



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GRETHNER
DIRECTOR

April 27, 2018

Mr. James E. Earl
AK Steel Corporation
4001 Miller Road
Dearborn, Michigan 48121-1699

Dear Mr. Earl:

SUBJECT: Notice of Termination for Consent Order AQD No. 9-2010

Enclosed is the Notice of Termination for Stipulation for Entry of Final Order by Consent (Consent Order), AQD No. 9-2010 for Severstal Dearborn, Inc. This is in response to the request made by your company to the Michigan Department of Environmental Quality (MDEQ).

If you have any questions regarding the enclosed Notice of Termination, please contact Ms. Rachel McLeod, Enforcement Unit, Air Quality Division, at 517-284-6770, mcleodr1@michigan.gov, or MDEQ, P.O. Box 30260, Lansing, Michigan 48909-7760; or you may contact me.

Sincerely,

Mary Ann Dolehanty, Acting Director
Air Quality Division
517-284-6773

Enclosure

cc/enc: Ms. Sarah Marshall, U.S. Environmental Protection Agency, Region 5
Mr. Neil Gordon, Michigan Department of Attorney General
Mr. Christopher Ethridge, MDEQ
Ms. Wilhemina McLemore, MDEQ
Mr. Malcolm Mead-O'Brien, MDEQ
Ms. Rachel McLeod, MDEQ

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

In the matter of administrative proceedings
against **SEVERSTAL DEARBORN, INC.**, a
corporation organized under the laws of the
State of Delaware and doing business at
4001 Miller Road in the City of Dearborn,
County of Wayne, State of Michigan

AQD No. 9-2010

SRN: A8640

NOTICE OF TERMINATION

This Notice is issued pursuant to a request for termination submitted by AK Steel Corporation, pursuant to paragraph 22 of the Stipulation for Entry of Final Order by Consent (Consent Order), AQD No. 9-2010. The request contained supporting information as required by paragraph 22 of AQD No. 9-2010. Review of this request and supporting information indicates that Severstal Dearborn, Inc., currently AK Steel Corporation, has achieved compliance with the terms and requirements of the Consent Order.

THEREFORE, effective on the date signed below, AQD No. 9-2010 is terminated. The Michigan Department of Environmental Quality reserves the right to pursue administrative, civil and/or criminal proceedings, including the assessment of monetary fines, for any falsification of information submitted in support of AK Steel Corporation's request for termination of the Consent Order AQD No. 9-2010, or for any violation of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.5501 *et seq.*; and all other applicable laws.

By: Mary Ann Dolehanty
Mary Ann Dolehanty, Acting Director
Air Quality Division
Michigan Department of
Environmental Quality

Dated: 5/1/18

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT
OFFICE OF THE DIRECTOR

In the matter of administrative proceedings against
SEVERSTAL DEARBORN, INC., a corporation
organized under the laws of the State of Delaware
and doing business at 4001 Miller Road in the City
of Dearborn, County of Wayne, State of Michigan

AQD No. 9-2010

SRN: A8640

STIPULATION FOR ENTRY OF FINAL ORDER
BY CONSENT

This proceeding resulted from allegations by the Michigan Department of Natural Resources and Environment ("MDNRE") Air Quality Division ("AQD") against Severstal Dearborn, Inc. ("Company"), a Delaware corporation located at 4001 Miller Road, in the City of Dearborn, County of Wayne, State of Michigan, with State Registration Number ("SRN") A8640. The MDNRE alleges that the Company is in violation of Michigan Administrative Code ("MAC") Rule 336.1910; specifically, for failure to maintain and operate an air cleaning device in a satisfactory manner. The MDNRE also alleges the Company is in violation of 40 CFR Part 63, Subpart CCC, 63.1157(a)(1) (HCl Steel Pickling Line MACT) and the Company's Renewable Operating Permit No. 199700004 (ROP), specifically, for exceedance of the HCl emission limit set forth in that ROP as cited herein and in the Letter of Violation dated November 15, 2007. The Company and MDNRE stipulate to the termination of this proceeding by entry of a Stipulation for Entry of a Final Order by Consent ("Consent Order").

