State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

**TELE:** (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

11/01/04

**CERTIFIED MAIL**

**RE: Final Title V Chapter 3745-77 permit**

14-09-01-0006
AK Steel Corporation
Steven L. Francis
1801 Crawford Street
Middletown, OH 45042

Dear Steven L. Francis:

Enclosed is the 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.

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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final 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. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

If you have any questions, please contact Hamilton County Dept. of Environmental Services.

Sincerely,

Michael W. Ahern

Michael W. Ahern
Permit Issuance and Data Management Section
Division of Air Pollution Control

cc: Hamilton County Dept. of Environmental Services
File, DAPC PMU

State of Ohio Environmental Protection Agency

# FINAL TITLE V PERMIT

| Issue Date: **11/01/04** | Effective Date: **01/03/05** | Expiration Date: **01/03/10** |
|---|---|---|

This document constitutes issuance of a Title V permit for Facility ID: 14-09-01-0006 to:
AK Steel Corporation
1801 Crawford Street
Middletown, OH 45043-0001

## Emissions Unit ID (Company ID)/Emissions Unit Activity Description

B007 (Boiler No.1,No.2 BH)
Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

B008 (Boiler No.4,No.2 BH)
Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

B009 (Boiler No.3,No.2 BH)
Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

B010 (Boiler No.2,No.2 BH)
Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

B021 (No. 84 Anneal)
No. 84 Anneal is a batch annealing of cold rolled steel coils operation.

B022 (Open Coil Anneal)
Open Coil Anneal is a batch annealing of cold rolled steel coils operation.

B023 (No. 64 Anneal)
No. 64 Anneal is a batch annealing of cold rolled steel coils operation.

B026 (No. 94 Anneal)
No. 94 Anneal is a batch annealing of cold rolled steel coils operation.

B027 (H Ladle Preheater 1)
The No. 1 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

B028 (H Ladle Preheater 2)
The No. 2 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

B029 (H Ladle Preheater 3)
The No. 3 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

B030 (V Ladle Preheater)
The Stelter & Brinck vertical ladle preheater is used to preheat steel ladles.

B031 (Tundish Preheater1)
The No. 1 Stelter & Brinck tundish preheater is used to preheat tundishes.

B032 (Tundish Preheater 2)
The No. 2 Stelter & Brinck tundish preheater is used to preheat tundishes.

B918 (No.2 Coke Plant)
Wilputte Underjet 76-oven Coke Battery produces coke and various coke by-products.

F001 (Roads & Park. Areas)
This includes unpaved roads, paved roads, and parking lots which are treated for dust suppression.

F002 (RM Storage Piles)
Material storage piles throughout the facility.

F003 (Coal Hand.-No.2CP)
This includes part of the coal handling system for the Wilputte Coke Battery (No. 2 Coke Plant).

F004 (Still Coal Handling)
Still Coal handling (now used to feed the No. 2 Coke Plant)

F005 (Coke Hand.-No.2 CP)
This includes the coke handling facility for the No. 2 Coke Plant.

F008 (Ore Screen. & Hand.)
This includes the ore screening and handling facility.

F010 (Iron Ore Unloading)
This includes the railcar, truck dump, conveyors and transfer station for the conveyance of ore.

F011 (BOF Deslagger)
The molten iron deslagging operation is used to remove slag off of the hot metal ladle.

F012 (BF Raw Matls Hand.)
This includes the coke, iron bearing materials and fluxing agents handling equipment for No. 3 Blast Furnace.

F015 (Slab Scarfing/Slitting)
This includes the hand scarfing and slitting of steel slabs.

F021 (Backup Quench Station)
This is the quenching of hot coke operation. Backup quench station in case the main one is out of service for repairs.

F025 (Backup Skimmer)
Backup BOF Furnace Slag Skimmer.

G001 (Plantwide Gasoline)
This is the Pickler Bldg, BOF, and Main Garage diesel and gasoline dispensing facilities.

K001 (Shops Spray Paint.)
This is a miscellaneous metal parts spray painting operation.

P009 (No. 3 Slab Fce/WHB)
Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

P010 (No. 2 Slab Fce/WHB)
Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

P011 (No. 1 Slab Fce/WHB)
Salem pusher slab reheat furnace reheats steel slabs, associated waste heat boiler

P012 (No. 4 Slab Fce/WHB)
Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

P019 (No. 4 Coating Line)
The No. 4 Coating Line is an aluminum coating of steel coils operation.

P022 (No. 3 Coating Line)
The No. 3 Coating Line is a zinc coating of steel coils operation.

P023 (No. 5 Pickler)
The Wean Unique HCI Pickler is used to remove scale from hot rolled steel.

P024 (No. 4 Pickler)
The Wean Unique HCI Pickler is used to remove scale from hot rolled steel.

P043 (Wilp.Quench Tower)
This is the quenching of hot coke operation.

P047 (HMT/Desulf. Station)
This is a combination hot metal pouring and desulfurization facility.

P062 (No. 2 EG Line)
This is an electrolytic zinc coating or zinc-nickel coating of steel coils operation.

P065 (No. 3 Cold Mill)
The United 5 Stand Tandem Cold Mill is a cold rolling steel operation.

P067 (Gas Holder/Flare)
The gas holder/flare is used to flare excess coke oven gas.

P068 (Wilp. Exhausters)
The two Wilputte exhausters for the coke oven gas

distribution throughout the by-products facility

P070 (FC, WO Tanks & Dec)
This includes the final cooler, wash oil tanks and decanter within the by-products.

P075 (Wilp. Tar & FL Vess.)
This includes the Wilputte tar and flushing liquor processing vessels within the by-products.

P091 (No. 5 Temper Mill)
This equipment includes a four high set of rolls used for cold working (tempering) steel.

P092 (No. 6 Temper Mill)
This equipment includes a four high set of rolls used for cold working (tempering) steel.

P093 (No. 1 CR Line)
This equipment includes payoff reel, shears, inspection station, oiler, and a winding reel.

P094 (Hot Strip Mill)
The Hot Strip Mill is a hot rolling of steel slabs operation.

P095 (No. 7 Temper Mill)
This equipment includes a two high set of rolls used for cold working (tempering) steel.

P901 (Flux Handling)
This includes the unloading and conveying of flux material to the BOF.

P902 (Continuous Caster)
Molten steel is continuous cast into steel slabs at this operation.

P925 (No. 3 Blast Furnace)
Arthur G. McKee unique blast furnace produces hot metal.

P926 (No. 15 Vessel)
The No. 15 basic oxygen furnace produces molten steel.

P927 (No. 16 Vessel)
The No. 16 basic oxygen furnace produces molten steel.

P934 (CAS/OB)
This is a steel refining station using argon stirring and oxygen blowing for certain steel grades.

P935 (Vacuum Degasser)
The vacuum degassing system is a molten steel refining station for certain steel grades.

P956 (Desul. Station)
This is a spare desulfurization facility used during routine maintenance of the main operation.

T002 (E.Tar Storage Tank)
The east tar storage tank is used to store tar, a coke by-product.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. 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. 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, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Hamilton County Dept. of Environmental Services
250 William Howard Taft Rd
Cincinnati, OH 45219-2660
(513) 946-7777

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

# PART I - GENERAL TERMS AND CONDITIONS

## *A. State and Federally Enforceable Section*

### 1. 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 A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.
ii. The date(s) analyses were performed.
iii. The company or entity that performed the analyses.
iv. The analytical techniques or methods used.
v. The results of such analyses.
vi. 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:

i. **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 General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, 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 scheduled maintenance, 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))*

ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II 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 promptly made to the appropriate Ohio EPA District Office or local air agency. 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 reports shall satisfy the requirements (in part) 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. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

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 overrides the reporting requirements specified in this General 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 the requirements (in part) 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 General Term and Condition.

See B.6 below if no deviations occurred during the quarter.
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

iii. **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 General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

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 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 General Term and Condition A.1.c.ii 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))*

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

v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

**2. 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 General Term and Condition A.1.c.i above.
*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

**3. 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))*

**4. 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))*

**5. 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))*

**6. General Requirements**

a. The permittee must comply with all terms and conditions of this permit. 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.

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 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.

*(Authority for term: OAC rule 3745-77-07(A)(7))*

**7. 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))*

**8. 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))*

**9. 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 general terms and conditions shall apply to all operating scenarios authorized in this permit.
*(Authority for term: OAC rule 3745-77-07(A)(10))*

**10. 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))*

**11. 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))*

**12. 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:

i. 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.

ii. 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.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

iv. 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 appropriate Ohio EPA District Office or local air agency 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:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
ii. 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 appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

i. 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.
ii. Compliance certifications shall include the following:
(a) An identification of each term or condition of this permit that is the basis of the certification.
(b) The permittee's current compliance status.
(c) Whether compliance was continuous or intermittent.
(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
iii. 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))*

**13. 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))*

**14. 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 appropriate Ohio EPA District Office or local air agency 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 appropriate District Office of the Ohio EPA or local

air agency 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))*

**15. 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))*

**16. 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. 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))*

**17. 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 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
*(This term is provided for informational purposes only.)*

**18. Insignificant Activities**

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.
*(Authority for term: OAC rule 3745-77-07(A)(1))*

**19. 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))*

**20. 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))*

**21. 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 by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If 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 monitoring, record keeping, reporting, or testing 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.

No emissions unit 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.

## B. *State Only Enforceable Section*

### 1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

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 appropriate Ohio EPA District Office or local air agency.

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 appropriate Ohio EPA District Office or local air agency. 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, i.e., 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.)

### 2. Records Retention Requirements

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.

### 3. 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.

### 4. Scheduled Maintenance/Malfunction Reporting

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 appropriate Ohio EPA District Office or local air agency 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).

### 5. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**6. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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 General Term and Condition A.1.c.ii;

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 potentials to emit; and

c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

# Part II - Specific Facility Terms and Conditions

## A. State and Federally Enforceable Section

**1.** The permittee is subject to the applicable limitations(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, (including the Tables(s) and Appendix(ices) referenced in Subpart DDDDD, which are included in the text of Attachment 1 hereto, and are hereby incorporated into this permit as if fully rewritten.

Ordinarily, these requirements would be incorporated into Part II of this Title V Permit; however, incorporating Subpart DDDDD into Part II of this Title V permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

The following emissions units in this permit may be subject to the aforementioned requirements:

B007
B008
B009
B010
B021
B022
B023
B026
P019
P022

**2.** The permittee is subject to the applicable limitations(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart CCCCC - National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks (including the Tables(s) and Appendix(ices) referenced in Subpart CCCCC, which are included in the text of Attachment 2 hereto, and are hereby incorporated into this permit as if fully rewritten.

Ordinarily, these requirements would be incorporated into Part II of this Title V Permit; however, incorporating Subpart CCCCC into Part II of this Title V permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

The following emissions units in this permit may be subject to the aforementioned requirements:

B918
F021
P043

## A. State and Federally Enforceable Section (continued)

**3.** The permittee is subject to the applicable limitations(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR Part 63, Subpart FFFFF - National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities (including the Tables(s) and Appendix(ices) referenced in Subpart FFFFF), which are included in the text of Attachment 3 hereto, and are hereby incorporated into this permit as if fully rewritten.

