



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

8/15/2014

Certified Mail

Mr. Thomas Shepard
Mingo Junction Energy Center, LLC
790 W. Frontage Rd
Suite 725
Northfield, IL 60093

Facility ID: 0641090234
Permit Number: P0104627
County: Jefferson

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

Enclosed is a final Ohio Environmental Protection Agency (EPA) Air Pollution Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this Title V permit is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Southeast District Office as indicated on page one of your permit.

Sincerely,



Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA DAPC, Southeast District Office



FINAL

**Division of Air Pollution Control
Title V Permit
for
Mingo Junction Energy Center, LLC**

Facility ID:	0641090234
Permit Number:	P0104627
Permit Type:	Renewal
Issued:	8/15/2014
Effective:	9/5/2014
Expiration:	9/5/2019



Division of Air Pollution Control
Title V Permit
for
Mingo Junction Energy Center, LLC

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Authorization

Facility ID: 0641090234
Facility Description: Four blast furnace gas and natural gas fired boilers for electricity and process steam generation AKA a facility that was previously identified with a NOVA ID 1741090234.
Application Number(s): A0036176, A0041071
Permit Number: P0104627
Permit Description: Renewal Title V operating permit for a steam and electricity generating facility.
Permit Type: Renewal
Issue Date: 8/15/2014
Effective Date: 9/5/2014
Expiration Date: 9/5/2019
Superseded Permit Number: P0089710

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Mingo Junction Energy Center, LLC
540 Commercial Avenue
Mingo Junction, OH 43938

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Southeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Craig W. Butler
Director



Final Title V Permit
Mingo Junction Energy Center, LLC
Permit Number: P0104627
Facility ID: 0641090234
Effective Date: 9/5/2014

A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
 - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
 - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
 - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
- (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))



c) The permittee shall submit required reports in the following manner:

- (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the



probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Ohio EPA DAPC, Southeast District Office. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Southeast District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally



enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

- (4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Southeast District Office unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))



4. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) 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 federally enforceable terms and conditions of this permit except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.



- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
 - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
 - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
 - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))



10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible



Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Southeast District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - (2) Compliance certifications shall include the following:
 - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.



- b. The permittee's current compliance status.
 - c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.
 - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
 - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.



This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)



19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:



- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

25. Records Retention Requirements Under State Law Only

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine



whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Southeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Southeast District Office must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Southeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.



Final Title V Permit
Mingo Junction Energy Center, LLC
Permit Number: P0104627
Facility ID: 0641090234
Effective Date: 9/5/2014

B. Facility-Wide Terms and Conditions



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.
2. Mingo Junction Energy Center, LLC (MJEC, facility ID 0641090234), Severstal Wheeling, Inc. (facility ID 0641090010), and Mountain State Carbon (MSC, in Follansbee, WV) have been determined to be one facility for permitting purposes under 40 CFR Part 52.21, OAC Chapter 3745-31, and OAC Chapter 3745-77. All coke oven gas (COG) will be produced by MSC Coke Batteries 1, 2, 3, and 8 in Follansbee, WV (WVa P001-4).
3. Operating Restrictions
 - a) The H₂S content of all COG used at the MJEC facility (emission units B001, B002, B003, and B004) shall not exceed 50 grains/100 dry standard cubic feet. An audible alarm shall be activated whenever the H₂S content of the COG exceeds 50 grains/100 dscf. The permittee shall discontinue burning COG within 60 minutes of activating the audible alarm.
 - b) The water injection system on the boilers (B001, B002, B003, and B004) shall be installed and made operational by March 1, 2011. Prior to March 1, 2011, MJEC is allowed to burn coke oven gas in the boilers before the installation of the water injection system.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

4. Monitoring and/or Recordkeeping Requirements
 - a) For a period of 10 years following issuance of Chapter 31 Modification Permit-to-Install (PTI) P0105113, issued 1/14/2011, the permittee shall calculate and maintain a record of annual emissions, in tons per year, for the following sources combined: Mingo Junction Energy Center (MJEC) Boilers (B001, B002, B003, B004), Severstal Wheeling's reheat furnaces (P006-P008), and MSC COG flare (WVa: P024). The purpose of this record is to demonstrate that emissions from these emissions units, combined, shall not exceed the baseline actual emissions by the significance levels, as defined in OAC rule 3745-31-01(MMMMM)(effective date 12/14/2007). The baseline actual emissions are the following:

<u>Baseline Actual Emissions</u>	
NOx	357.44
SO ₂	431.33
PM	51.73
PM ₁₀	43.45
PM _{2.5}	36.83
CO	332.91
VOC	39.11

- b) The MJEC facility (emissions units B001, B002, B003, and B004) shall install and thereafter operate and maintain an audible alarm to be activated whenever the H₂S grain loading content is greater than 50 grains/100 dry standard cubic feet whenever COG is burned. The permittee will notify Ohio EPA of the alarm activation level set below 50 grains/100 dscf.



- c) The permittee shall collect and record the following information each day COG is burned at the MJEC facility (emissions units B001, B002, B003, and B004):
 - (1) the alarm activation set point;
 - (2) a log of each instance when an audible alarm is activated;
 - (3) the time interval of each alarm period;
 - (4) if possible, an estimate of the H₂S concentration during each alarm period;
 - (5) the probable cause given by MSC for each alarm period; and
 - (6) any corrective action taken.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

5. Reporting Requirements

- a) The permittee shall submit quarterly deviation (excursion) reports that identify all instances when the audible alarm at the MJEC facility was activated when burning COG, the time interval of each alarm period, the actual H₂S concentration during each alarm period, the probable cause given by MSC for each alarm period, and any corrective action taken by MSC and/or MJEC.
- b) For a period of 10 years following issuance Chapter 31 Modification PTI P0105113, issued 1/14/2011, the permittee shall submit a report if the annual emissions from the MJEC boilers (B001, B002, B003, B004), Severstal Wheeling's reheat furnaces (P006-P008), and MSC flare (WVa: P024), in tons per year, of NO_x, SO₂, PM, PM₁₀, PM_{2.5}, CO, VOC exceed the baseline actual emissions (as documented and maintained in 4.a) by a significant amount for that pollutant, as defined in OAC rule 3745-31-01(MMMMM). The report shall contain the following:
 - (1) The name, address and telephone number of the major stationary source;
 - (2) The annual emissions; and
 - (3) Any other information that the permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

The report shall be submitted within 60 days after the end of each year during which an exceedance occurs.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

6. Testing Requirements

- a) None.

- 7. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions units listed below are



subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, 3745-21, and 3745-31, and/or 40 CFR Part 60 or 63:

- a) B006 – emergency generator (PBR06517).
8. The compression ignition (CI) reciprocating internal combustion engine(s) (RICE), located at an area source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ. The existing stationary CI RICE, EU #B006, installed before 6/12/06, shall meet the requirements of Part 63, Subpart ZZZZ no later than 5/3/13.