The Company and MDNRE stipulate as follows:

1. The Natural Resources and Environmental Protection Act, 1994 PA 451, ("Act 451"), MCL 324.101 et seq, is an act that controls pollution to protect the environment and natural resources in the State.
2. Article II, Pollution Control, Part 55 of Act 451 ("Part 55"), MCL 324.5501 et seq, provides for air pollution control regulations in this State.
3. The MDNRE was created as a principal department within the Executive Branch of the State of Michigan pursuant to Executive Order 2009-45 and has all statutory authority powers, duties, functions and responsibilities to administer and enforce all provisions of Part 55.

4. The Director has delegated authority to the Chief of the AQD ("AQD Chief") to enter into this Consent Order.

5. The termination of this matter by a Consent Order pursuant to Section 5528 of Part 55 is proper and acceptable.

6. The Company and the MDNRE 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 Chief.

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. The Company's existing pickle line operation has three scrubbers, as permitted in Table E-0.12 of ROP No.199700004. The Company was issued Permit to Install No. 8-08 on February 4, 2008, for the construction of a new pickle line and tandem rolling mill, which will include installation of a new scrubber for the new pickle line as per Table E-01.23 of PTI No. 8-08. This Consent Order only applies to the three scrubbers in the existing pickle line and shall not apply to the scrubber to be installed at the new pickle line pursuant to PTI No. 8-08.

10. Testing

The Company shall conduct stack testing on all three scrubbers associated with the pickling lines subject to this Stipulation, for HCl, in accordance with methods required by 40 C.F.R. Part 63.1161(d) and procedures approved by the AQD Southeast Michigan District Supervisor to demonstrate compliance with the HCl emission limitations specified in the ROP. Testing shall be conducted in accordance with the following schedule:

a. At least 60 days prior to testing, the Company shall submit a test plan which includes the test methods required by 40 C.F.R. Part 63.1161(d) to the AQD Southeast Michigan District Supervisor and the Technical Programs Unit Supervisor for approval prior to testing.

b. Within one year of the effective date of this Consent Order, the Company shall have completed the testing in accordance with the approved test plan except as detailed below in paragraph 10.i. relating to out of service pickling line(s) and associated scrubbers. This testing may be the same as testing conducted to fulfill independent ROP and/or MACT requirements.

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

d. Within 60 days of the completion of the stack testing described above, the Company shall submit to the AQD Southeast Michigan District Supervisor and Technical Programs Unit Supervisor a test report, which includes the test data and results, in accordance with the requirements specified in Exhibit B.

e. Within two and a half years (30 months) of the initial test required by 10.b. above, and in compliance with 40 CFR Part 63, Subpart CCC (Steel Pickling Line MACT Standard) 63.1157(a)(1) the Company shall have completed a second stack test on all three scrubbers associated with the pickling lines, for HCl, to demonstrate compliance with the HCl emission limitations specified in the ROP except as detailed below in paragraph 10.i. relating to out of service pickling line(s) and associated scrubbers. This testing shall be performed in accordance with the same requirements delineated in paragraphs 10. a., c., and d. above. This testing may be the same as testing conducted to fulfill independent ROP and/or MACT requirements.

f. If testing of any scrubber does not demonstrate compliance with the HCl emission limit, the Company shall be subject to stipulated penalties as outlined in paragraph 17 of this Consent Order, corrective action shall be taken and the scrubber shall be retested, until compliance is demonstrated.

g. Any successful corrective action taken on the scrubbers in order to achieve compliance during retesting shall be made part of the Company's Operation and Maintenance Plan (O&M Plan). Corrective parameters that are made part of the O&M Plan shall be monitored and recorded on a daily basis as appropriate.

h. During the duration of this Consent Order, if any scrubber is not in operation at the time of any specified testing, it does not need to be tested. However, if any such scrubber is later placed back into operation, it must be tested within 180 days of resuming operation.

i. The Company shall notify the MDNRE within 60 days of taking any pickle line and associated scrubber subject to the terms of this Stipulation out of service for any time period in excess of sixty (60) days. In such instance for the scrubber(s) subject to the notice the Company is relieved of the obligation imposed by paragraphs 10., 10.b., and 10.e. above until such time as the Company recommences operation of the particular emission source. The Company shall notify the MDNRE upon recommencing operations.

11. Scrubber Inspections

a. To insure compliance with the MAC R336.1910 (Rule 910), each scrubber associated with the pickling lines shall be inspected for operational worthiness at a minimum of once per month.

b. Each inspection shall include evaluation of the following.