Ordinarily, these requirements would be incorporated into Part II of this Title V Permit; however, incorporating Subpart FFFFF into Part II of this Title V permit was not practical due to technical incompatibilities and the limitations of the STARS program. In addition, numerous difficulties were encountered in attempting to copy and paste the Subpart's tables and/or equations into STARS format.

The following emissions units in this permit may be subject to the aforementioned requirements:

F011
F025
P047
P925
P926
P927
P934
P956

## A. State and Federally Enforceable Section (continued)

**4.** The following insignificant emissions units are located at this facility:

P087 EP Roll Shop Shotblaster 1
P088 EP Roll Shop Shotblaster 2
P089 CSM Roll Shop Shotblaster
P090 Shops Abrasive Blast
T011 STTP HCl Tanks
Z012 NiCO3 Storage Tank
Z013 NiCO3/Elect Mixer
Z014 Lime Silo
Z016 Roll./RP Oils Tanks
Z019 EGL WWTP Lime Bins
Z020 STTP Limestone Bins
Z021 HSM WWTP RM A Bins
Z022 HSM WWTP RM B Bins
Z023 HSM WWTP RM C Bins
Z024 NTTP Lime Bins
Z025 Chem B Lime Bins
Z026 CHEM B FS Bins
Z027 No. 8 Fuel Oil Tank
Z028 No. 5 Fuel Oil Tank
Z029 CSM Waste Oil Tanks
Z030 4CL CA Strip Spray
Z031 4CL Pot Snout Heating
Z032 4CL Pot Preheater
Z033 4CL Printer
Z034 3CL Caustic Rec Tank
Z035 3CL Bonderite
Z036 3CL Rust Prev Tank 1
Z037 3CL Rust Prev Tank 2
Z038 3CL H2SO4 Cleaning
Z044 2EG Caustic Tank
Z045 2EG Degreas. Tank
Z046 2EG Surf Act. Tank
Z047 2EG Rust Prev Tank
Z048 2EG Con Roll Zn Tank
Z049 2EG Con Roll ZnNi Tank
Z050 2EG Tank Farm

## A. State and Federally Enforceable Section (continued)

| | |
|---|---|
| Z051 | 2EG Permerate Tank |
| Z052 | 2EG W H2SO4 Tank |
| Z053 | 2EG E H2SO4 Tank |
| Z054 | Diesel Tank - Garage |
| Z055 | PS MT25 Tank - 6TM |
| Z056 | PS 1 Roll Shop Cool. Tank |
| Z057 | N4P ULHF46 Tank |
| Z058 | N5P ULHF46 Tank |
| Z059 | N4P Pickle Rinse Tanks |
| Z060 | N5P Pickle Rinse Tanks |
| Z061 | N4P SPL Tanks |
| Z062 | N5P SPL Tanks |
| Z063 | Rolling Oil Tank- Pickle Hse |
| Z064 | Rust Prev Tank - Pickle Hse |
| Z065 | N4P ULMP2 Tank |
| Z066 | N5P ULMP2 Tank |
| Z067 | CSM N3 Sys Lube Oil Tank |
| Z068 | CSM UNOCAL Hyd Tank |
| Z069 | CSM ULMR2 RP Tank |
| Z070 | CSM Unimist 222 Tank |
| Z071 | CSM Morgoil MO1 Tank |
| Z072 | CSM Morgoil MO2 Tank |
| Z073 | CSM DI Water Tank |
| Z074 | CSM Morgoil 1200 Tank1 |
| Z075 | CSM Morgoil 1200 Tank2 |
| Z076 | CSM Morgoil 2450 Tank1 |
| Z077 | CSM Morgoil 2450 Tank2 |
| Z078 | CSM N6 Hyd Sys Tank |
| Z079 | CSM N8 Hyd Sys Tank |
| Z080 | CSM Roll Coolant Tanks |
| Z081 | HSM Hyd 22,23,24 Tank |
| Z082 | HSM Hot Rolling Oil Tank |
| Z083 | HSM H-17 Sys Tank |
| Z084 | HSM H-18 Sys Tank |
| Z085 | HSM H-1 Sys Tank |
| Z086 | HSM H-2 Sys Tank |
| Z087 | HSM H-1, H-2 Sys Tank |
| Z088 | HSM ULSO385 604 Tank |
| Z089 | HSM ULSO385 613 Tank |
| Z090 | HSM Bulk Tanks - Door 611 |
| Z091 | HSM Scale Pits (3) |
| Z092 | HSM RS ULSY995 System |
| Z093 | HSM RS ULSY997 System |
| Z094 | N3BF Stockhse Hyd Tank |
| Z095 | N3BF N5 Cooling Tower Cell |
| Z096 | N3BF N Sludge Pond |
| Z097 | N3BF S Sludge Pond |
| Z098 | N2BH Nitric Acid Tank |
| Z099 | N2BH Betz CPD Tank |
| Z100 | N2BH Betz AL39 Tank1 |

## A. State and Federally Enforceable Section (continued)

Z101 N2BH Lime Slurry Tanks
Z102 N2BH Betz AL39 Tank2
Z103 EGLTP Caustic Tank1
Z104 EGLTP Caustic Tank2
Z105 EGLTP Zn/Ni Surge Tanks
Z106 EGLTP Zn/Ni Mix Tank
Z107 EGLTP Zn/Ni Used Oil Tank
Z108 EGLTP Nalco 9901 Tanks
Z109 STTP PRW Tanks (2)
Z110 STTP Ashland SPL Tank
Z111 STTP Crown Inhib. Tank
Z112 STTP Oil Skim A/A Tank
Z113 STTP Interm Inhib Tank
Z114 HSMTP Betz 91946 Tank
Z115 HSMTP H2SO4 Tank
Z116 HSM Oil Holding Tanks (2)
Z117 NTTP SPL Tank
Z118 NTTP PRW Surge Tanks (3)
Z119 NTTP Caustic Tank
Z120 NTTP Oil Concentator Pit
Z121 N3BH Nalco 1720 Tank
Z122 N3BH Nalco 7204T Tank
Z123 N3BH N6 Fuel Oil Tank
Z124 N3BH N7 Fuel Oil Tank
Z125 Carp Saws(3) Exhaust
Z126 Weld Weld N Lathe
Z127 Weld Weld M Lathe
Z128 Weld Weld S Lathe
Z129 Weld Roll Preheater
Z130 Mach Cut-Off Saw
Z131 Mach Caster Roll Grind.
Z132 Lub Pipe Clean Tank
Z133 Lub Grease Tank 607
Z134 Lub Grease Tanks 612
Z135 Dust Suppr Tank Door 82A
Z136 Dust Suppr Tank Door 600K
Z137 Round House Diesel Tank 1
Z138 Round House Diesel Tank 2
Z139 Diesel Tank Door 351
Z140 Round Hse Waste Oil Tank
Z141 CP H2SO4 S Tanks
Z142 CP H3PO4 N Tank
Z143 CP H3PO4 S Tank
Z144 CP Caustic E Tank
Z145 CP Caustic W Tank
Z146 CP Bulk Oil S Tank
Z147 Deskull Pit
Z148 BOF NALCO 8315 T
Z149 BOF Quin 822-300 T
Z150 BOF Betz 36073 T

## A. State and Federally Enforceable Section (continued)

Z151 Misc Kerosene Tanks
Z152 Misc Cold Cleaners
Z154 3CL Printer
Z155 EGL Printer
Z156 Round Hse Lub Tank

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, and well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more of the applicable requirements contained in the federally-approved versions of OAC Chapters 3745-17, 3745-18, and/or 3745-21.

**5.** Nitrogen Oxides (NOx) Budget Trading Program

OAC Chapter 3745-14

**5.a** Facility Code - 880028

**5.b** The four (4) waste heat recovery boilers (P009, P010, P011 and P012) are NOx budget units, as defined in OAC rule 3745-14-01(B)(2)(eee), and are subject to the applicable requirements specified in OAC Chapter 3745-14. The slab furnaces which are coupled with each of the waste heat recovery boilers are not subject to the NOx budget program requirements specified in OAC Chapter 3745-14. The NOx allowance allocation, as defined in OAC rule 3745-14-01(B)(2)(rr), for the four NOx budget units for the 2004-2007 control periods, as defined in OAC rule 3745-14-01(B)(2)(r), are listed below:

| NOx budget unit | Annual Allowance during Control Periods 2004 through 2007 |
|---|---|
| P009 | 66 |
| P010 | 66 |
| P011 | 66 |
| P012 | 66 |

i. By April 1, 2005, the Director shall submit to the Administrator the NOx allowance allocation for the four NOx budget units listed above for the control periods in years 2008 through 2012.

ii. By April 1, 2010, by April 1 of 2015, and thereafter by April1 of the year that is five years after the last year for which NOx allowance allocations are determined, the Director shall submit to the Administrator the NOx allowance allocation for the four NOx budget units listed above.

iii. NOx allowance allocations shall be determined in accordance with OAC rule 3745-14-05(C).

**5.c** The emissions units identified in Section A.5.b above are NOx budget units under OAC rule 3745-14-01(C)(1)(b).
[OAC rule 3745-14-01(C)(1)]

**5.d** NOx allowances for units commencing operation on the dates specified in OAC rule 3745-14-05(C)(4) shall be allocated from the new source set-aside in accordance with the provisions of OAC rule 3745-14-05(C)(4)(d).
[OAC rule 3745-14-05(C)(4)]

**5.e** The NOx authorized account representative, as defined in OAC rule 3745-14-01(B)(2)(xx), shall submit a complete NOx budget permit application in accordance with the deadlines specified in paragraphs (B)(2) and (B)(3) of OAC rule 3745-14-03. The NOx authorized account representative shall also submit, in a timely manner, any supplemental information that the Director determines is necessary in order to review a NOx budget permit application and issue or deny a NOx budget permit.
[OAC rules 3745-14-01(E)(1)(a)(i), 3745-14-01(E)(1)(a)(ii), and 3745-14-03(B)(1)]

## A. State and Federally Enforceable Section (continued)

**5.f** Beginning May 31, 2004, the owners and operators of each NOx budget source and each NOx budget unit at the source shall hold NOx allowances available for compliance deductions under paragraph (E) of OAC rule 3745-14-06, as of the NOx allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NOx emissions for the control period from the unit, as determined in accordance with OAC rule 3745-14-08, plus any amount necessary to account for actual utilization under paragraph (C)(5) of OAC rule 3745-14-05 for the control period.
[OAC rules 3745-14-01(E)(3)(a) and 3745-14-01(E)(3)(c)]

**5.g** NOx allowances shall be held in, deducted from, or transferred among NOx allowance tracking system accounts in accordance with OAC rules 3745-14-05, 3745-14-06, 3745-14-07, and 3745-14-09.
[OAC rule 3745-14-01(E)(3)(d)]