The RICE must meet the definition of an emergency stationary RICE in section 63.6675, which includes operating according to the provisions specified in section 63.6640(f), and the permittee shall meet the following requirements contained in 40 CFR Part 63, Subpart ZZZZ:

66.6605(a) & (b)	General Compliance
63.6603(a), 63.6625(e), (f), (h), and (i)	Monitoring, Installation, Collection, Operation, & Maintenance
66.6640 (a), (b), (e), & (f)	Continuous Compliance
63.6655(d), (e) &(f) & 63.6660(a), (b), and (c)	Recordkeeping
66.6665	Table 8 General Provisions

[Authority for term: OAC rule 3745-77-07(A)(13) and 40 CFR 63, Subpart ZZZZ]



Final Title V Permit
Mingo Junction Energy Center, LLC
Permit Number: P0104627
Facility ID: 0641090234
Effective Date: 9/5/2014

C. Emissions Unit Terms and Conditions



1. Emissions Unit Group -Boiler A: B001,B002,B003,

EU ID	Operations, Property and/or Equipment Description
B001	180 MMBtu/hr natural gas, clean blast furnace gas and/or desulfurized coke oven gas (COG) fired boiler with NO _x CEMS. Boiler #1
B002	180 MMBtu/hr natural gas, clean blast furnace gas and/or desulfurized coke oven gas (COG) fired boiler with NO _x CEMS. Boiler #2
B003	180 MMBtu/hr natural gas, clean blast furnace gas and/or desulfurized coke oven gas (COG) fired boiler with NO _x CEMS. Boiler #3

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0105113 issued January 4, 2011)	<p>Particulate matter (PM) and particulate matter emissions with a diameter less than 10 microns (PM₁₀) shall not exceed 0.0145 lb/MMBtu when burning a blend of natural gas and clean blast furnace gas.</p> <p>PM/PM₁₀ emissions shall not exceed 0.004 lb/MMBtu when only burning natural gas.</p> <p>PM/PM₁₀ emissions shall not exceed 0.012 lb/MMBtu when burning only coke oven gas (COG), a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>PM_{2.5} emissions shall not exceed 0.011 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>PM/PM₁₀ emissions shall not exceed 2.61</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>lbs/hr.</p> <p>PM2.5 emissions shall not exceed 2.61 lbs/hr.</p> <p>PM/PM10 emissions shall not exceed 11.4 tons/year.</p> <p>PM2.5 emissions shall not exceed 11.4 tons/year.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.20 lb/MMBtu, as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.16 lb/MMBtu, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>NOx emissions shall not exceed 36.0 lbs/hr, as a 3-hour rolling average.</p> <p>NOx emissions shall not exceed 157.7 tons/year.</p> <p>See b)(2)c.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.045 lb/MMBtu when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.038 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>CO emissions shall not exceed 8.1 lbs/hr.</p> <p>CO emissions shall not exceed 35.5 tons/year.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Volatile organic compound (VOC) emissions shall not exceed 1.0 lb/hr.</p> <p>VOC emissions shall not exceed 4.38 tons/year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 45.7 lbs/hr, as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 49.5 lbs/hr, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>SO₂ emissions shall not exceed 216.8 tons/year.</p> <p>See b)(2)e.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), and 3745-31-05(D), and 3745-18-47(C).</p>
b.	OAC rule 3745-31-05(D) (PTI P0105113 issued January 4, 2011)	<p>PM/PM10 emissions shall not exceed 45.7 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>NOx emissions shall not exceed 403.6 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>CO emissions shall not exceed 141.9 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>VOC emissions shall not exceed 8.4 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		SO ₂ emissions shall not exceed 500.0 tons/rolling, 12-month period, foremissions units B001, B002, B003, and B004, combined.
c.	OAC rule 3745-31-10	See Section B.4.a)
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	The particulate emission limitations specified by this rule is less stringent than the particulate emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-47(C)	The hydrogen sulfide (H ₂ S) content of the COG combusted in this emissions unit shall not exceed 50 grains of H ₂ S per 100 dscf of COG.
g.	40 CFR Part 60, Subpart Db	The NO _x emission limitation specified by this rule is less stringent than or equivalent to the NO _x emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-63.7575)	See b)(2)d., d)(15) and e)(16)
i.	40 CFR 63.1-15 (40 CFR 63.7565)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDD shows which parts of the General Provisions in 40 CFR 63.1-15 apply

(2) Additional Terms and Conditions

- a. For purposes of this permit, "clean blast furnace gas" is defined as blast furnace gas which has had particulate matter controlled by Severstal Wheeling, Inc. formerly Wheeling-Pittsburgh Steel's properly operating scrubber system on Blast Furnace Number 5.
- b. For purposes of this permit, "desulfurized COG" is defined as COG that has a H₂S content less than 50 grains/100 dscf.
- c. The NO_x emissions from this emissions unit shall be controlled through water injection at all times when the emissions unit is combusting COG or co-firing COG with natural gas.



- d. This emissions unit meets the definition of existing boilers or process heaters with a heat input capacity of greater than 10 mmBtu per hour; therefore, the following requirements found in 40 CFR, Part 63, Subpart DDDDD are applicable:

Work Practice Standards	63.7500 (a)(3), (f) and Table 3 #4
General Compliance Requirements	63.7505(a), 63.7515(d), 63.7540(a)(10) and (a)(13), 63.7565 and Table 10

- e. The permittee shall operate and maintain the fuel burner in accordance with the manufacturer's recommendations to ensure efficient combustion of the fuel(s) and to ensure compliance with the applicable emissions limitations. In accordance with the permit application, the permittee has committed to installation and operation of a burner management system and combustion control system in order to satisfy this requirement.

c) Operational Restrictions

- (1) Fuel usage in emissions units B001-B004, combined, shall not cause PM/PM10, CO, VOC, and SO₂ emissions to exceed the rolling, 12-month emissions limitations specified in b)(1)b. based on the following equation:

$$\sum_{i,j,k=1}^{12} [(X_i \times Y_i) + (X_j \times Y_j) + (X_k \times Y_k)] / 2000 \text{ lbs/ton}$$

Where:

- X_i = emissions factor for natural gas
- Y_i = monthly natural gas usage
- X_j = emissions factor for clean blast furnace/natural gas blend
- Y_j = monthly clean blast furnace/natural gas blend usage
- X_k = emissions factor for COG*
- Y_k = monthly COG usage*

See f)(1)n-r. for emissions factors to be used in this equation.

*For SO₂, in lieu of the variables X_k and Y_k above, use the equation given in f)(1)r. to determine the monthly COG SO₂ emissions.

[OAC rule 3745-77-07(A)(1) and PTI #P0105113]

- (2) This emissions unit shall be operated only in conjunction with the permanent shutdown of the Wheeling-Pittsburgh Steel Corporation Mingo Junction Boiler House, emissions units B005, B006, B007, B008, B009, B010, B011, and B012 under Ohio EPA premise number 0641090010.



