, the following format should be utilized:

1. Identification and a brief description of the source to be tested. The description should include:
 - a. Names, addresses, and contact information for the facility and consultant/personnel who will be performing the test. Expected test date(s);
 - b. Type of industrial process or combustion facility;
 - c. Type and quantity of raw and finished materials used in the process;
 - d. Description of any cyclical or batch operations, which would tend to produce variable emissions with time;
 - e. Basic operating parameters used to regulate the process; and

- f. Rated capacity of the process. Process capacity can be demonstrated by calculating an average and maximum production rate using facility records. Based on these figures the facility shall include a production rate to be maintained during emission testing.
2. A brief description of any air pollution control equipment associated with the process:
 - a. Type of control device;
 - b. Operating parameters;
 - c. Rated capacity and efficiency; and
 - d. Any maintenance activity on the air pollution control equipment within the last three months.
3. Applicable Facility State Registration Number (SRN), permit number, and emission limits for the process to be tested.
4. Identify all pollutants to be measured.
5. Describe in detail the sampling and analysis procedures, including the applicable standard methods reference. Provide a description of the sampling train(s) to be used, including schematic diagrams if appropriate. Justify any proposed sampling or analytical modifications.
6. The number and length of sampling runs, which will constitute a complete test.
7. Dimensioned sketch showing all sampling ports in relation to breeching and to upstream and downstream disturbances or obstructions of gas flow.
8. Estimated flue gas conditions such as temperature, moisture, and velocity.
9. Projected process operating conditions during which the tests will be run (e.g., production rate). These conditions should match the operating conditions stated in the facility's permit or facility operations shall be at the maximum routine operating conditions during the test.
10. A description of any process or control equipment data to be collected during the test period. This should include any permit required information used to demonstrate the acceptable operations of emissions control processes and production rates.
11. A description of any monitoring data to be collected during the test period and subsequently reported (e.g., stationary continuous emission monitor data).
12. Field quality assurance/quality control (QA/QC) procedures (e.g., field blanks, sample storage, and transport methods) and chain of custody procedures.
13. Laboratory QA/QC procedures utilized as part of the testing (e.g., manner and frequency of blanks, spikes, and standards). This should include analysis of audit samples where required as a component of the approved test method.

If the source operates under a Renewable Operating Permit (ROP), certification by a responsible official, as defined in the Michigan Air Pollution Control Rule R 336.1118(j), using the Renewable Operating Permit Certification (ROPC) form (EQP 5736), must be included with the test plan and cover letter. This form shall certify that the testing will be conducted in

accordance with the attached test plan and that the facility will be operated in compliance with permit conditions or at the maximum routine operating conditions for the facility.

EMISSION TEST REPORTING

The emission test report should contain all pertinent data concerning the test program. In addition to reporting the results, it should include descriptions of the source, the sampling and analytical methodologies, the process operating conditions, and all raw field data, laboratory analytical data, and calculation methods. Since the report will serve as evidence to both the agency and the source as a demonstration of the compliance status of the facility, it is important it be complete in content and adequate in quality. Its contents should be presented in an understandable and organized manner. The information listed below shall be submitted to the appropriate AQD District Office and the Technical Programs Unit by the date specified in an applicable air use permit, consent order, consent judgment, or state or federal regulation. Otherwise, pursuant to Michigan Air Pollution Control Rules R 336.2001 *et seq.*, a complete test report shall be submitted to the AQD within sixty (60) days following the last date of testing. In the event that the test report is not complete, additional information will be requested for submittal. If the information is not received following two written requests to the facility, the test results may be rejected by the AQD.

While the exact format of the report and the applicable information necessary will vary depending on the source and the pollutants of interest, the following format should be utilized.

1. Introduction:
 - a. Identification, location, and dates of tests;
 - b. Purpose of testing;
 - c. Brief description of source; and
 - d. Names, addresses, and telephone numbers of the contacts for information regarding the test and the test report, and names and affiliation of all personnel involved in conducting the testing.
2. Summary of Results:
 - a. Operating data (e.g., production rate, fuel type, or composition);
 - b. Applicable Facility SRN, permit number, and Emission Unit ID or designation for the source; and
 - c. Results expressed in units consistent with the emission limitation applicable to the source, and comparison with emission regulations.
3. Source Description:
 - a. Description of process, including operation of emission control equipment;
 - b. Process flow sheet or diagram (if applicable);
 - c. Type and quantity of raw and finished materials processed during the tests;
 - d. Maximum and normal rated capacity of the process; and
 - e. A description of process instrumentation monitored during the test.
4. Sampling and Analytical Procedures:
 - a. Description of sampling train(s) and field procedures;
 - b. Description of recovery and analytical procedures;
 - c. Dimensioned sketch showing all sampling ports in relation to breeching and to upstream and downstream disturbances or obstructions of gas flow; and
 - d. A sketch of a cross-sectional view of the stack indicating traverse point locations and exact stack dimensions.

5. Test Results and Discussion:
- a. Detailed tabulation of results including process operating conditions and flue gas conditions;
 - b. Discussion of significance of results relative to operating parameters and emission regulations;
 - c. Discussion of any variations from normal sampling procedures or operating conditions, which could have affected the results;
 - d. Documentation of any process or control equipment upset condition, which occurred during the testing;
 - e. Description of any major maintenance performed on the air pollution control device(s) during the three-month period prior to testing;
 - f. In the event of a re-test, a description of any changes made to the process or air pollution control device(s) since the last test;
 - g. Results of any quality assurance audit sample analyses required by the reference method;
 - h. Calibration sheets for the dry gas meter, orifice meter, pitot tube, and any other equipment or analytical procedures, which require calibration;
 - i. Sample calculations of all the formulas used to calculate the results;
 - j. Copies of all field data sheets, cyclonic flow checks, including any pre-testing, aborted tests, and/or repeat attempts; and
 - k. Copies of all laboratory data including QA/QC (e.g. blanks, spikes, standards).

If the source operates under an ROP, certification by a responsible official, as defined in the Michigan Air Pollution Control Rule 336.1118(j), using the ROPC form (EQP 5736), must be included with the emission test results and cover letter. This form shall certify that the testing was conducted in accordance with the approved test plan and that the facility operating conditions were in compliance with permit requirements or were at the maximum routine operating conditions for the facility.

REFERENCES

¹ Michigan Air Pollution Control Rules R 336.2001 *et seq.*,

² United States Environmental Protection Agency, Plant Inspection Workshop-Techniques for Evaluating Performance of Air Pollution Control Equipment: Observing Compliance Tests, February 1981.

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