**5.h** A NOx allowance shall not be deducted, in order to comply with the requirement under paragraph (E)(3)(a) of OAC rule 3745-14-01, for a control period in a year prior to the year for which the NOx allowance was allocated.
[OAC rule 3745-14-01(E)(3)(e)]

**5.i** Each ton of NOx emitted in excess of the NOx budget emission limitation, as defined in OAC rule 3745-14-01(B)(2)(yy), shall constitute a separate violation of OAC Chapter 3745-14, the Clean Air Act, and applicable Ohio law. The owners and operators of a NOx budget unit that has excess emissions, as defined in OAC rule 3745-14-01(B)(2)(x), in any control period shall surrender the NOx allowances required for deduction under paragraph (E)(4)(a) of OAC rule 3745-14-06 and pay any fine, penalty, or assessment or comply with any other remedy imposed under paragraph (E)(4)(c) of OAC rule 3745-14-06.
[OAC rules 3745-14-01(E)(3)(b), 3745-14-01(E)(4)(a) and 745-14-01(E)(4)(b)]

**5.j** When recorded by the Administrator pursuant to OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from a NOx budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NOx budget permit of the NOx budget unit by operation of law without any further review.
[OAC rule 3745-14-01(E)(3)(h)]

**5.k** Except as provided below, the Director shall revise the NOx budget permit, as necessary, in accordance with OAC rule 3745-77-08. Each NOx budget permit is deemed to incorporate automatically the definitions of terms under paragraph (B) of OAC rule 3745-14-01 and, when recorded by the Administrator, in accordance with OAC rules 3745-14-06 and 3745-14-07, every allocation, transfer, or deduction of a NOx allowance to or from the compliance accounts of the NOx budget units covered by the permit or the overdraft account of the NOx budget source covered by the permit.
[OAC rules 3745-14-03(D)(2) and 3745-14-03(E)(1)]

**5.l** The owner or operator of a NOx budget unit shall comply with the prohibitions under OAC rule 3745-14-08(A)(5).
[OAC rule 3745-14-08(A)(5)]

**5.m** The owners and operators of the NOx budget unit shall keep on site at the source each of the following documents for a period of five years from the date the document is created: (This period may be extended for cause, at any time prior to the end of five years, in writing by the Director or Administrator.)

## A. State and Federally Enforceable Section (continued)

i. the account certificate of representation for the NOx authorized account representative for the NOx budget unit and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with paragraph (D) of OAC rule 3745-14-02, provided that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate or representation changing the NOx authorized account representative;

ii. all emission monitoring information, in accordance with OAC rule 3745-14-08;

iii. copies of all reports, compliance certifications, and other submissions and all records made or required under the NOx budget trading program; and

iv. copies of all documents used to complete a NOx budget permit application and any other submission under the NOx budget trading program or to demonstrate compliance with the requirements of the NOx budget trading program.
[OAC rule 3745-14-01(E)(5)(a)(i) through (iv)]

**5.n** The permittee, and to the extent applicable, the NOx authorized account representative of the NOx budget unit, shall comply with the monitoring and reporting requirements as provided in OAC rule 3745-14-08 and in 40 CFR Part 75, Subpart H. For purposes of complying with such requirements the definitions in OAC rule 3745-14-01(B) and in 40 CFR 72.2 shall apply, and the terms "affected unit," "designated representative," and "continuous emission monitoring system" (or "CEMS") in 40 CFR Part 75 shall be replaced by the terms "NOx budget unit," "NOx authorized account representative," and "continuous emission monitoring system" (or "CEMS"), respectively, as defined in OAC rule 3745-14-01(B).
[OAC rule 3745-14-08(A)]

**5.o** During each control period, the permittee shall operate and maintain equipment to continuously monitor and record nitrogen oxides emissions from the NOx budget units identified in Section A.5.b above. Such continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 75. The permittee's monitoring system shall comply with the alternate monitoring provisions specified in the permittee's petition which has been approved by the Director and the Administrator in accordance with 40 CFR 75.66(l) and OAC rule 3745-14-08(F). This includes all systems required to monitor the NOx emission rate and heat input. The permittee shall comply with the initial and re-certification procedures of 40 CFR Part 75. The permittee shall maintain on-site documentation from the USEPA or the Ohio EPA that the continuous nitrogen oxides monitoring system has been certified in accordance with 40 CFR Part 75. The certification documentation shall be made available to the Director upon request. For each control period, the permittee shall maintain records of the following data obtained by the continuous nitrogen oxides monitoring system: emissions of nitrogen oxides in lb/mmBtu actual heat input on an hourly average basis and emissions of nitrogen oxides in lbs/hr. Whenever the monitoring system fails to meet the quality assurance or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Appendix D, or Appendix E of 40 CFR Part 75.
[OAC rules 3745-14-01(E)(2)(a), 3745-14-01(E)(5)(a)(ii), 745-14-08(A)(2)(a) through (A)(2)(d), 3745-14-08(B)(1), and 3745-14-08(C)(1)]

**5.p** The permittee shall comply with the monitoring plan requirements of 40 CFR Part 75.62, except that the monitoring plan is only required to include information required by 40 CFR Part 75, Subpart H.
[OAC rule 3745-14-08(E)(2)(b)]

**5.q** The NOx authorized account representative of the NOx budget unit shall submit the reports and compliance certifications required under the NOx budget trading program, including those under OAC rules 3745-14-04 and 3745-14-08, to the Director and Administrator.
[OAC rule 3745-14-01(E)(4)(b)]

**5.r** Each submission under the NOx budget trading program shall be submitted, signed, and certified by the NOx authorized account representative for each NOx budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the NOx authorized account representative:

## A. State and Federally Enforceable Section (continued)

**5.s** "I am authorized to make this submission on behalf of the owners and operators of the NOx budget sources or NOx budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

**5.t** If the NOx authorized account representative for a NOx budget unit subject to an acid rain emission limitation who signed and certified any submission that is made under Subpart F or G of 40 CFR Part 75 and which includes data and information required under OAC rule 3745-14-08 or Subpart H of 40 CFR Part 75 is not the same person as the designated representative or the alternate designated representative for the unit under 40 CFR Part 72, then the submission shall also be signed by the designated representative or the alternate designated representative.
[OAC rules 3745-14-02(A)(5) and 3745-14-08(E)(1)(b)]

**5.u** The NOx authorized account representative shall submit quarterly reports covering the period May 1 through September 30 of each year and including the data described in 40 CFR Part 75.74(c)(6). The NOx authorized account representative shall submit such quarterly reports, beginning with the calendar quarter covering May 1 through June 30, 2003. The NOx authorized account representative shall submit each quarterly report to the Administrator within thirty days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in 40 CFR Part 75, Subpart H.
[OAC rules 3745-14-08(E)(4)(b) and 3745-14-08(E)(4)(c)(i)]The NOx authorized account representative shall submit to the Administrator a compliance certification in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The compliance certification shall state that:

i. the monitoring data submitted were recorded in accordance with the applicable requirements of OAC rule 3745-14-08 and 40 CFR Part 75, including the quality assurance procedures and specifications; and

ii. for a unit with add-on NOx emission controls and for all hours where data are substituted in accordance with 40 CFR Part 75.34(a)(1), the add-on emission control were operating within the range of parameters listed in the quality assurance program under Appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate the NOx emissions.
[OAC rule 3745-14-08(E)(4)(d)(i) and (ii)]

The NOx authorized account representative for a NOx budget unit shall submit written notice of monitoring system certification and re-certification test dates to the Director and the Administrator in accordance with 40 CFR Part 75.61. The NOx authorized account representative shall submit a certification application to the Administrator, U.S. EPA, Region V Office, and the Director within forty-five days after completing all initial or re-certification tests required under paragraph (B) of OAC rule 3745-14-08, including the information required under Subpart H of 40 CFR Part 75.
[OAC rules 3745-14-08(D) and 3745-14-08(E)(3)]

## A. State and Federally Enforceable Section (continued)

**5.v** For each control period in which one or more NOx budget units at a source are subject to the NOx budget emission limitation, the NOx authorized account representative of the source shall submit to the Director and the Administrator, by November 30 of that year, a compliance certification report for each source covering all such units. The NOx authorized account representative shall include the following elements in the compliance certification report, in a format prescribed by the Administrator, concerning each unit at the source and subject to the NOx budget emission limitation for the control period covered by the report:

i. identification of each NOx budget unit;

ii. at the NOx authorized account representative's option, the serial numbers of the NOx allowances that are to be deducted from each unit's compliance account or overdraft account under paragraph (E) of OAC rule 3745-14-06 for the control period;

iii. at the NOx authorized account representative's option, for units sharing a common stack and having NOx emissions that are not monitored separately or apportioned in accordance with OAC rule 3745-14-08, the percentage of allowances that is to be deducted from each unit's compliance account under paragraph (E)(5) of OAC rule 3745-14-06; and

iv. the compliance certification under paragraph (A)(3) of OAC rule 3745-14-04.
[OAC rules 3745-14-04(A)(1) and 3745-14-04(A)(2)]

**5.w** In the compliance certification report under Section A.5.v.iv above, the NOx authorized account representative shall certify, based upon reasonable inquiry of those persons with the primary responsibility for operating the source and the NOx budget units at the source in compliance with the NOx budget trading program, whether each NOx budget unit for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the NOx budget trading program applicable to the unit, including all the following:

i. whether the unit was operated in compliance with the NOx budget emission limitation;

ii. whether the monitoring plan that governs the unit has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute NOx emissions to the unit, in accordance with OAC rule 3745-14-08;

iii. whether all the NOx emissions from the unit, or group of units (including the unit) using a common stack, were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with OAC rule 3745-14-08, and if conditional data were reported, the permittee shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report submissions have been made; and

iv. whether the facts that form the basis for certification under OAC rule 3745-14-08 of each monitor at the unit or group of units (including the unit) using a common stack, or for using an excepted monitoring method or alternative monitoring method approved under OAC rule 3745-14-08, if any, have changed. If a change is required to be reported under Section A.1.v.iv above, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.
[OAC rule 3745-14-04(A)(3)]

**5.x** The NOx authorized account representative shall submit a complete NOx budget permit renewal application for the NOx budget source covering the NOx budget units at the source in accordance with paragraph (E) of OAC rule 3745-77-08.
[OAC rule 3745-14-03(B)(3)(a)]

**5.y** The emission measurements recorded and reported in accordance with OAC rule 3745-14-08 shall be used to determine compliance by the unit with the NOx budget emission limitation under paragraph (E)(3) of OAC rule 3745-14-01.
[OAC rule 3745-14-01(E)(2)(b)]

## B. State Only Enforceable Section

**1.** The permittee shall comply with the provisions of the Consent Order and Final Judgement Entry for State of Ohio ex rel. Petro v. AK Steel Corporation, Butler County Court of Common Pleas, Case No. CV 2004 03 1000.

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Boiler No.1,No.2 BH (B007)

**Activity Description:** Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 211 MMBtu/hr coke oven gas, blast furnace gas, natural gas, on-specification used oil (as defined in OAC rule 3745-279-11), and fuel oil-fired boiler | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(B)(1) | See A.I.2.a and A.I.2.c below. |
| | OAC rule 3745-17-10(C)(1) | See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(1) | Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil, or used oil.