[OAC rule 3745-77-07(A)(1) and PTI #P0105113]

- (3) The permittee shall burn only natural gas or a combination of natural gas and clean blast furnace gas, or only desulfurized COG, or a combination of COG and natural gas, or a combination of COG, natural gas, and blast furnace gas in this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI #P0105113]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than natural gas or a combination of natural gas and clean blast furnace gas, or only desulfurized COG, or a combination of COG and natural gas, or a combination of COG, natural gas, and blast furnace gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (2) In order to accurately determine the heat input rates for this emissions unit, the permittee shall install, operate, and maintain equipment to continuously monitor and record the actual natural gas, clean blast furnace gas, and COG fuel flow rates to this emissions unit when the emissions unit is in operation. The permittee shall demonstrate that each fuel flowmeter used meets a flowmeter accuracy of 2.0 percent. This shall be accomplished not later than 60 days after the issuance of this permit by performing an initial transmitter accuracy test and a primary element visual inspection. Thereafter, the permittee shall perform a transmitter accuracy test once every four fuel flowmeter quality assurance (QA) operating quarters (as defined in 40 CFR Part 72.2) and a primary element visual inspection once every 12 calendar quarters. The transmitter accuracy tests and primary element visual inspections shall be performed in accordance with the procedures specified in 40 CFR Part 75, Appendix D, Sections 2.1.6.1(a) through (c) (Transmitter Accuracy Test), 2.1.6.3 (Failure of Transmitter(s)), and 2.1.6.4 (Primary Element Inspection). If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75, Appendix D, Section 2.4.2. If the fuel flowmeter is replaced, the replacement meter shall be certified within 60 days after installation, in accordance with the procedures specified above.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (3) The permittee shall maintain monthly records of the following information for emissions units B001, B002, B003, and B004, combined:
 - a. the total quantity of natural gas burned, in mmcf;
 - b. the total quantity of clean blast furnace gas burned, in mmcf;
 - c. the total quantity of COG burned, in mmcf;
 - d. the total PM/PM10, CO, VOC, and SO₂ emissions, in tons; and



- e. the rolling, 12-month summations of the PM/PM₁₀, CO, VOC, and SO₂ emissions, in tons.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (4) The permittee shall maintain records of the total COG consumption (in 1000 cubic feet) for calendar day for emissions units B001, B002, B003, and B004, combined.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (5) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (6) In order to maintain compliance with the applicable emission limitations contained in this permit, the water injection control system liquid flow rate shall be based upon the manufacturer's specifications.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (7) The permittee shall maintain records of all periods of time during which water injection is employed.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (8) The permittee shall operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:

- a. emissions of NO_x in parts per million on an instantaneous (one-minute) basis;



- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period (i.e., lb/MMBtu, lb/hr, lb/hr as a 3-hr rolling average, tons/month, and tons/rolling, 12- month period);
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (9) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (10) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO_x monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction



and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (11) The F-factor for clean blast furnace gas shall be calculated on an hourly basis in accordance with equation 19-13 of 40 CFR Part 60, Appendix A, Method 19. The heat input for clean blast furnace gas shall be calculated on an hourly basis in accordance with equation F-20 of 40 CFR 75, Appendix F. The hourly F-factor and heat input calculations shall be based upon the clean blast furnace gas constituent concentrations as measured by Severstal Wheeling, Inc. formerly Wheeling-Pittsburgh Steel, the calculated clean blast furnace gas density, and the clean blast furnace gas flow rates and stack oxygen concentrations measured by the permittee. If the permittee demonstrates to the satisfaction of the Ohio EPA that a reasonably accurate default F-factor and heat value for clean blast furnace gas may be calculated using worst-case assumptions, the permittee may submit a written request to the Ohio EPA to discontinue hourly calculations of the F-factor and heat input. The F-factor for natural gas shall be based upon the data from Table 19-1 of 40 CFR Part 60, Appendix A, Method 19. The heat input for natural gas shall be calculated in accordance with equation F-20 of 40 CFR 75, Appendix F, using a default natural gas gross calorific value found in 40 CFR 75.19(e)(6), Table LM-5, and natural gas flow rates. For COG, the F-factor shall be calculated on a monthly basis in accordance with equation 19-13 of 40 CFR Part 60, Appendix A, Method 19. The heat input for COG shall be calculated on an hourly basis in accordance with equation F-20 of 40 CFR 75, Appendix F. The monthly F-factor and hourly heat input calculations shall be based upon the COG constituent concentrations as measured by Mountain State Carbon, the calculated COG density, and the COG flow rates and stack oxygen concentrations measured by the permittee.

The combined F-factor for natural gas and clean blast furnace gas shall be calculated in accordance with equation 19-16 of 40 CFR Part 60, Appendix A, Method 19. The combined F-factor for natural gas and clean blast furnace gas shall be used in conjunction with the NO_x continuous monitoring system data to determine the NO_x emission rates.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (12) The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (13) The permittee shall obtain and maintain records of the monitored H₂S concentrations of the COG, in units of gr/100 dscf, for the averaging periods required (1-hour, rolling 3-hour average, and 12-hour block average, midnight to noon, noon to midnight), as a condition of using this fuel.



[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (14) The permittee shall obtain and maintain records of the monitored H₂S concentrations of the COG, in units of gr/100 dscf, for B001, B002, B003, and B004, combined, for the averaging period required (24-hour block average for each calendar day), as a condition of using this fuel.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (15) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart DDDDD, including the following sections:

Record Keeping Requirements	63.7521(f) through (i) 63.7530(e), (f), (g); 63.7540(c) 63.7555(a), (i), (j), 63.7560(a), (b) and (c)
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[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart DDDDD]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or clean blast furnace gas or desulfurized COG was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Southeast District Office by February 15 and August 15 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month PM/PM10, CO, VOC, and SO₂ emission limitations; and
 - b. all exceedances, when COG is burned, of the allowable H₂S content.

The quarterly report shall be submitted by January 31, April 30, July 31, and October 31 and shall cover the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]



- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous NO_x and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total NO_x emissions for the calendar quarter (tons);
 - vi. the total NO_x emissions (in tons) for each rolling, 12-month period during the calendar quarter;
 - vii. the total operating time (hours) of the emissions unit;
 - viii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;
 - ix. results and dates of quarterly cylinder gas audits;
 - x. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - xi. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;



- xii. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
- xiii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and
- xiv. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR 60.7 and PTI #P0105113]

- (5) The permittee shall also submit annual reports that specify the total, PM_{2.5}, PM/PM₁₀, NO_x, CO, VOC, and SO₂ emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (6) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart DDDDD, including the following sections:

Reporting Requirements	63.7530(e), (f), 63.7545(a), (f), (h), 63.7550(a), (b), (c) and (h)
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[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart DDDDD]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.



Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation shall be determined according to USEPA Method 9.

b. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.004 lb/MMBtu when only burning natural gas.

Applicable Compliance Method:

This emissions limitation has been established based upon manufacturer's data for natural gas combustion.