- i. Condition and leveling of the scrubber packing.
- ii. Condition, positioning and operation of the spray nozzles.
- iii. Condition and positioning of the mist eliminator.
- iv. Overall integrity of the scrubber and relevant ductwork.

c. Each inspection will identify whether any maintenance or repair is needed.

d. If any inspection indicates the need for maintenance or repair the work will be effectuated as soon as practicable and in such event the Company shall comply with MAC 336.1910-1916, the requirements of 40 CFR 63.6(e)(3), and with its startup shutdown and malfunction plan for the pickle line scrubbers.

e. During the duration of this Consent Order, if any scrubber is not in operation it does not need to be inspected. However, if any such scrubber is later placed back into operation, it must be inspected within 30 days of resuming operation.

f. Each inspection, and the results thereof, including any corrective action taken, will be recorded. Inspection records will be maintained for the duration of this Consent Order. The requirement to maintain inspection records shall be incorporated into the facility's ROP.

12. During the term of this Consent Order, the Company may evaluate and test alternate operating scenarios that would allow use of the Nos.1 and 3 pickle line heat exchangers. Such alternate operating scenarios are neither authorized or prohibited by the Consent Order, but shall be coordinated with the MDNRE, Air Quality Division, Southeast Michigan District Office.

SUPPLEMENTAL ENVIRONMENTAL PROJECT

13. In partial settlement of the civil fine in this Consent Order for the violations alleged in the LOV, the Company agrees to undertake the Supplemental Environmental Project (SEP) described in Exhibit A which is attached to, incorporated by reference, and made an enforceable part of this Consent Order. Performance of the SEP will benefit the environment and is a project that the Company is not otherwise legally required to perform. The Company agrees to implement the SEP in accordance with the details specified in Exhibit A and in accordance with the following terms and conditions below:

a. The total expenditure for the SEP shall not be less than \$205,120.00 ("SEP Cost Amount"). All costs of the SEP shall be the responsibility of the Company. If the SEP is fully and

completely implemented, to the extent that the actual expenditures for the SEP totals less than 90% of the SEP Cost Amount, the Company shall pay to the MDNRE as a civil fine, within thirty (30) days of submission of the SEP certificate of completion required in subparagraph g. below, the difference between the actual expenditures and the SEP Cost Amount except that such civil fine shall not exceed \$68,373.00.

b. The plan included as Exhibit A contains schedules for the implementation of the SEP. The Company shall fully implement all aspects of the SEP within the specified schedules.

c. The Company further certifies that the Company has not received, and is not presently negotiating to receive, a credit for the SEP as part of any other enforcement action or any grant from the state, U.S. Environmental Protection Agency (U.S. EPA) or any other entity. The Company also certifies that the Company will not seek tax benefits following completion of the SEP.

d. Disputes between the MDNRE and the Company regarding the SEP costs, mitigation amounts, and fulfillment of the SEP obligations under Exhibit A are not subject to dispute resolution.

e. In the event the Company fails to fully and completely implement the SEP as provided herein to the reasonable satisfaction of the MDNRE, the MDNRE will provide written notice to the Company describing the nature of the deficiency. The Company shall have thirty (30) days from receipt of the notice to submit documentation to the MDNRE demonstrating that the deficiency has been corrected. In the event the deficiency is not corrected to the satisfaction of the MDNRE, the Company will be notified and the Company shall be in violation of this Consent Order and required to pay a stipulated penalty of \$68,373.00 to the MDNRE within thirty (30) days of notification from the MDNRE. The amount of the stipulated penalty may be reduced or waived by the MDNRE if the Company made good faith and timely efforts to complete the project. Payment of stipulated penalties under the terms of this paragraph 13.e. shall satisfy the Company's obligation to complete the SEP under this Consent Order.

f. The Company agrees that any public statement, oral or written, making reference to the SEP shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action taken by the MDNRE for violations of air quality law".

g. No later than thirty (30) days after the completion of all activities specified in Exhibit A, the Company shall submit written certification of completion of the SEP to the Chief of the AQD demonstrating that all SEP activities specified in Exhibit A have been completed in accordance with the terms and conditions of this Consent Order and Exhibit A. The certification shall be accompanied by appropriate documentation (such as invoices, receipts, or tax statement) to verify the total expenditure made by the Company as a result of implementing the activities specified under Exhibit A. It shall be the

sole determination of the MDNRE whether the Company has completely implemented the activities specified in Exhibit A of this Consent Order.