**2.b** Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or used oil with any gaseous fuels. This limit was obtained from curve P-1 in Figure I of OAC rule 3745-17-10 using a total heat input of 844 mmBtu/hr, which is the combined total heat input from emissions units B007 thru B010.

**2.c** Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

### II. Operational Restrictions

**1.** The quality of the coke oven gas, blast furnace gas, on-specification used oil or fuel oil and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.90 pound sulfur dioxide/mmBtu of actual heat input.

**2.** The permittee shall burn only natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** Monitoring and record keeping for sulfur content is not required for blast furnace gas because the sulfur dioxide emission rate from the burning of blast furnace gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**6.** For each day during which the permittee burns a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and/or coke oven gas was burned in this emissions unit.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil or on-specification used oil.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. The actual particulate emission rate when distillate oil (No 2 fuel oil or lighter) is being fired may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs filterable PE/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (MMBtu/hr).

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.c** Emission Limitation:

Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or on-specification used oil with any gaseous fuels.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.d** Emission Limitation:

Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. To determine the particulate emission rate for blast furnace gas, the permittee may use the emission factor of 0.035 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.e** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation, while burning blast furnace gas, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

iv. If required, the permittee shall demonstrate compliance with this emission limitation, while burning No. fuel oil mixed with on-specification used oil, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## V. Testing Requirements (continued)

**2.** The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 90 days after beginning to fire oil in emissions unit B007, B008, B009, or B010. The emission testing shall be conducted for one of the identical boilers (B007-B010) while firing oil.

b. The emission testing shall be conducted to demonstrate compliance with the allowable particulate emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services 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's refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Boiler No.4,No.2 BH (B008)

**Activity Description:** Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 211 MMBtu/hr coke oven gas, blast furnace gas, natural gas, on-specification used oil (as defined in OAC rule 3745-279-11), and fuel oil-fired boiler | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(B)(1) | See A.I.2.a and A.I.2.c below. |
| | OAC rule 3745-17-10(C)(1) | See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(1) | Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil, or used oil.

**2.b** Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or used oil with any gaseous fuels. This limit was obtained from curve P-1 in Figure I of OAC rule 3745-17-10 using a total heat input of 844 mmBtu/hr, which is the combined total heat input from emissions units B007 thru B010.

**2.c** Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

### II. Operational Restrictions

**1.** The quality of the coke oven gas, blast furnace gas, on-specification used oil or fuel oil and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.90 pound sulfur dioxide/mmBtu of actual heat input.

**2.** The permittee shall burn only natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** Monitoring and record keeping for sulfur content is not required for blast furnace gas because the sulfur dioxide emission rate from the burning of blast furnace gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**6.** For each day during which the permittee burns a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and/or coke oven gas was burned in this emissions unit.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil or on-specification used oil.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. The actual particulate emission rate when distillate oil (No 2 fuel oil or lighter) is being fired may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs filterable PE/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (MMBtu/hr).

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.c** Emission Limitation:

Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or on-specification used oil with any gaseous fuels.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.d** Emission Limitation:

Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. To determine the particulate emission rate for blast furnace gas, the permittee may use the emission factor of 0.035 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.e** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation, while burning blast furnace gas, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

iv. If required, the permittee shall demonstrate compliance with this emission limitation, while burning No. fuel oil mixed with on-specification used oil, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## V. Testing Requirements (continued)

**2.** The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 90 days after beginning to fire oil in emissions unit B007, B008, B009, or B010. The emission testing shall be conducted for one of the identical boilers (B007-B010) while firing oil.

b. The emission testing shall be conducted to demonstrate compliance with the allowable particulate emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services 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's refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Boiler No.3,No.2 BH (B009)

**Activity Description:** Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 211 MMBtu/hr coke oven gas, blast furnace gas, natural gas, on-specification used oil (as defined in OAC rule 3745-279-11), and fuel oil-fired boiler | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(B)(1) | See A.I.2.a and A.I.2.c below. |
| | OAC rule 3745-17-10(C)(1) | See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(1) | Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil, or used oil.

**2.b** Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or used oil with any gaseous fuels. This limit was obtained from curve P-1 in Figure I of OAC rule 3745-17-10 using a total heat input of 844 mmBtu/hr, which is the combined total heat input from emissions units B007 thru B010.

**2.c** Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

### II. Operational Restrictions

**1.** The quality of the coke oven gas, blast furnace gas, on-specification used oil or fuel oil and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.90 pound sulfur dioxide/mmBtu of actual heat input.

**2.** The permittee shall burn only natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** Monitoring and record keeping for sulfur content is not required for blast furnace gas because the sulfur dioxide emission rate from the burning of blast furnace gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**6.** For each day during which the permittee burns a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and/or coke oven gas was burned in this emissions unit.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil or on-specification used oil.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. The actual particulate emission rate when distillate oil (No 2 fuel oil or lighter) is being fired may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs filterable PE/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (MMBtu/hr).

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.c** Emission Limitation:

Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or on-specification used oil with any gaseous fuels.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.d** Emission Limitation:

Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. To determine the particulate emission rate for blast furnace gas, the permittee may use the emission factor of 0.035 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.e** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation, while burning blast furnace gas, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

iv. If required, the permittee shall demonstrate compliance with this emission limitation, while burning No. fuel oil mixed with on-specification used oil, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## V. Testing Requirements (continued)

**2.** The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 90 days after beginning to fire oil in emissions unit B007, B008, B009, or B010. The emission testing shall be conducted for one of the identical boilers (B007-B010) while firing oil.

b. The emission testing shall be conducted to demonstrate compliance with the allowable particulate emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services 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's refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Boiler No.2,No.2 BH (B010)

**Activity Description:** Babcock & Wilcox Gas/Oil Industrial Boiler produces steam for consumption throughout the facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 211 MMBtu/hr coke oven gas, blast furnace gas, natural gas, on-specification used oil (as defined in OAC rule 3745-279-11), and fuel oil-fired boiler | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(B)(1) | See A.I.2.a and A.I.2.c below. |
| | OAC rule 3745-17-10(C)(1) | See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(1) | Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil, or used oil.

**2.b** Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or used oil with any gaseous fuels. This limit was obtained from curve P-1 in Figure I of OAC rule 3745-17-10 using a total heat input of 844 mmBtu/hr, which is the combined total heat input from emissions units B007 thru B010.

**2.c** Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

### II. Operational Restrictions

**1.** The quality of the coke oven gas, blast furnace gas, on-specification used oil or fuel oil and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content that is sufficient to comply with the allowable sulfur dioxide emission limitation of 0.90 pound sulfur dioxide/mmBtu of actual heat input.

**2.** The permittee shall burn only natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** Monitoring and record keeping for sulfur content is not required for blast furnace gas because the sulfur dioxide emission rate from the burning of blast furnace gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**6.** For each day during which the permittee burns a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil, blast furnace gas, and/or coke oven gas was burned in this emissions unit.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Particulate emissions shall not exceed 0.020 pound per million Btu of actual heat input except when burning non-distillate fuel oil (No. 4 fuel oil or higher), used oil, non-distillate fuel oil or on-specification used oil.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. The actual particulate emission rate when distillate oil (No 2 fuel oil or lighter) is being fired may be determined by multiplying the maximum fuel oil capacity of the emissions unit (gallons/hr) by the AP-42, Fifth Edition, Section 1.3, Table 1.3-1 (revised 9/98) emission factor of 2.0 lbs filterable PE/1000 gallons, and then dividing by the maximum hourly heat input capacity of the emissions unit (MMBtu/hr).

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.c** Emission Limitation:

Particulate emissions shall not exceed 0.11 pound per million Btu of actual heat input when burning non-distillate fuel oil (No. 4 fuel oil or higher) used oil, or when co-firing non-distillate oil or on-specification used oil with any gaseous fuels.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.d** Emission Limitation:

Particulate emissions shall not exceed 0.040 pound per million Btu of actual heat input when burning only blast furnace gas or any mixture of blast furnace gas and other gaseous fuels.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. To determine the particulate emission rate for coke oven gas, the permittee may use the emission factor of 0.012 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iii. To determine the particulate emission rate for blast furnace gas, the permittee may use the emission factor of 0.035 lb particulate/mmBtu from AP-42, Section 12.5 Iron and Steel Production, Table 12.5-1, 10/86.

iv. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

**1.e** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.90 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation, while burning blast furnace gas, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

iv. If required, the permittee shall demonstrate compliance with this emission limitation, while burning No. fuel oil mixed with on-specification used oil, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## V. Testing Requirements (continued)

**2.** The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 90 days after beginning to fire oil in emissions unit B007, B008, B009, or B010. The emission testing shall be conducted for one of the identical boilers (B007-B010) while firing oil.

b. The emission testing shall be conducted to demonstrate compliance with the allowable particulate emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services 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's refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 84 Anneal (B021)

**Activity Description:** No. 84 Anneal is a batch annealing of cold rolled steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 118.6 mmBtu/hr, indirect fired, natural gas furnace | OAC rule 3745-17-10(B)(1) | See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-18-15(C)(6) | Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** Monitoring and record keeping for the sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is always less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the actual emission rate for SO2 from natural gas, the following equation may be used:

E (lb/mmBtu) = (0.6 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu)

Where:

E = SO2 emission rate from natural gas, in lb/mmBtu;

0.6 lb/10^6 scf = emission factor for SO2 from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

**1.b** Emission Limitation:

Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.c** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Open Coil Anneal (B022)

**Activity Description:** Open Coil Anneal is a batch annealing of cold rolled steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 80 mmBtu/hr, indirect fired, natural gas furnace | OAC rule 3745-17-10(B)(1) | See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-18-15(C)(6) | Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** Monitoring and record keeping for the sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is always less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the actual emission rate for SO2 from natural gas, the following equation may be used:

E (lb/mmBtu) = (0.6 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu)

Where:

E = SO2 emission rate from natural gas, in lb/mmBtu;

0.6 lb/10^6 scf = emission factor for SO2 from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

**1.b** Emission Limitation:

Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.c** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 64 Anneal (B023)

**Activity Description:** No. 64 Anneal is a batch annealing of cold rolled steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 244.2 mmBtu/hr, indirect fired, natural gas furnace | OAC rule 3745-17-10(B)(1) | See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-18-15(C)(6) | Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** Monitoring and record keeping for the sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is always less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the actual emission rate for SO2 from natural gas, the following equation may be used:

E (lb/mmBtu) = (0.6 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu)

Where:

E = SO2 emission rate from natural gas, in lb/mmBtu;

0.6 lb/10^6 scf = emission factor for SO2 from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

**1.b** Emission Limitation:

Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.c** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 94 Anneal (B026)

**Activity Description:** No. 94 Anneal is a batch annealing of cold rolled steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 145.8 mmBtu/hr, indirect fired, natural gas furnace | OAC rule 3745-17-10(B)(1) | See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-18-15(C)(6) | Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input. |
| | 40 CFR Part 63, Subpart DDDDD | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** Monitoring and record keeping for the sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is always less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.5 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the actual emission rate for SO2 from natural gas, the following equation may be used:

E (lb/mmBtu) = (0.6 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu)

Where:

E = SO2 emission rate from natural gas, in lb/mmBtu;

0.6 lb/10^6 scf = emission factor for SO2 from burning natural gas from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 or 6C and the procedures in OAC rule 3745-18-04.