If required, the permittee shall demonstrate compliance with this emissions limitation through the emission testing methods and procedures specified in f)(2) while burning only natural gas.

c. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.0145 lb/MMBtu when burning a blend of natural gas and clean blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of 95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/MMBtu). $0.0151 \times 0.95 + 0.004 \times 0.05 = 0.0145$ lb/MMBtu

If required, compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

d. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.012 lb/MMBtu when burning only

COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon AP-42 Table 12.5-1(October 1986).



Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

e. Emissions Limitation:

PM_{2.5} emissions shall not exceed 0.011 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon AP-42 Table 12.2-19 (combustion stack) (October 1986) (0.94*PM).

Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

f. Emissions Limitation:

PM/PM₁₀ emissions shall not exceed 11.4 tons/year.

Applicable Compliance Method:

This emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with this emission limitation will also be demonstrated.

g. Emissions Limitation:

PM/PM₁₀ emissions shall not exceed 2.61 lbs/hr.

Applicable Compliance Method:

This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of 95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/ MMBtu). $180 \times [(0.0151 \times 0.95 + 0.004 \times 0.05)] = 2.6 \text{ lbs/hr.}$

The permittee shall demonstrate compliance through the emission testing methods and procedures specified in f)(2).

h. Emissions Limitation:

PM_{2.5} emissions shall not exceed 2.61 lbs/hr.

Applicable Compliance Method:



This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of 95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/ MMBtu). $180 \times [(0.0151 \times 0.95 + 0.004 \times 0.05)] = 2.61$ lbs/hr.

Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

i. Emissions Limitation:

PM2.5 emissions shall not exceed 11.43 tons/year.

Applicable Compliance Method:

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

j. Emissions Limitations:

VOC emissions shall not exceed 1.0 lb/hr.

VOC emissions shall not exceed 4.38 tons/year.

Applicable Compliance Methods:

The hourly emissions limitation has been established by multiplying the maximum gas burning capacity of the emissions unit by the AP-42 emission factor of 5.5 lbs VOC/MMSCF (Table 1.4-2, July, 1998) and is based on the worst case emission condition of 100% natural gas.

$180 \text{ MMBtu/hr} \times 5.5 \text{ lbs/MMCF} / 1000 \text{ MMBtu/MMCF} = 1.0 \text{ lb/hr.}$

The permittee shall demonstrate compliance with the hourly emission limitation through the emission testing methods and procedures specified in f)(2).

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

k. Emissions Limitations:

NOx emissions shall not exceed 0.16 lb/MMBtu, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

NOx emissions shall not exceed 0.20 lb/MMBtu, as a 3-hour rolling average, when burning natural gas or a blend of natural gas and clean blast furnace gas.



NO_x emissions shall not exceed 36.0 lbs/hr, as a 3-hour rolling average.

NO_x emissions shall not exceed 157.7 tons/year.

Applicable Compliance Methods:

The lb/MMBtuNO_x emissions limitations have been established based upon a manufacturer's performance guarantee. The lb/hr emission limitation has been established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum heat input capacity and is based on the worst case emission condition of 100% natural gas. (0.20 x 180 =36.0)

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2,000 lbs/ton.

The permittee shall demonstrate initial compliance with the COG lb/MMBtu and hourly emission limitations through the emission testing methods and procedures in f)(2).

Ongoing compliance with these emissions limitations shall be demonstrated based upon the records required pursuant to d)(2), d)(8), d)(11) and d)(12).

I. **Emissions Limitations:**

CO emissions shall not exceed 0.038 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

CO emissions shall not exceed 0.045 lb/ MMBtu when burning natural gas, a blend of natural gas and clean blast furnace gas.

CO emissions shall not exceed 8.1 lbs/hr.

CO emissions shall not exceed 35.5 tons/year.

Applicable Compliance Methods:

The lb/MMBtu emission limitation for both natural gas and clean blast furnace gas has been established based upon a manufacturer's performance guarantee. The lb/MMBtu emission limitation for COG has been established based upon the AIRS Facility Subsystem SCC and emission factor listing for Criteria Pollutants. The hourly emission limitation has been established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum heat input capacity and is based on the worst case emission condition of 100% natural gas. (0.045 x 180 = 8.1)

The permittee shall demonstrate compliance with the COG lb/MMBtu and hourly emissions limitations through the emission testing methods and procedures specified in f)(2).



The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

m. Emissions Limitations:

SO₂ emissions shall not exceed 45.7 lbs/hr, as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.

SO₂ emissions shall not exceed 49.5 lbs/hr, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

SO₂ emissions shall not exceed 216.8 tons/year.

Applicable Compliance Methods:

Ongoing compliance with these emissions limitations shall be demonstrated based upon the records required pursuant to d)(2), d)(11), d)(15), d)(16) and d)(17).

If use of the continuous emissions monitoring system for SO₂ is discontinued pursuant to section d)(18) of this permit, ongoing compliance with the hourly emission limitation when burning COG shall be determined based on the continuous H₂S monitoring system and records required pursuant to d)(13).

The permittee shall demonstrate compliance with the hourly emissions limitation through the emission testing methods and procedures specified in f)(2).

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

n. Emissions Limitation:

NO_x emissions shall not exceed 403.6 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the records required pursuant to d)(2), d)(8), d)(11), and d)(12).

o. Emissions Limitation:

CO emissions shall not exceed 141.9 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:



Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 0.045 lb/MMBtu, based on manufacturer's guarantee.

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, 0.038 lb/MMBtu, or on the most recent test that demonstrated that the emissions units were in compliance.

p. Emissions Limitation:

VOC emissions shall not exceed 8.4 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 5.5 lbs/mmcf, (AP-42 Section 1.4-2, July 1998)

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, 1.2 lbs/mmcf, or on the most recent test that demonstrated that the emissions units were in compliance.

q. Emissions Limitation:

PM/PM10 emissions shall not exceed 45.7 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 0.004 lb/MMBtu, based on manufacturer's guarantee.

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.



For COG, 0.012 lb/MMBtu, or on the most recent test that demonstrated that the emissions units were in compliance.

r. Emissions Limitation:

SO2 emissions shall not exceed 500.0 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3) and d)(4), and the following emissions factors:

For natural gas, 0.6 lbs/mmcf, (AP-42 Section 1.4-2, July 1998)

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, the following equation shall be used to determine monthly SO2 emissions:

$$X_j = \sum_{i=1}^n (Y_i \times Z_i \times 10) \times \frac{64 \text{ mol}}{34 \text{ mol}} \times \frac{1 \text{ lb}}{7,000 \text{ grains}} \times \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

where:

X_j = total tons of SO2 emissions per month

Y_i = 24-hour average H2S content (grains/100 dry standard cubic feet) for each calendar day for the month for B001-B004, combined

Z_i = total COG consumption (1000 cubic feet) for each calendar day for the month for B001-B004, combined

n = number of calendar days for the month

s. Emissions Limitation:

The H2S content of the COG combusted in this emissions unit shall not exceed 50 grains of H2S per 100 dscf of COG.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in d)(13).