GENERAL PROVISIONS

14. This Consent Order in no way affects the Company's responsibility to comply with any other applicable state and federal or local laws or regulations, including without limitation, any amendments to the federal Clean Air Act, 42 USC 7401 et seq., Act 451, Part 55 or their rules and regulations, or to the State Implementation Plan.

15. 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.

16. 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 delivered to the Michigan Department of Natural Resources and Environment, Financial and Business Services Division, Revenue Control, P.O. Box 30657, Lansing, Michigan 48909-8157, a settlement amount of \$26,527.00, which includes AQD costs for investigation and enforcement. This total settlement amount shall be paid within thirty (30) days of the effective date of this Consent Order. To ensure proper credit, all payments made pursuant to this Consent Order shall include the Agreement Identification No. AQD 3321 on the face of the check. This settlement amount is in addition to any fees, taxes, or other fines that may be imposed on the Company by law.

17. On and after the effective date of this Consent Order, if the Company fails to comply with paragraphs 10.b., 10.e., 10.f., or 10.h., of this Consent Order, the Company shall pay stipulated fines of \$5,000.00 per violation. On and after the effective date of this Consent Order, if the Company fails to comply with paragraphs 10.a., 10.c., 10.d., 10.g., 11.a., 11.b., 11.c., 11.d., or 11.e., the Company shall pay stipulated fines of \$3,000.00 per violation. On and after the effective date of this Consent Order, if the Company fails to comply with any other provision of this Consent Order, the Company shall pay stipulated fines of \$500.00 per violation. Stipulated fines submitted under this Consent Order shall be by check, payable to the State of Michigan within thirty (30) days of demand and shall be delivered to the Michigan Department of Natural Resources and Environment, Financial and Business Services Division, Revenue Control, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments shall include the Agreement Identification No. AQD 3321S on the face of the check. 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.

18. 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 MDNRE 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.

19. To ensure timely payment of the settlement amount assessed in paragraph 16 and any stipulated fines assessed pursuant to paragraph 17 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 due shall be determined at an annual interest that is equal to one percent (1%) plus the average interest rate paid at auctions of 5-year United States Treasury notes during the six months immediately preceding July 1 and January 1, as certified by the state treasurer, compounded annually and, 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 interest by the Company shall be made to the State of Michigan as payment is directed in paragraph 17 of this Consent Order. Interest payments shall be applied first to 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.

20. The Company agrees not to contest the legal basis for the settlement amount assessed pursuant to paragraph 16. The Company also agrees not to contest the legal basis for any stipulated fines assessed pursuant to paragraph 17 of this Consent Order, but reserves the right to dispute in a court of competent jurisdiction the factual basis upon which a demand by MDNRE of stipulated fines is made. In addition, the Company agrees that said fines have not been assessed by the MDNRE pursuant to Section 5529 of Part 55 and therefore are not reviewable under Section 5529 of Part 55.

21. This compliance program is not a variance subject to the twelve (12) month limitation specified in Section 5538 of Part 55.

22. This Consent Order shall remain in full force and effect until the earlier of five (5) years or until the Company completes testing and demonstrates compliance in accordance with paragraphs 10.b. and 10.e. of this Consent Order. Thereafter, the Consent Order shall terminate only upon written notice of termination issued by the AQD Chief. Prior to issuance of a written notice of termination, the Company shall submit a request 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 Southeast Michigan 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 Chief. The Company is not precluded from requesting an earlier termination date. This early termination shall be solely at the discretion of the MDNRE as circumstances may warrant and subject to the aforementioned termination requirements.

23. In the event the Company sells or transfers the facility with SRN A8640, 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 Southeast Michigan 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. The purchaser and/or transferee of the facility must agree, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the AQD Southeast Michigan District Supervisor within thirty (30) days of assuming the obligations of this Consent Order.

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

25. Section 5530 of Part 55 may serve as a source of authority but not a limitation under which the Consent Order may be enforced. Further, Part 17 of Act 451 and all other applicable laws and any other legal basis or applicable statute may be used to enforce this Consent Order.

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.

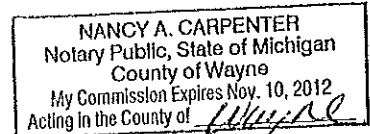
SEVERSTAL DEARBORN, INC.