**1.b** Emission Limitation:

Particulate emissions are limited to 0.020 lb per million Btu actual heat input.

Applicable Compliance Method:

i. To determine the actual particulate emission rate for natural gas, the following equation may be used:

E (lb/mmBtu) = (1.9 lb/10^6 scf) x (1 scf/1000 Btu) x (1,000,000 Btu/mmBtu) = 0.0019 lb/mmBtu

Where:

E = particulate emission rate from natural gas, in lb/mmBtu;

1.9 lb/10^6 scf = emission factor for filterable particulate matter from burning natural gas, from AP-42, Section 1.4 Natural Gas Combustion, Table 1.4-2, 7/98;

1 scf/1000 Btu = the heat value of 1 scf of natural gas; and

1,000,000 Btu/mmBtu = conversion from Btu to mmBtu.

ii. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, and the procedures specified in OAC rule 3745-17-03(B)(9).

## V. Testing Requirements (continued)

**1.c** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** H Ladle Preheater 1 (B027)

**Activity Description:** The No. 1 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 15 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to employ reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** H Ladle Preheater 2 (B028)

**Activity Description:** The No. 2 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 15 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to emply reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** H Ladle Preheater 3 (B029)

**Activity Description:** The No. 3 Stelter & Brinck horizontal ladle preheater is used to preheat steel ladles.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 15 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to emply reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** V Ladle Preheater (B030)

**Activity Description:** The Stelter & Brinck vertical ladle preheater is used to preheat steel ladles.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 15 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to emply reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Tundish Preheater1 (B031)

**Activity Description:** The No. 1 Stelter & Brinck tundish preheater is used to preheat tundishes.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 12 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to employ reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Tundish Preheater 2 (B032)

**Activity Description:** The No. 2 Stelter & Brinck tundish preheater is used to preheat tundishes.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 12 mmBtu/hr, direct fired, natural gas, ladle preheater | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The requirement to employ reasonably available control measures (RACM) is satisfied through the use of natural gas as a fuel. |

**2. Additional Terms and Conditions**

**2.a** Because this emissions unit burns only natural gas, there is no applicable SO2 emission limitation from OAC rule 3745-18-06.

### II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

### III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

### IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

### V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points (i.e., building windows, doors, roof monitors, etc.) from the building housing this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No.2 Coke Plant (B918)

**Activity Description:** Wilputte Underjet 76-oven Coke Battery produces coke and various coke by-products.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| coke oven firing (combustion stack) | OAC rule 3745-17-07(A) | Visible particulate emissions from the combustion stack shall not exceed 20 percent opacity as a 6-minute average, except as provided by the rule. |
| | OAC rule 3745-17-10(C)(1) | Particulate emissions from coke oven firing (combustion stack) shall not exceed 0.18 pound per mmBtu of actual heat input. |
| | OAC rule 3745-18-15(C)(5) | The hydrogen sulfide content of the coke oven gas combusted in this emissions unit shall not exceed 280 grains per 100 dry standard cubic feet of coke oven gas burned. |
| | 40 CFR Part 63, Subpart CCCCC | See Part II - Specific Facility Terms and Conditions. |
| emergency bypass bleeder flare | 40 CFR Part 63, Subpart L [40 CFR Part 63.307(c)] | The emergency bypass bleeder flare shall be operated with no visible emissions, as determined by 40 CFR Part 60, Appendix A, Method 22 with an observation period of two hours, except for periods not to exceed 5 minutes during any 2 consecutive hours.<br><br>See A.II.1 below. |
| charging operations | 40 CFR Part 63, Subpart L [40 CFR Part 63.302(a)(1)(iv)] | During charging operations, visible particulate emissions shall not exceed 12 seconds per charge, as determined by the procedures in section A.V.1.e of these terms and conditions. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-07(B)(2)(a) | There shall be no visible particulate emissions from any charging operations except for a period of time not to exceed one hundred twenty-five seconds during any five consecutive charges. One charge, which represents the charge with the highest visible particulate emissions value of twenty consecutive charges observed, may be exempted from this visible particulate emission limitation.<br><br>Although the visible particulate emission limitation established in OAC rule 3745-17-07(B)(2)(a) is numerically less stringent than that established in 40 CFR Part 63.302(a)(1)(iv), compliance with OAC rule 3745-17-07(B)(2)(a) is not based on the logarithmic 30-day rolling average of the seconds of visible emissions. |
| | OAC rule 3745-17-08(B) | The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM during charging operations shall include: staged charging. |
| offtake systems | 40 CFR Part 63, Subpart L<br>[40 CFR Part 63.302(a)(1)(iii)] | There shall be no visible particulate emissions from more than 3.0 percent of the offtake systems, as determined by the procedures in section A.V.1.f of these terms and conditions. |
| | OAC rule 3745-17-07(B)(2)(b) | At no time shall there be visible particulate emissions from more than ten per cent of the offtake piping.<br><br>Although the visible particulate emission limitation established in OAC rule 3745-17-07(B)(2)(b) is numerically less stringent than that established in 40 CFR Part 63.302(a)(1)(iii), compliance with OAC rule 3745-17-07(B)(2)(b) is not based on the 30-run rolling average of the seconds of visible emissions. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(B) | The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM for offtake systems shall include: good operation and maintenance practices for offtake piping. |
| topside port lids | 40 CFR Part 63, Subpart L [40 CFR Part 63.302(a)(1)(ii)] | There shall be no visible particulate emissions from more than 0.6 percent of the topside port lids, as determined by the procedures in section A.V.1.f of these terms and conditions. |
| | OAC rule 3745-17-07(B)(2)(c) | At no time shall there be visible particulate emissions from more than five per cent of the charging hole lids.<br><br>Although the visible particulate emission limitation established in OAC rule 3745-17-07(B)(2)(c) is numerically less stringent than that established in 40 CFR Part 63.302(a)(1)(ii), compliance with OAC rule 3745-17-07(B)(2)(c) is not based on the 30-run rolling average of the seconds of visible emissions. |
| | OAC rule 3745-17-08(B) | The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM for topside lids shall include: good operation and maintenance practices for topside port lids. |
| oven doors | 40 CFR Part 63, Subpart L [40 CFR Part 63.302(a)(2)(ii)] | On and after January 1, 2003, there shall be no visible particulate emissions from more than 5.0 percent of the oven doors, as determined by the procedures in section A.V.1.f of these terms and conditions. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-07(B)(2)(d)(ii) | At no time shall there be visible particulate emissions from more than ten per cent of the oven doors. Two oven doors, which represent the last oven charged prior to the commencement of visible particulate emission readings performed in accordance with paragraph (B)(2)(c) of rule 3745-17-03 of the Administrative Code, shall be exempted from this visible emission limitation.<br><br>For purposes of OAC rule 3745-17-07(B)(2)(d), an oven door and the associated chuck door on the pusher side of the battery shall be considered as one door. [OAC rule 3745-17-07(B)(2)(d)(iii)]<br><br>Although the visible particulate emission limitation established in OAC rule 3745-17-07(B)(2)(d)(ii) is numerically less stringent than that established in 40 CFR Part 63.302(a)(2)(ii), compliance with OAC rule 3745-17-07(B)(2)(d)(ii) is not based on the 30-run rolling average of the seconds of visible emissions. |
| | OAC rule 3745-17-08(B) | The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM for coke oven doors shall include: good operation and maintenance practices for oven doors. |
| collecting main | 40 CFR Part 63.308 | See A.III.2.b below. |
| pushing operations controlled with a baghouse | OAC rule 3745-17-07(B)(2)(e) | Visible particulate emissions during any pushing operation shall not exceed an average of 20 percent opacity read above the battery top. The duration of a pushing operation shall commence with the moving (or pushing) of the coke mass from the oven and shall conclude when the quench cars enter the quench tower. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(B)(3) | Particulate emissions from the baghouse exhaust shall not exceed 0.030 grain/dry standard cubic foot of exhaust gases or there shall be no visible emissions from the exhaust stack(s) which ever is less stringent. |
| | OAC rule 3745-17-08(B) | The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). At a minimum, the permittee's employment of RACM for pushing operations shall include: a pushing emission control system consisting of a fixed duct and land based coke guide evacuated to a baghouse collector. |
| | 40 CFR Part 63, Subpart CCCCC | See Part II - Specific Facility Terms and Conditions. |
| coke plant fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**None**

## II. Operational Restrictions

**1.** In accordance with the requirements of section 63.30 of 40 CFR Part 63, Subpart L, the emergency bypass bleeder flare shall comply with the following requirements:

a. the flare shall be able to control 120% of the normal gas flow generated by the battery;

b. the flare shall be steam-assisted and the gas shall have a net heating value of 240 Btu/scf;

c. the flare shall be operated with a continuously operable pilot flame monitored by a thermocouple (or equivalent device); and

d. coke oven emissions shall not be vented to the atmosphere through the bypass bleeder stack, except through the flare system.

## II. Operational Restrictions (continued)

**2.** The permittee shall operate according to the work practice plan, required by section A.III.4 for each emission point, following the second independent exceedance of the visible emission limitation for that emission point in any consecutive 6-month period, by no later than 3 days after the receipt of written notification of the second such exceedance from the certified observer. The permittee shall continue to implement such plan provisions until the visible emission limitation for the emission point is achieved for 90 consecutive days.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain monthly records of the quantity of coke oven gas (million cubic feet) burned in this emissions unit.

**2.** The charging operations shall be inspected at least once daily, for 5 consecutive charges, in accordance with 40 CFR Part 63, Appendix A, Method 303. The permittee shall maintain records of the information specified in Form 303-1 of 40 CFR Part 63, Appendix A, Method 303 for the daily inspections of the charging operations

The oven doors shall be inspected at least once daily in accordance with 40 CFR Part 63, Appendix A, Method 303. The permittee shall maintain records of the information specified in Form 303-2 of 40 CFR Part 63, Appendix A, Method 303 for the daily inspections of the oven doors.

The charging hole lids, offtake piping and collecting main shall be inspected at least once daily in accordance with 40 CFR Part 63, Appendix A, Method 303. The permittee shall maintain records of the information specified in Form 303-3 of 40 CFR Part 63, Appendix A, Method 303 for the daily inspections of the charging hole lids, offtake piping and collecting main.

**2.a** 40 CFR Part 63, Appendix A, Method 303 visible emission readings of the collecting main shall be performed by a certified observer, and shall be conducted each day, 7 days per week, at various times during the day.

Records of all visible emissions readings shall be maintained by the permittee on an on site location for at least 1 year.

The certified observer shall complete any reasonable safety training program offered by the permittee prior to conducting any performance test at a coke oven battery.