(2) The permittee shall conduct, or have conducted, emission testing for these emissions units, in accordance with the following requirements:

a. The emissions testing for B001 shall be conducted within 3 months after completion of the emissions unit modification (installation of the new burner and water injection system) pursuant to Chapter 31 PTI P0105113, issued 1/14/2011. If the above modification occurs four years or more after the effective date of this permit, emissions testing for B001 shall be conducted within 12 months prior to permit expiration.

b. The emissions testing for B002-3 shall be conducted within 12 months prior to permit expiration.

c. The emission testing shall be conducted to demonstrate compliance with the PM_{2.5}, PM₁₀, visible particulate, VOC, and CO emission limitations.

d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM_{2.5}, Method 201 or 201A of 40 CFR Part 51, Appendix M;

for PM₁₀, Methods 1 through 4 of 40 CFR Part 60, Appendix A, and Method 201 or 201A of 40 CFR Part 51, Appendix M;

for visible particulate emissions, Method 9 of 40 CFR 60 Appendix A;

for VOC, Methods 1 through 4 and Method 25 of 40 CFR 60 Appendix A; and

for CO, Methods 1 through 4 and Method 10 of 40 CFR 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning COG, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.



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A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

[All of section f): OAC rule 3745-77-07(C)(1) and PTI #P0105113]

g) Miscellaneous Requirements

(1) None.



2. B004, Boiler 4

Operations, Property and/or Equipment Description:

180 MMBtu/hr natural gas, clean blast furnace gas and /or desulfurized coke oven gas (COG) fired boiler with NO_x and SO₂ continuous emissions monitoring systems (CEMS).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI P0105113 issued January 4, 2011)	<p>Particulate matter (PM) and particulate matter emissions with a diameter less than 10 microns (PM10) shall not exceed 0.0145 lb/MMBtu when burning a blend of natural gas and clean blast furnace gas.</p> <p>PM/PM10 emissions shall not exceed 0.004 lb/MMBtu when only burning natural gas.</p> <p>PM/PM10 emissions shall not exceed 0.012 lb/MMBtu when burning only coke oven gas (COG), a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>PM2.5 emissions shall not exceed 0.011 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>PM/PM10 emissions shall not exceed 2.61 lbs/hr.</p> <p>PM2.5 emissions shall not exceed 2.61 lbs/hr.</p> <p>PM/PM10 emissions shall not exceed 11.4 tons/year.</p> <p>PM2.5 emissions shall not exceed 11.4 tons/year.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.20 lb/MMBtu , as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.16 lb/MMBtu , as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>NOx emissions shall not exceed 36.0 lbs/hr, as a 3-hour rolling average.</p> <p>NOx emissions shall not exceed 157.7 tons/year.</p> <p>See b)(2)c.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.045 lb/MMBtu when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.038 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>CO emissions shall not exceed 8.1 lbs/hr.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>CO emissions shall not exceed 35.5 tons/year.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 1.0 lb/hr.</p> <p>VOC emissions shall not exceed 4.38 tons/year.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 45.7 lbs/hr, as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 49.5 lbs/hr, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.</p> <p>SO₂ emissions shall not exceed 216.8 tons/year.</p> <p>See b)(2)e.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), and 3745-31-05(D), and 3745-18-47(C).</p>
b.	<p>OAC rule 3745-31-05(D) (PTI P0105113 issued January 4, 2011)</p>	<p>PM/PM10 emissions shall not exceed 45.7 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>NOx emissions shall not exceed 403.6 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>CO emissions shall not exceed 141.9 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.</p> <p>VOC emissions shall not exceed 8.4</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined. SO ₂ emissions shall not exceed 500.0 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.
c.	OAC rule 3745-31-10	See Section B.4.a)
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-10(B)(1)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-18-47(C)	The hydrogen sulfide (H ₂ S) content of the COG combusted in this emissions unit shall not exceed 50 grains of H ₂ S per 100 dscf of COG.
g.	40 CFR Part 60, Subpart Db	The NO _x emission limitation specified by this rule is less stringent than or equivalent to the NO _x emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-63.7575)	See b)(2)d., d)(19) and e)(8).
i.	40 CFR 63.1-15 (40 CFR 63.7565)	Table 10 to Subpart DDDDD of 40 CFR Part 63 – Applicability of General Provisions to Subpart DDDD shows which parts of the General Provisions in 40 CFR 63.1-15 apply

(2) Additional Terms and Conditions

- a. For purposes of this permit, "clean blast furnace gas" is defined as blast furnace gas which has had particulate matter controlled by Severstal Wheeling, Inc. formerly Wheeling-Pittsburgh Steel's properly operating scrubber system on Blast Furnace Number 5.
- b. For purposes of this permit, "desulfurized COG" is defined as COG that has a H₂S content less than 50 grains/100 dscf.



- c. The NOx emissions from this emissions unit shall be controlled through water injection at all times when the emissions unit is combusting COG or co-firing COG with natural gas.
- d. This emissions unit meets the definition of existing boilers or process heaters with a heat input capacity of greater than 10 mmBtu per hour; therefore, the following requirements found in 40 CFR, Part 63, Subpart DDDDD are applicable:

Work Practice Standards	63.7500 (a)(3), (f) and Table 3 #4
General Compliance Requirements	63.7505(a), 63.7515(d), 63.7540(a)(10) and (a)(13), 63.7565 and Table 10

- e. The permittee shall operate and maintain the fuel burner in accordance with the manufacturer's recommendations to ensure efficient combustion of the fuel(s) and to ensure compliance with the applicable emissions limitations. In accordance with the permit application, the permittee has committed to installation and operation of a burner management system and combustion control system in order to satisfy this requirement.

c) Operational Restrictions

- (1) Fuel usage in emissions units B001-B004, combined, shall not cause PM/PM10, CO, VOC, and SO₂ emissions to exceed the rolling, 12-month emissions limitations specified in b)(1)b. based on the following equation:

$$\sum_{i,j,k=1}^{12} [(X_i \times Y_i) + (X_j \times Y_j) + (X_k \times Y_k)] / 2000 \text{ lbs/ton}$$

Where:

- X_i = emissions factor for natural gas
- Y_i = monthly natural gas usage
- X_j = emissions factor for clean blast furnace/natural gas blend
- Y_j = monthly clean blast furnace/natural gas blend usage
- X_k = emissions factor for COG*
- Y_k = monthly COG usage*

See f)(1)n-r. for emissions factors to be used in this equation.

*For SO₂, in lieu of the variables X_k and Y_k above, use the equation given in f)(1)r. to determine the monthly COG SO₂ emissions.

[OAC rule 3745-77-07(A)(1) and PTI #P0105113]



- (2) This emissions unit shall be operated only in conjunction with the permanent shutdown of the Wheeling-Pittsburgh Steel Corporation Mingo Junction Boiler House, emissions units B005, B006, B007, B008, B009, B010, B011, and B012 under Ohio EPA premise number 0641090010.