B. L. Black
Bruce L. Black, Vice President and General Manager

Date: 4/19/10

The above signatory subscribed and sworn to before me this 19 day of April, 2010.

Nancy A. Carpenter
Notary Public



Approved as to Content:

Approved as to Form:

G. Vinson Hellwig
G. Vinson Hellwig, Chief
AIR QUALITY DIVISION
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENT

Dated: 4/23/10

Alan F. Hoffman
Alan F. Hoffman, Section Head
ENVIRONMENTAL REGULATION SECTION
ENVIRONMENT, NATURAL RESOURCES
AND AGRICULTURE DIVISION
DEPARTMENT OF ATTORNEY GENERAL

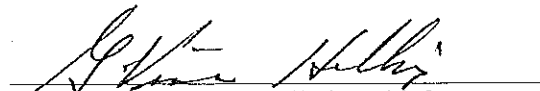
Dated: 4/23/10

FINAL ORDER

The Chief of the Air Quality Division having had opportunity to review the Consent Order and having been delegated authority to enter into Consent Orders by the Director of the Michigan Department of Natural Resources and Environment pursuant to the provisions of Part 55 of Act 451 and otherwise being fully advised on the premises,

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

MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT


G. Vinson Hellwig, Chief
Air Quality Division

Dated: 4/23/10

EXHIBIT A

SEVERSTAL DEARBORN, INC.

SUPPLEMENTAL ENVIRONMENTAL PROJECT DESCRIPTION

REDUCTION OF FUGITIVE HCL EMISSION FROM #1 PICKLE LINE THROUGH ENHANCEMENT OF PICKLE LINE COVERS

PROJECT TITLE: #1 Pickle Line Cover Replacement

PROJECT AMOUNT: \$205,120

PROJECT DESCRIPTION: This project enhances the existing pickle line covers by replacing 27 rubber-lined steel covers with 16 polypropylene covers. The new polypropylene covers decrease the operation's environmental impact by reducing the fugitive HCL emissions by containing acid fumes more efficiently through a tighter fit, reduced thermal expansion, reduced corrosion and a reduction in seams from 24 to 16. This is a project that Severstal is not otherwise legally required to perform.

PROJECT RESULTS (BENEFITS): The benefits of the project are reduced fugitive HCL emission from the #1 Pickle Line. HCL emissions are a recognized HAP.

PROJECT COSTS: Severstal is investing \$205,120 in the project.

New Covers - \$160,820
Installation - \$24,300
Labor - \$1,313
Contingencies - \$20,000

PROJECT SCHEDULE: Severstal expects to complete the project in approximately six months. Below is an estimated schedule:

Activities	'08							'09						
	M	A	M	J	J	A	S	O	N	D	J	F	M	A
1. Develop Project Approval														
2. Issue a Purchase Order for the supply and installation of the new enhanced pickle line covers.														
3. Material Order														
4. Delivery and installation (4 covers every 6-8 weeks)														

CONTACT PERSONS: James E. Earl, Environmental Manager, Severstal North America, Inc., Dearborn, Michigan (313) 845-3217.

EXHIBIT B

MICHIGAN DEPARTMENT NATURAL RESOURCES AND ENVIRONMENT AIR QUALITY DIVISION FORMAT FOR SUBMITTAL OF SOURCE EMISSION TEST PLANS AND REPORTS February 2008

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 Air Quality Division's (AQD's) technical submittal requirements for a source test. The format described applies to the requirements of the Michigan Department of Environmental Quality (MDEQ) Rule 1001 (4), 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, for 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 (DO) and the Technical Programs Unit (TPU) in Lansing, at least 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.

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 MDEQ 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 telephone numbers of the facility contacts and personnel who will be performing the test.

- 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.
 - 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. d) Any maintenance activity on the air pollution control equipment within the last three months.
- 3) Applicable 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 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 DO and the TPU by the date specified in an applicable air use permit, consent order, consent judgment, or state or federal regulation.** Otherwise, pursuant to the MDEQ Rule 1001(4), a complete test report shall be submitted to the AQD within 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.
- 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 permit number, State Registration Number (SRN), and Emission Unit ID or designation for the source.
- 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.
- 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.
- d) A sketch of cross-sectional view of 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, including any pre-testing, aborted tests, and/or repeat attempts.
- 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 Department of Environmental Quality Rules, Part 10, Intermittent Testing and Sampling.

2

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

Mailing Address for the Technical Programs Unit

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