**2.b** The permittee shall record the time and date each collecting main leak is first observed, the time and date the collecting main leak is temporarily sealed, and the time and date of repair. Any leak in the collecting main shall be temporarily sealed as soon as possible after detection, but no later than 4 hours after detection of the leak. The permittee shall initiate a collecting main repair as expeditiously as possible, but no later than 5 calendar days after initial detection of the leak. The repair shall be completed within 15 calendar days after initial detection of the leak.

**2.c** The observer may perform additional visible emission runs as needed to obtain and record a visible emission value (or set of values) for an emission point that is valid under 40 CFR Part 63, Appendix A, Method 303. Observations from fewer than five consecutive charges shall constitute a valid set of charging operations only in accordance with the procedures and conditions specified in section 11.1.1 of 40 CFR Part 63, Appendix A, Method 303.

**2.d** If a valid visible emissions value (or set of values) is not obtained for a performance test, there is no compliance determination for that day. Compliance determinations will resume on the next day that a valid visible emissions value (or set of values) is obtained.

**2.e** After each test for a by-product coke oven battery, the certified observer shall check and record the collecting main pressure according to the procedures in section 11.4.3 of 40 CFR Part 63, Appendix A, Method 303. The permittee shall demonstrate, pursuant to Method 303, the accuracy of the pressure measurement device upon request of the certified observer. The permittee shall not adjust the pressure to a level below the range of normal operation during or prior to the inspection.

**2.f** The permittee shall not knowingly block a coke oven door, or any portion of a door for the purpose of concealing emissions or preventing observations by the certified observer.

**2.g** Compliance with the visible emission limitations shall be demonstrated using the observations obtained from each performance test in accordance with sections A.V.1.e and A.V.1.f of these terms and conditions.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.h** The certified observer shall make available to the Hamilton County Department of Environmental Services, as well as to the permittee, a copy of the daily inspection results by the end of the day and shall make available the appropriate calculated rolling average of each emission point to the permittee as soon as practicable following each performance test. For the purpose of notifying the permittee of the results obtained by a certified observer, the person does not have to be certified.

**2.i** Compliance shall not be determined more often than the schedule provided for performance tests in these terms and conditions. If additional valid emissions observations are obtained (or in the case of charging, valid sets of emission observations), the arithmetic average of all values (or valid sets of values) obtained during the day shall be used in any computation performed to determine compliance under sections A.V.1.e or A.V.1.f of these terms and conditions.

**3.** No observations obtained during any program for training or for certifying observers for 40 CFR Part 63, Appendix A, Method 303 shall be used to determine compliance with the requirements of these terms and conditions.

**4.** The permittee shall maintain a written emission control work practice plan for the coke battery. In accordance with the requirements of section 63.306 of 40 CFR Part 63, Subpart L, the plan shall be designed, implemented, and maintained to achieve compliance with the visible emission limitations for coke oven doors, charging hole lids, offtake systems and charging operations. The permittee shall organize the work practice plan so that the subjects required in accordance with sections A.III.4.a through A.III.4.f are clearly addressed.

**4.a** The work practice plan shall include procedures for initial and refresher training for all plant personnel and contractors with responsibilities that impact emissions. The training program shall include:

i. a list, by job title, of personnel that are required to be trained and the emission points associated with each job title;

ii. an outline of the subjects to be covered in the initial and refresher training for each group of personnel;

iii. a description of the training methods that will be used;

iv. a statement of the duration of initial training and the duration and frequency of refresher training;

v. a description of the methods used to demonstrate and document successful completion of the training program; and

vi. a description of the procedure to be used to document performance of plan requirements pertaining to daily operation of the coke oven battery and its emission control equipment, including a copy of the form(s) to be completed by the certified Method 303 observer.

## III. Monitoring and/or Record Keeping Requirements (continued)

**4.b** The work practice plan shall include procedures for controlling emissions from oven doors including the following:

i. a program for the inspection, adjustment, repair, and replacement of coke oven door jambs, and any other equipment for controlling emissions from coke oven doors, including a defined frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

ii. procedures for identifying leaks that indicate a failure of the emission control equipment to function properly, including a clearly defined chain of command for communicating information on leaks and procedures for corrective action;

iii. procedures for cleaning all sealing surfaces of each door and jamb, including identification of the equipment that will be used and a specified schedule or frequency for the cleaning of sealing surfaces;

iv. for batteries equipped with self sealing doors, procedures for the use of supplemental gasketing and luting materials, if the permittee elects to use such procedures as part of the program to prevent exceedances;

v. for batteries equipped with hand-luted doors, procedures for luting and reluting, as necessary, to prevent exceedances;

vi. procedures for maintaining an adequate inventory of the number of spare coke oven doors and jambs located on site; and

vii. procedures for monitoring and controlling collecting main back pressure, including corrective actions if pressure control problems occur.

**4.c** The work practice plan shall include procedures for controlling emissions from charging operations including the following:

i. procedures for equipment inspection, including the frequency of inspections, and the replacement or repair of equipment for controlling emissions from charging, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

ii. procedures for ensuring that the larry car hoppers are filled properly with coal;

iii. procedures for the alignment of the larry car over the oven to be charged;

iv. procedures for filling the oven;

v. procedures for ensuring that the coal is leveled properly in the oven; and

vi. procedures and schedules for inspection and cleaning of offtake systems, oven roofs, charging holes, topside port lids, the steam supply system, and liquor sprays.

**4.d** The work practice plan shall include procedures for controlling emissions from topside port lids including the following:

i. procedures for equipment inspection and replacement or repair of topside port lids and port lid mating and sealing surfaces, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances; and

ii. procedures for sealing topside port lids after charging, for identifying topside port lids that leak, and procedures for resealing.

## III. Monitoring and/or Record Keeping Requirements (continued)

**4.e** The work practice plan shall include procedures for controlling emissions from oven offtake systems including the following:

i. procedures for equipment inspection and replacement or repair of offtake system components, including the frequency of inspections, the method to be used to evaluate conformance with operating specifications for each type of equipment, and the method to be used to audit the effectiveness of the inspection and repair program for preventing exceedances;

ii. procedures for identifying offtake system components that leak and procedures for sealing leaks that are detected; and

iii. procedures for dampering off ovens prior to a push.

**4.f** The work practice plan shall include procedures for maintaining, for each emission point subject to visible emission limitations by this permit, a daily record of the performance of plan requirements pertaining to the daily operation of the coke oven battery and its emission control equipment, including:

i. procedures for recording the performance of such plan requirements; and

ii. procedures for certifying the accuracy of such records by the permittee.

**4.g** The permittee shall implement the work practice plan procedures after 2 independent exceedances of the visible emission limitations for an emission point within a 6-month period and within 3 days after the receipt of written notification.

The permittee shall continue the procedures of the work practice plan until the visible emission limitation for the point is achieved for 90 consecutive days.

**4.h** The permittee shall review and revise the work practice plan in accordance with the following:

i. The permittee may be required to review and revise the work practice plan for an emission point if there are 2 independent exceedances of a visible emission limitation within the 6-month period which begins 30 days after the permittee is required to implement the work practice plan.

ii. The permittee shall not be required to review and revise the work practice plan more than twice in any 12-month period for a particular emission point.

iii. If the certified observer calculates a second independent exceedance of the visible emission limitation has occurred for an emission point, the observer shall notify the permittee. Within 10 days of notification, the permittee shall notify the Administrator and the Director whether the work practices are related to the cause or solution of the problem.

iv. The permittee shall submit revised work practice plans within 60 days of notification from the Administrator or Director.

v. If a work practice plan revision is required, the permittee may be required to address subjects not listed in these terms and conditions or 40 CFR Part 63.306(b) if there is reason to expect further exceedances of the visible emission limitations.

vi. A work practice plan revision may be disapproved if the revised plan is not adequate to prevent future exceedances of the visible emission limitations.

## III. Monitoring and/or Record Keeping Requirements (continued)

**4.i** If the permittee is required to implement the provisions of the work practice plan for a particular emission point, the permittee shall maintain the following records regarding the implementation of plan requirements for that emission point during the implementation period:

i. copies of all written and audiovisual materials used in the training, the dates of each class, the names of the participants in each class, and documentation that all appropriate personnel have successfully completed the training required under section A.III.4.a of these terms and conditions;

ii. the records required to be maintained by the plan provisions implementing section A.III.4.f of these terms and conditions;

iii. records resulting from audits of the effectiveness of the work practice program for the particular emission point, as required under sections A.III.4.b.i, A.III.4.c.i, A.III.4.d.i, and A.III.4.e.i of these terms and conditions; and

iv. if the plan provisions for coke oven doors must be implemented, records of the inventory of doors and jambs as required under section A.III.4.b.vi of these terms and conditions.

**5.** The permittee shall develop and implement, in accordance with the procedures in section 63.310 of 40 CFR Part 63, Subpart L, a written startup, shutdown, and malfunction plan for the coke oven battery. At all times, including periods of startup, shutdown, and malfunction, the permittee shall operate and maintain the coke oven battery, and its pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions to the levels required by 40 CFR Part 63, Subpart L.

a. The permittee shall operate the coke oven battery in accordance with the startup, shutdown, and malfunction plan during a startup, shutdown, or malfunction event.

b. Malfunctions shall be corrected as soon as practical in accordance with this plan.

c. The permittee shall notify the certified Method 303 observer if practical and if the observer is at the facility during a malfunction event.

d. The permittee shall maintain plant records which form the basis of each malfunction notification.

e. The permittee may use the standard operating procedures manual for the coke oven battery to satisfy the requirements of a startup, shutdown, and malfunction plan if the standard operating procedure manual meets the requirements of these terms and conditions and 40 CFR Part 63.310 and is available for review at reasonable times.

f. The permittee may be required to make revisions to a startup, shutdown, and malfunction plan if the plan does not address (i) a startup, shutdown, malfunction event that has occurred; (ii) fails to provide adequate procedures for startup, shutdown, malfunctions which are consistent with good air pollution control practices; or (iii) does not provide adequate procedures to correct malfunctioning process equipment as soon as practical.

g. If the permittee demonstrates a startup, shutdown, or malfunction event has occurred, then an observation occurring during such event (i) shall not be a violation of relevant requirements, (ii) shall not be used in any visible emission compliance determination per Method 303, and (iii) shall not be considered as an exceedance for purposes of the work practice plan.

**6.** The permittee shall, on a weekly basis, observe and record combustion stack visible emissions in accordance with the methods and procedures of 40 CFR Part 60, Appendix A, Method 9.

**7.** The permittee shall maintain files of all required information in a permanent form suitable for inspection at an on site location for at least 1 year and must thereafter be assessable within 3 working days to the Administrator and/or Director for a period of at least 5 years from the date of the monitoring, sample, measurement, report, or application.

## III. Monitoring and/or Record Keeping Requirements (continued)

**8.** The permittee shall maintain records of the design and engineering specifications for the emergency bypass bleeder flare.