[OAC rule 3745-77-07(A)(1) and PTI #P0105113]

- (3) The permittee shall burn only natural gas or a combination of natural gas and clean blast furnace gas, or only desulfurized COG, or a combination of COG and natural gas, or a combination of COG, natural gas, and blast furnace gas in this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI #P0105113]

d) **Monitoring and/or Recordkeeping Requirements**

- (1) For each day during which the permittee burns a fuel other than natural gas or a combination of natural gas and clean blast furnace gas, or only desulfurized COG, or a combination of COG and natural gas, or a combination of COG, natural gas, and blast furnace gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (2) In order to accurately determine the heat input rates for this emissions unit, the permittee shall install, operate, and maintain equipment to continuously monitor and record the actual natural gas, clean blast furnace gas, and COG fuel flow rates to this emissions unit when the emissions unit is in operation. The permittee shall demonstrate that each fuel flowmeter used meets a flowmeter accuracy of 2.0 percent. This shall be accomplished not later than 60 days after the issuance of this permit by performing an initial transmitter accuracy test and a primary element visual inspection. Thereafter, the permittee shall perform a transmitter accuracy test once every four fuel flowmeter quality assurance (QA) operating quarters (as defined in 40 CFR Part 72.2) and a primary element visual inspection once every 12 calendar quarters. The transmitter accuracy tests and primary element visual inspections shall be performed in accordance with the procedures specified in 40 CFR Part 75, Appendix D, Sections 2.1.6.1(a) through (c) (Transmitter Accuracy Test), 2.1.6.3 (Failure of Transmitter(s)), and 2.1.6.4 (PrimaryElement Inspection). If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75, Appendix D, Section 2.4.2. If the fuel flowmeter is replaced, the replacement meter shall be certified within 60 days after installation, in accordance with the procedures specified above.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (3) The permittee shall maintain monthly records of the following information for emissions units B001, B002, B003, and B004, combined:
- a. the total quantity of natural gas burned, in mmcf;
 - b. the total quantity of clean blast furnace gas burned, in mmcf;



- c. the total quantity of COG burned, in mmcf;
- d. the total PM/PM10, CO, VOC, and SO₂ emissions, in tons; and
- e. the rolling, 12-month summations of the PM/PM10, CO, VOC, and SO₂ emissions, in tons.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (4) The permittee shall maintain records of the total COG consumption (in 1000 cubic feet) for calendar day for emissions units B001, B002, B003, and B004, combined.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (5) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emission incident; and
- e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (5) In order to maintain compliance with the applicable emission limitations contained in this permit, the water injection control system liquid flow rate shall be based upon the manufacturer's specifications.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (6) The permittee shall maintain records of all periods of time during which water injection is employed.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (7) The permittee shall operate and maintain equipment to continuously monitor and record NO_x emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous NO_x monitoring system including, but not limited to:



- a. emissions of NO_x in parts per million on an instantaneous (one-minute) basis;
- b. emissions of NO_x in all units of the applicable standard(s) in the appropriate averaging period (i.e., lb/MMBtu, lb/hr, lb/hr as a 3-hr rolling average, tons/month, and tons/rolling, 12- month period);
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous NO_x monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous NO_x monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous NO_x monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (8) The permittee shall maintain a written quality assurance/quality control plan for the continuous NO_x monitoring system, designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (9) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NO_x monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.



Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (10) The F-factor for clean blast furnace gas shall be calculated on an hourly basis in accordance with equation 19-13 of 40 CFR Part 60, Appendix A, Method 19. The heat input for clean blast furnace gas shall be calculated on an hourly basis in accordance with equation F-20 of 40 CFR 75, Appendix F. The hourly F-factor and heat input calculations shall be based upon the clean blast furnace gas constituent concentrations as measured by Severstal Wheeling, Inc. formerly Wheeling-Pittsburgh Steel, the calculated clean blast furnace gas density, and the clean blast furnace gas flow rates and stack oxygen concentrations measured by the permittee. If the permittee demonstrates to the satisfaction of the Ohio EPA that a reasonably accurate default F-factor and heat value for clean blast furnace gas may be calculated using worst-case assumptions, the permittee may submit a written request to the Ohio EPA to discontinue hourly calculations of the F-factor and heat input. The F-factor for natural gas shall be based upon the data from Table 19-1 of 40 CFR Part 60, Appendix A, Method 19. The heat input for natural gas shall be calculated in accordance with equation F-20 of 40 CFR 75, Appendix F, using a default natural gas gross calorific value found in 40 CFR 75.19(e)(6), Table LM-5, and natural gas flow rates. For COG, the F-factor shall be calculated on a monthly basis in accordance with equation 19-13 of 40 CFR Part 60, Appendix A, Method 19. The heat input for COG shall be calculated on an hourly basis in accordance with equation F-20 of 40 CFR 75, Appendix F. The monthly F-factor and hourly heat input calculations shall be based upon the COG constituent concentrations as measured by Mountain State Carbon, the calculated COG density, and the COG flow rates and stack oxygen concentrations measured by the permittee.

The combined F-factor for natural gas and clean blast furnace gas shall be calculated in accordance with equation 19-16 of 40 CFR Part 60, Appendix A, Method 19. The combined F-factor for natural gas and clean blast furnace gas shall be used in conjunction with the NO_x and SO₂ continuous monitoring systems data to determine the NO_x and SO₂ emission rates.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (11) The permittee shall install, operate and maintain equipment to continuously monitor and record the percent oxygen in the stack serving this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60. The monitoring and recording equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (12) The permittee shall obtain and maintain records of the monitored H₂S concentrations of the COG, in units of gr/100 dscf, for the averaging periods required (1-hour, rolling 3-



hour average, and 12-hour block average, midnight to noon, noon to midnight), as a condition of using this fuel.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (13) The permittee shall obtain and maintain records of the monitored H₂S concentrations of the COG, in units of gr/100 dscf, for B001, B002, B003, and B004, combined, for the averaging period required (24-hour block average for each calendar day), as a condition of using this fuel.

The current H₂S monitoring system at MSC is acceptable to meet conditions (d)(13) and d)(14).

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (14) The permittee shall operate and maintain equipment to continuously monitor and record SO₂ emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous SO₂ monitoring system including, but not limited to:

- a. emissions of SO₂ in parts per million on an instantaneous (one-minute) basis;
- b. emissions of SO₂ in all units of the applicable standard(s) in the appropriate averaging period (i.e., lb/hr, lb/hr as a 3-hr average, tons/month, and tons/rolling, 12-month period);
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
- f. hours of operation of the emissions unit, continuous SO₂ monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO₂ monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO₂ monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]



- (15) The permittee shall maintain a written quality assurance/quality control plan for the continuous SO₂ monitoring system, designed to ensure continuous valid and representative readings of SO₂ emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO₂ monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (16) The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO₂ monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[OAC rule 3745-77-07(C)(1); 40 CFR 60.13 and PTI #P0105113]

- (17) Petition for Discontinued Use of the SO₂ Monitoring System

The permittee may petition the Director of the Ohio EPA for permission to discontinue the use of the SO₂ monitoring system if all of the following conditions are met:

- a. Ohio EPA has determined that the system meets all requirements of ORC section 3704.03(l) and 40 CFR Part 60, Appendix B, Performance Specification 2; and
- b. the SO₂ monitoring system has collected at least 180 days of valid data (after the certification of the monitoring system is completed) during which this emissions unit was operating with clean blast furnace gas as fuel; and
- c. the permittee has developed an accurate, representative SO₂ emission factor for SO₂ emissions during the use of blast furnace gas as fuel by using the SO₂ monitoring system data and has developed justification concerning why the emission factor should be used as an alternative to the SO₂ monitoring system for calculating SO₂ emissions.