For the emergency bypass bleeder flare, the permittee shall properly operate and maintain a device to continuously monitor the flare pilot flame as specified in sections 63.307(b)(1), 63.307(b)(2), and 63.309(h)(2) of 40 CFR 63, Subpart L. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record the following information each day:

a. all periods where there was no pilot flame; and

b. the downtime for the flare, monitoring equipment and the associated emissions unit.

**9.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**10.** The permittee shall take daily grab samples of the coke oven gas for analysis of the hydrogen sulfide content. A minimum of one sample shall be taken each day on Monday through Friday of each week, except for any day(s) when no gas is delivered to the Coke Oven Gas Holder Vessel (P067). The hydrogen sulfide content of each of the samples shall be determined using the "Tutwiler Method," and the resulting hydrogen sulfide content shall be expressed in terms of grains of hydrogen sulfide per 100 dry standard cubic feet of coke oven gas. The hydrogen sulfide content of each of the daily samples during the week shall be averaged to estimate the hydrogen sulfide content of the coke oven gas burned on the weekend and on any days when no gas is delivered to the vessel. The grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of COG shall be converted to the decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S and times 0.94 pound of sulfur per 1 pound of H2S, and then dividing by the density of COG (0.027 pound per cubic foot).

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the coke oven battery exceeded the visible emission limitations for charging, offtake piping, oven lids, and oven doors.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

**2.** The permittee shall report the venting of coke oven gas through a bypass bleeder stack, that is not vented through the emergency bypass bleeder flare system, as soon as practical but no later than 24 hours after the beginning of the event.

A written report which includes a description of the event shall be submitted within 30 days after the occurrence.

These reports shall be submitted to the U. S. EPA Region 5 Administrator, with a copy to the Hamilton County Department of Environmental Services.

## IV. Reporting Requirements (continued)

**3.** The permittee shall notify the Hamilton County Department of Environmental Services within 24 hours of a malfunction in accordance with the startup, shutdown, and malfunction plan and this notification shall include an explanation if the certified Method 303 observer was not notified as required in section A.III.5.c of this permit.

Within 14 days of the notification required above, the permittee shall submit a written report to the Hamilton County Department of Environmental Services describing the date, time, and circumstances of the startup, shutdown, or malfunction event and describing actions taken that may be inconsistent with the startup, shutdown, and malfunction plan.

**4.** The permittee shall submit semi-annual compliance certifications in accordance with the requirements of 40 CFR Part 63.311, which are signed by the permittee, certifying the following:

a. no coke oven gas was vented, except through the bypass/bleeder stack flare system, during the reporting period or that a venting report has been submitted in accordance with section A.IV.2 of this permit;

b. a startup, shutdown, or malfunction event did not occur during the reporting period or that a startup, shutdown, and malfunction event did occur and a report was submitted in accordance with section A.IV.3 of this permit; and

c. that work practices were implemented, as applicable, under the work practice plan required in section A.III.4 of this permit.

These semi-annual certifications shall be submitted to the U. S. EPA Region 5 Administator, with a copy to the Hamilton County Department of Environmental Services.

**5.** Within 30 days after the effective date of this permit, the permittee shall submit a written statement to the U. S. EPA Region 5 Administrator, with a copy to the Hamilton County Department of Environmental Services, signed by the permittee, certifying compliance with the emission limitation specified 40 CFR Part 63.302(a)(2)(ii) for no visible particulate emissions from more than 5.0 percent of the oven doors, as determined by the procedures in section A.V.1.f of these terms and conditions.

**6.** a. The permittee shall submit quarterly deviation (excursion) reports identifying all periods of time when a pilot flame was not present on the emergency bleeder flare and describing any corrective actions taken to relight and maintain a pilot flame.

b. The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the flare pilot flame was not functioning properly. The reports shall include the date, time, and duration of each such period, as well as the cause of each deviation.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

**7.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the hydrogen sulfide content of the coke oven gas combusted in this emissions unit exceeded 280 grains per 100 dry standard cubic feet of coke oven gas burned.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

**8.** The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

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

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

Particulate emissions from coke oven firing (combustion stack) shall not exceed 0.18 pound per mmBtu of actual heat input.

Applicable Compliance Method:

Compliance shall be determined through emission testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5B and the procedures specified in OAC rule 3745-17-03(B)(10).

**1.c** Emission Limitation:

The hydrogen sulfide content of the coke oven gas combusted in this emissions unit shall not exceed 280 grains per 100 dry standard cubic feet of coke oven gas based on monthly arithmetic averages.

Applicable Compliance Method:

Compliance shall be demonstrated based on the monitoring and record keeping requirements in section A.III.10 and the reporting requirements in section A.IV.7.

If required, compliance shall also be demonstrated based on the requirements specified in 40 CFR Part 60, Appendix A, Method 15.

**1.d** Emission Limitation:

The emergency bypass bleeder flare shall be operated with no visible emissions except for periods not to exceed 5 minutes during any 2 consecutive hours.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements in 40 CFR Part 60, Appendix A, Method 22 and the methods and procedures specified in OAC rule 3745-17-03(B)(4).

**1.e** Emission Limitation:

During charging operations, visible particulate emissions shall not exceed 12 seconds per charge.

Applicable Compliance Method:

Using the observations obtained in accordance with section A.III.2 of these terms and conditions, compliance shall be demonstrated by calculating the logarithmic 30-day, rolling average of the seconds of visible emissions per charge using the equation in section 12.4 of 40 CFR Part 63, Appendix A, Method 303.

## V. Testing Requirements (continued)

**1.f** Emission Limitation:

There shall be no visible particulate emissions from any charging operations except for a period of time not to exceed one hundred twenty-five seconds during any five consecutive charges. One charge, which represents the charge with the highest visible particulate emissions value of twenty consecutive charges observed, may be exempted from this visible particulate emission limitation.

Applicable Compliance Method:

Compliance shall be based on the results of the daily inspections required in section A.III.2 of these terms and conditions for any 5 consecutive charges.

**1.g** Emission Limitations:

There shall be no visible particulate emissions from more than 3.0 percent of the offtake systems.
There shall be no visible particulate emissions from more than 0.6 percent of the topside port lids.
There shall be no visible particulate emissions from more than 5.0 percent of the oven doors.

Applicable Compliance Method:

Using the observations obtained in accordance with section A.III.2 of these terms and conditions, compliance shall be demonstrated by calculating the 30-run, rolling average of the percent leaking coke oven doors, topside port lids, and offtake systems using the equations in sections 12.5, 12.6, and 12.7, respectively of 40 CFR Part 63, Appendix A, Method 303.

**1.h** Emission Limitations:

At no time shall there be visible particulate emissions from more than ten per cent of the offtake piping.
At no time shall there be visible particulate emissions from more than five per cent of the charging hole lids.
At no time shall there be visible particulate emissions from more than ten per cent of the oven doors. Two oven doors, which represent the last oven charged prior to the commencement of visible particulate emission readings performed in accordance with paragraph (B)(2)(c) of rule 3745-17-03 of the Administrative Code, shall be exempted from this visible emission limitation.
Visible particulate emissions during any pushing operation shall not exceed an average of 20 percent opacity read above the battery top. The duration of a pushing operation shall commence with the moving (or pushing) of the coke mass from the oven and shall conclude when the quench cars enter the quench tower.

Applicable Compliance Methods:

Compliance shall be based on the results of the daily inspections required in section A.III.2 of these terms and conditions using the procedures specified in OAC rule 3745-17-03 for coke oven batteries pertaining to charging operations (OAC rule 3745-17-03(B)(2)(a)), offtake piping and charging hole lids (OAC rule 3745-17-03(B)(2)(b)), oven doors (OAC rule 3745-17-03(B)(2)(c)), and pushing operations (OAC rules 3745-17-03(B)(2)(d) and 3745-17-03(B)(7)(h)).

**2.** The permittee shall conduct, or have conducted emission testing for this emissions unit in accordance to the following requirements:

a. The emission testing shall be conducted within 12 months of the effective date of this permit.

b. The emission testing shall be conducted at the combustion stack to demonstrate compliance with the allowable mass emission limitation of 0.18 lb PE/mmBtu of actual heat input.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity.

## V. Testing Requirements (continued)

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission tests.

Personnel from the Hamilton County Department of Environmental Services 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 tests shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

**3.** The permittee shall conduct, or have conducted emission testing for this emissions unit in accordance to the following requirements:

a. The emission testing shall be conducted within 12 months of the effective date of this permit.

b. The emission testing shall be conducted at the outlet of the baghouse controlling the particulate emissions from the pushing operation to demonstrate compliance with the allowable mass emission limitation of 0.030 grain per dry standard cubic foot.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Method 22 visible emission readings shall be performed during each 1-hour test of the allowable mass emission rate.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity.

e. Following completion of the emission testing specified above, it will be assumed that this emissions unit is in compliance with the particulate emission limitation of 0.030 grain/dry standard cubic foot of exhaust gases based on the monitoring and record keeping requirements specified in Section A.III.9, if there are no visible emissions from the baghouse stack associated with this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 tests, and the person(s) who will be conducting the tests. Failure to submit such notification for review and approval prior to the tests may result in the Hamilton County Department of Environmental Services refusal to accept the results of the emission tests.

Personnel from the Hamilton County Department of Environmental Services 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 tests shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the tests. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Roads & Park. Areas (F001)

**Activity Description:** This includes unpaved roads, paved roads, and parking lots which are treated for dust suppression.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| paved roadways and parking areas (see Section A.I.2.a) | OAC rule 3745-17-07(B)(4) | no visible particulate emissions except for 6 minutes during any 60-minute period |
| | OAC rules 3745-17-08(B), (B)(8), and (B)(9) | reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.c, A.I.2.d, and A.I.2.f through A.I.2.j) |
| unpaved roadways and parking areas (see Section A.I.2.b) | OAC rule 3745-17-07(B)(5) | no visible particulate emissions except for 13 minutes during any 60-minute period |
| | OAC rules 3745-17-08(B) and (B)(2) | reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.I.2.e through A.I.2.j) |
| roadways and parking areas fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

## 2. Additional Terms and Conditions

**2.a** The paved roadways and parking areas that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

| paved roadways:* | Approx. one-way mileage of road segment |
|---|---|
| Processing Loop (4-5-6-7-8-9-) | 1.90 |
| South Stores Receiving (1-2-3-4) | 0.35 |
| Scale Pit (4-9-10) | 0.75 |
| General Services ((2-11-12) | 0.75 |
| Soaking Pit (10-11) | 0.30 |
| OSR Gate (11-27-28) | 0.55 |
| Coke Plant Loop (28-29-30-31) | 1.10 |
| BOF/Coal Pile (20-24-26-27) | 0.65 |
| Transportation (25-26) | 0.30 |
| Mold Yard (12-13-14) | 0.70 |

**2. Additional Terms and Conditions (continued)**

| paved roadways:* | Approx. one-way mileage of road segment |
|---|---|
| Reeds Yard (14-15-16) | 0.60 |
| OH Loop (15-19-22-23) | 0.55 |
| BOF Loop (14-20-21) | 0.55 |
| Slag Hauler (BOF-24-28-Dump) | 1.40 |
| Slag Dump | 1.60 |
| Old Lefferson (16-17-18) | 0.40 |
| Lefferson/Yankee Gate (18-36) | 0.50 |
| E-W Freeway (32-33-34-35-36) | 0.60 |
| Old Muzzy (17-33) | 0.20 |
| Old Stores (33-34) | 0.30 |
| BF/BOF (11-19-20) | 0.60 |
| No. 1 OH (35-37) | 0.30 |
| East Processing (16-32-38) | 1.00 |
| West Processing (37-38) | 0.25 |
| North Perimeter (1-16) | 0.85 |
| Shipping Turn Around (32-32) | 0.20 |
| EGL Shipping (33-39) | 0.25 |

* The number in parentheses after each name refers to AK Steel's road cleaning program checkpoints (see drawing 585163 as submitted by the permittee with their PTO application on 8/10/94).

| paved parking areas:* | Approx. one-way mileage of road segment |
|---|---|
| Wicoff Gate | 0.25 |
| Administration/Staff | 0.55 |
| Lefferson Gate/Shops | 0.30 |
| Coke Plant | 0.20 |
| Contractor | 0.30 |
| Yankee Gate | 0.20 |
| Misc. South Area | 1.00 |
| Misc. North Area | 0.55 |
| Misc. Steel Area | 1.00 |
| HSM/CSM | 0.60 |
| Maintenance/Administration | 0.65 |
| Maingate | 0.45 |

* The paved roadway segments and parking lots listed above are shown schematically in Dwg. 585163 as submitted by the permittee with their PTO application on 8/10/94.