The petition to the Director shall include documentation to demonstrate that the above conditions have been met.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]



- (18) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart DDDDD, including the following sections:

Record Keeping Requirements	63.7521(f) through (i) 63.7530(e), (f), (g); 63.7540(c) 63.7555(a), (i), (j), 63.7560(a), (b) and (c)
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[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart DDDDD]

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas or clean blast furnace gas or desulfurized COG was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Southeast District Office by February 15 and August 15 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. all exceedances of the rolling, 12-month PM/PM10, CO, VOC, and SO₂ emission limitations; and
 - b. all exceedances, when COG is burned, of the allowable SO₂ emissions, as a 3-hour rolling average; and
 - c. all exceedances, when COG is burned, of the allowable H₂S content.

The quarterly report shall be submitted by January 31, April 30, July 31, and October 31 and shall cover the previous calendar quarter.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (4) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NO_x monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within



30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

- b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
- i. the facility name and address;
 - ii. the manufacturer and model number of the continuous NO_x and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total NO_x emissions for the calendar quarter (tons);
 - vi. the total NO_x emissions (in tons) for each rolling, 12-month period during the calendar quarter;
 - vii. the total operating time (hours) of the emissions unit;
 - viii. the total operating time of the continuous NO_x monitoring system while the emissions unit was in operation;
 - ix. results and dates of quarterly cylinder gas audits;
 - x. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - xi. unless previously submitted, the results of any relative accuracy test audit showing the continuous NO_x monitor out-of-control and the compliant results following any corrective actions;
 - xii. the date, time, and duration of any/each malfunction** of the continuous NO_x monitoring system, emissions unit, and/or control equipment;
 - xiii. the date, time, and duration of any downtime** of the continuous NO_x monitoring system and/or control equipment while the emissions unit was in operation; and



- xiv. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR 60.7 and PTI #P0105113]

- (5) The permittee shall also submit annual reports that specify the total, PM_{2.5}, PM/PM₁₀, NO_x, CO, VOC, and SO₂ emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (6) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO₂ monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO₂ emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous SO₂ and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;



- iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
- v. the total SO₂ emissions for the calendar quarter (tons);
- vi. the total SO₂ emissions (in tons) for each rolling, 12-month period during the calendar quarter;
- vii. the total operating time (hours) of the emissions unit;
- viii. the total operating time of the continuous SO₂ monitoring system while the emissions unit was in operation;
- ix. results and dates of quarterly cylinder gas audits;
- x. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
- xi. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO₂ monitor out-of-control and the compliant results following any corrective actions;
- xii. the date, time, and duration of any/each malfunction** of the continuous SO₂ monitoring system, emissions unit, and/or control equipment;
- xiii. the date, time, and duration of any downtime** of the continuous SO₂ monitoring system and/or control equipment while the emissions unit was in operation; and
- xiv. the reason (if known) and the corrective actions taken (if any) for each event in b. xi. and xii.

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[OAC rule 3745-77-07(C)(1); 40 CFR 60.7 and PTI #P0105113]

- (7) If use of the continuous emissions monitoring system for SO₂ is discontinued, the permittee shall submit quarterly deviation (excursion) reports of all exceedances, when COG is burned, of the allowable SO₂ emissions, as a 3-hour rolling average. The quarterly report shall be submitted by January 31, April 30, July 31, and October 31 and shall cover the previous calendar quarter.



[OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- (8) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 63, Subpart DDDDD, including the following sections:

Reporting Requirements	63.7530(e), (f), 63.7545(a), (f), (h), 63.7550(a), (b), (c) and (h)
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[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart DDDDD]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the visible particulate emissions limitation shall be determined according to USEPA Method 9.

b. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.004 lb/MMBtu when only burning natural gas.

Applicable Compliance Method:

This emissions limitation has been established based upon manufacturer's data for natural gas combustion.

If required, the permittee shall demonstrate compliance with this emissions limitation through the emission testing methods and procedures specified in f)(2) while burning only natural gas.

c. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.0145 lb/MMBtu when burning a blend of natural gas and clean blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of



95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/MMBtu). $0.0151 \times 0.95 + 0.004 \times 0.05 = 0.0145$ lb/MMBtu

If required, compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

d. Emissions Limitation:

PM/PM10 emissions shall not exceed 0.012 lb/MMBtu when burning only

COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon AP-42 Table 12.5-1(October 1986).

Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

e. Emissions Limitation:

PM2.5 emissions shall not exceed 0.011 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

Applicable Compliance Method:

This emissions limitation has been established based upon AP-42 Table 12.2-19 (combustion stack) (October 1986) (0.94*PM).

Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

f. Emissions Limitation:

PM/PM10 emissions shall not exceed 11.4 tons/year.

Applicable Compliance Method:

This emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with this emission limitation will also be demonstrated.

g. Emissions Limitation:

PM/PM10 emissions shall not exceed 2.61 lbs/hr.

Applicable Compliance Method:



This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of 95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/ MMBtu). $180 \times [(0.0151 \times 0.95 + 0.004 \times 0.05)] = 2.6 \text{ lbs/hr.}$

The permittee shall demonstrate compliance through the emission testing methods and procedures specified in f)(2).

h. Emissions Limitation:

PM2.5 emissions shall not exceed 2.61 lbs/hr.

Applicable Compliance Method:

This emissions limitation has been established based upon a manufacturer's performance guarantee. The worst-case emission condition is the combustion of 95% clean blast furnace gas (0.0151 lb/ MMBtu) and 5% natural gas (0.004 lb/ MMBtu). $180 \times [(0.0151 \times 0.95 + 0.004 \times 0.05)] = 2.61 \text{ lbs/hr.}$

Compliance with this emissions limitation shall be determined through the emission testing methods and procedures specified in f)(2).

i. Emissions Limitation:

PM2.5 emissions shall not exceed 11.43 tons/year.

Applicable Compliance Method:

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

j. Emissions Limitations:

VOC emissions shall not exceed 1.0 lb/hr.

VOC emissions shall not exceed 4.38 tons/year.

Applicable Compliance Methods:

The hourly emissions limitation has been established by multiplying the maximum gas burning capacity of the emissions unit by the AP-42 emission factor of 5.5 lbs VOC/MMSCF (Table 1.4-2, July, 1998) and is based on the worst case emission condition of 100% natural gas.

$180 \text{ MMBtu/hr} \times 5.5 \text{ lbs/MMCF} / 1000 \text{ MMBtu/MMCF} = 1.0 \text{ lb/hr.}$

The permittee shall demonstrate compliance with the hourly emission limitation through the emission testing methods and procedures specified in f)(2).



The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

k. Emissions Limitations:

NO_x emissions shall not exceed 0.16 lb/MMBtu, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

NO_x emissions shall not exceed 0.20 lb/MMBtu, as a 3-hour rolling average, when burning natural gas or a blend of natural gas and clean blast furnace gas.

NO_x emissions shall not exceed 36.0 lbs/hr, as a 3-hour rolling average.

NO_x emissions shall not exceed 157.7 tons/year.

Applicable Compliance Methods:

The lb/MMBtuNO_x emissions limitations have been established based upon a manufacturer's performance guarantee. The lb/hr emission limitation has been established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum heat input capacity and is based on the worst case emission condition of 100% natural gas. (0.20 x 180 =36.0)

The annual emission limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2,000 lbs/ton.

The permittee shall demonstrate initial compliance with the COG lb/MMBtu and hourly emission limitations through the emission testing methods and procedures in f)(2).

Ongoing compliance with these emissions limitations shall be demonstrated based upon the records required pursuant to d)(2), d)(8), d)(11) and d)(12).

l. Emissions Limitations:

CO emissions shall not exceed 0.038 lb/MMBtu when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

CO emissions shall not exceed 0.045 lb/ MMBtu when burning natural gas, a blend of natural gas and clean blast furnace gas.

CO emissions shall not exceed 8.1 lbs/hr.

CO emissions shall not exceed 35.5 tons/year.

Applicable Compliance Methods:



The lb/MMBtu emission limitation for both natural gas and clean blast furnace gas has been established based upon a manufacturer's performance guarantee. The lb/MMBtu emission limitation for COG has been established based upon the AIRS Facility Subsystem SCC and emission factor listing for Criteria Pollutants. The hourly emission limitation has been established by multiplying the lb/MMBtu emission limitation by the emissions unit's maximum heat input capacity and is based on the worst case emission condition of 100% natural gas. (0.045 x 180 = 8.1)

The permittee shall demonstrate compliance with the COG lb/MMBtu and hourly emissions limitations through the emission testing methods and procedures specified in f)(2).

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

m. Emissions Limitations:

SO₂ emissions shall not exceed 45.7 lbs/hr, as a 3-hour rolling average, when burning natural gas or natural gas/blast furnace gas blend.

SO₂ emissions shall not exceed 49.5 lbs/hr, as a 3-hour rolling average, when burning only COG, a blend of natural gas and COG, or a blend of natural gas, COG, and blast furnace gas.

SO₂ emissions shall not exceed 216.8 tons/year.

Applicable Compliance Methods:

Ongoing compliance with these emissions limitations shall be demonstrated based upon the records required pursuant to d)(2), d)(11), d)(15), d)(16) and d)(17).

If use of the continuous emissions monitoring system for SO₂ is discontinued pursuant to section d)(18) of this permit, ongoing compliance with the hourly emission limitation when burning COG shall be determined based on the continuous H₂S monitoring system and records required pursuant to d)(13).

The permittee shall demonstrate compliance with the hourly emissions limitation through the emission testing methods and procedures specified in f)(2).

The annual emissions limitation was established by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided that the permittee complies with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

n. Emissions Limitation:



NO_x emissions shall not exceed 403.6 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated based upon the records required pursuant to d)(2), d)(8), d)(11), and d)(12).

o. Emissions Limitation:

CO emissions shall not exceed 141.9 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 0.045 lb/MMBtu, based on manufacturer's guarantee.

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, 0.038 lb/MMBtu, or on the most recent test that demonstrated that the emissions units were in compliance.

p. Emissions Limitation:

VOC emissions shall not exceed 8.4 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 5.5 lbs/mmcf, (AP-42 Section 1.4-2, July 1998)

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, 1.2 lbs/mmcf, or on the most recent test that demonstrated that the emissions units were in compliance.

q. Emissions Limitation:



PM/PM10 emissions shall not exceed 45.7 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3), and the following emissions factors:

For natural gas, 0.004 lb/MMBtu, based on manufacturer's guarantee.

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, 0.012 lb/MMBtu, or on the most recent test that demonstrated that the emissions units were in compliance.

r. **Emissions Limitation:**

SO2 emissions shall not exceed 500.0 tons/rolling, 12-month period, for emissions units B001, B002, B003, and B004, combined.

Applicable Compliance Method:

Compliance with this emissions limitation shall be based upon the equation specified in c)(1), the records required pursuant to d)(3) and d)(4), and the following emissions factors:

For natural gas, 0.6 lbs/mmcf, (AP-42 Section 1.4-2, July 1998)

For clean blast furnace gas, the emission factor derived from the results of the most recent emission test that demonstrated that the emissions units were in compliance.

For COG, the following equation shall be used to determine monthly SO2 emissions:

$$X_j = \sum_{i=1}^n (Y_i \times Z_i \times 10) \times \frac{64 \text{ mol}}{34 \text{ mol}} \times \frac{1 \text{ lb}}{7,000 \text{ grains}} \times \frac{1 \text{ ton}}{2,000 \text{ lbs}}$$

where:

X_j = total tons of SO2 emissions per month

Y_i = 24-hour average H2S content (grains/100 dry standard cubic feet) for each calendar day for the month for B001-B004, combined



Z_i = total COG consumption (1000 cubic feet) for each calendar day for the month for B001-B004, combined

N = number of calendar days for the month

s. Emissions Limitation:

The H₂S content of the COG combusted in this emissions unit shall not exceed 50 grains of H₂S per 100 dscf of COG.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in d)(13).

(2) The permittee shall conduct, or have conducted, emissions testing for this emissions unit, in accordance with the following requirements:

a. The emissions testing shall be conducted within 12 months prior to permit expiration.

b. The emissions testing shall be conducted to demonstrate compliance with the PM_{2.5}, PM₁₀, visible particulate, VOC, SO₂, and CO emission limitations.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

for PM_{2.5}, Method 201 or 201A of 40 CFR Part 51, Appendix M;

for PM₁₀, Methods 1 through 4 of 40 CFR Part 60, Appendix A, and Method 201 or 201A of 40 CFR Part 51, Appendix M;

for visible particulate emissions, Method 9 of 40 CFR 60 Appendix A;

for VOC, Methods 1 through 4 and Method 25 of 40 CFR 60 Appendix A;

for SO₂, Methods 1 through 4 and Method 6 of 40 CFR 60, Appendix A; and

for CO, Methods 1 through 4 and Method 10 of 40 CFR 60 Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, while burning COG, unless otherwise specified or approved by the Ohio EPA, Southeast District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office.



The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Southeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

[All of section f): OAC rule 3745-77-07(C)(1) and PTI #P0105113]

- g) Miscellaneous Requirements
 - (1) None.