## 2. Additional Terms and Conditions (continued)

**2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

| unpaved roadways:* | Approx. one-way mileage of road segment |
|---|---|
| (1-2) | 0.2 |
| (3-4) | 0.3 |
| (4-5) | 0.5 |
| (5-6) | 0.2 |
| (5-7) | 0.6 |
| (8-9) | 0.5 |
| (9-10) | 0.3 |
| (11-12) | 0.6 |
| (12-13) | 0.2 |
| (14-15) | 0.3 |
| (16-17) | 0.2 |
| (18-19) | 0.2 |
| (22-23) | 1.0 |
| (24-25) | 0.2 |
| (26-27) | 0.2 |
| (28-29) | 0.3 |
| (30-31) | 0.2 |
| (32-32) | 0.3 |
| (36-37) | 0.2 |
| (38-39) | 0.2 |
| Miscellaneous segments | unspecified mileage |

* The unpaved roadway segments and parking lots listed above are shown in Figure III as submitted by the permittee with their PTO application on 8/10/94.

unpaved parking areas:

Miscellaneous - e.g., temporary construction parking

**2.c** The permittee shall employ reasonably available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by the following and shall be at sufficient treatment frequencies to ensure compliance: all paved road segments and parking areas listed above shall periodically be swept or flushed of surface material in order to minimize or eliminate visible emissions of fugitive dust by vehicular traffic.

Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

**2.d** The permittee shall employ reasonably available control measures on the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved shoulders of all paved roadways as follows and at sufficient treatment frequencies to ensure compliance: the unpaved shoulders of all paved road segments which are listed above shall periodically be treated with a suitable dust suppressant, in order to minimize or eliminate visible emissions of fugitive dust generated by vehicular traffic.

Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

**2. Additional Terms and Conditions (continued)**

**2.e** The permittee shall employ reasonably available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas as follows and at sufficient treatment frequencies to ensure compliance: all unpaved road segments which are listed above shall be treated periodically with a suitable dust suppressant, in order to minimize or eliminate visible emissions of fugitive dust generated by vehicular traffic. The equipment identified above for the treatment of the unpaved shoulders of paved road segments shall also be used for the unpaved road segments.

Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

**2.f** The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved or unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

**2.g** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

**2.h** The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

**2.i** Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

a. paved roadways and parking areas*

minimum inspection frequency: daily

b. unpaved shoulders *

minimum inspection frequencies:

| | |
|---|---|
| Area B | once every 4 weeks |
| Area A and Area C | once every 2 weeks |
| Area D | once every 3 weeks |

c. unpaved roadways and parking areas*

minimum inspection frequency: daily

* As identified in Figure III as submitted by the permittee with their PTO application on 8/10/94.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed within five days, except if the next required inspection is within one week.

**3.** The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 3.d. shall be kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation reports that identify all of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

**2.** The deviation reports shall be submitted in accordance with Section A.1.c of Part I of the General Terms and Conditions of this permit.

## V. Testing Requirements

**1.** If required, compliance with the emission limitation for the paved and unpaved roadways and parking areas identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** RM Storage Piles (F002)

**Activity Description:** Material storage piles throughout the facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| load-in and load-out of storage piles (see Section A.I.2.a for identification of storage piles) | OAC rule 3745-17-07(B)(6) | There shall be no visible particulate emissions from any material storage pile except for a period of time not to exceed thirteen minutes during any sixty-minute observation period, as determined in accordance with paragraph (B)(4) of rule OAC 3745-17-03. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b - A.I.2.d below. |
| wind erosion from storage piles (see Section A.I.2.a for identification of storage piles) | OAC rule 3745-17-07(B)(6) | There shall be no visible particulate emissions from any material storage pile except for a period of time not to exceed thirteen minutes during any sixty-minute observation period, as determined in accordance with paragraph (B)(4) of rule OAC 3745-17-03. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b-A.I.2.d below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| storage piles fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The storage piles that are covered by this permit and subject to the requirements of OAC rules 3745-17-07 and 3745-17-08 are listed below:

Coal Storage Pile(s), Iron Bearing Materials Storage Pile(s), Coke Storage Pile(s), Slag Storage Pile(s), Fluxing Agents Storage Pile(s).

**2.b** The permittee shall employ reasonably available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. The permittee shall employ the following control measures for the load-in and load-out operations: water spray, drop height reduction, bucket reclaimer and dust suppressant. The permittee may as an alternative employ equivalent or superior control measures to ensure compliance.

**2.c** The above-mentioned control measures shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures shall continue during any such operation until further observation confirms that use of the measures is unnecessary.

**2.d** The permittee shall employ reasonably available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat each storage pile with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies, to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing additional control measures to ensure compliance.

**2.e** The above-mentioned control measures shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measures shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** Except as otherwise provided in this section, the permittee shall perform inspections of the load-in and load-out operations at each storage pile in accordance with the following frequencies:

storage pile identification

Coal Storage Pile(s), Iron Bearing Materials Storage Pile(s), Coke Storage Pile(s), Slag Storage Pile(s), Fluxing Agents Storage Pile(s)

minimum inspection frequency

daily

**2.** Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:
storage pile identification:

Coal Storage Pile(s), Iron Bearing Materials Storage Pile(s), Coke Storage Pile(s), Slag Storage Pile(s), Fluxing Agents Storage Pile(s)

minimum wind erosion inspection frequency:

daily

**3.** No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed within five days except if the next required inspection is within one week.

**4.** The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

**5.** The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, and thedate any inspection was not performed due to snow and/or ice cover or precipitation.

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

**6.** The information required in 5.d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation reports that identify all of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

## IV. Reporting Requirements (continued)

**2.** The deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

There shall be no visible particulate emission from any material storage pile except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22, and the procedures specified in OAC rule 3745-17-03(B)(3).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Coal Hand.-No.2CP (F003)

**Activity Description:** This includes part of the coal handling system for the Wilputte Coke Battery (No. 2 Coke Plant).

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Conveyors Nos. 3 and 10 thru 14 | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Conveyor transfer points | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Coal bunker (at breaker building) | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Coal bins (at larry car unloading station) | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Coal Handling - No. 2CP fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall maintain enclosures surrounding the transfer and conveying points identified in A.I.1 in such a manner as to minimize or eliminate visible emissions of fugitive dust and to comply with the visible emission limitation specified in A.I.1 of the terms and conditions for this operation.

**2.b** The permittee shall maintain the building enclosure surrounding the coal bunker (at breaker building) and the coal bins (at larry car loading station) in such a manner as to minimize or eliminate visible emissions of fugitive dust and to comply with the visible emission limitation specified in A.I.1 of the terms and conditions for this operation.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Still Coal Handling (F004)

**Activity Description:** Still Coal handling (now used to feed the No. 2 Coke Plant)

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Railcar unloading (rotary dump of railcars) | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Truck unloading (dump loading into hopper) | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.<br><br>See A.I.2.b below. |
| Conveyor Nos. 302 thru 304 (from the rotary dump rail car unloading to the stacker/reclaimer at coal storage pile to transfer station 510) | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Conveyor transfer point between conveyor No. 303 and No. 304 on mobile stacker/reclaimer | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Conveyor Nos. 305 thru 311 (from transfer station 510 to coal bins) | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.c below. |
| Bar Grizzly | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.d below. |
| Coal mixing bins | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a and A.I.2.b below. |
| Coal screening, coal crushing, conveyor transfer station No. 512 coal/oil mixer (at bulk density control station) | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a and A.I.2.e below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Still Coal Handling fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall adequately enclose, contain and capture the fugitive dust from the railcar unloading operations, from the coal mixing bins, coal screening, coal crushing and conveyor transfer station No. 512, coal/oil mixer (at Bulk density control station) so as to minimize or eliminate visible emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering practices.

**2.b** The permittee shall employ, when necessary, a sufficient quantity of water or other dust suppressant at the truck unloading area (dump loading into hopper), conveyors 302 thru 304, and coal mixing bins, to minimize or eliminate visible emissions of fugitive dust. Such application may be made at upstream material handling and storage points or at subsequent handling and storage points.

**2.c** The permittee shall maintain enclosures for conveyors Nos. 305 thru 311(from transfer station 510 to coal bins) to minimize or eliminate visible emissions of fugitive dust.

**2.d** The permittee shall maintain enclosures at the bar grizzly to minimize or eliminate visible emissions of fugitive dust.

**2.e** If required to minimize or eliminate visible particulate emissions of fugitive dust and to comply with the visible emission limitation specified in A.I.1 for the coal screening, coal crushing, conveyor transfer station No. 512 and coal/oil mixer (at the bulk density control station), the permittee shall also employ the dust suppressant system.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Coke Hand.-No.2 CP (F005)

**Activity Description:** This includes the coke handling facility for the No. 2 Coke Plant.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Coke screening, transfer, and conveying at the coke screening station equipped with collection hood and exhaust duct | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>The permittee shall apply dust suppressant chemicals to fugitive dust emissions generated from the coke screening, transfer, and conveying operations to minimize or eliminate the generation of fugitive dust emissions from this operation.<br><br>See A.I.2.a below for the requirements of these control options. |
| Coke unloading from quench cars to wharf | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Coke unloading from rail car or truck dumping into reclaim hoppers at No. 2 coke plant | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Conveyors A, F-2 and G | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.d below. |
| Conveyor transfer point No. 350 and all other transfer points not associated with the coke screening station | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.d below. |
| Coke loading into railcars and trucks from the coke screening station | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.<br><br>See A.I.2.d below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Coke Handling - No. 2CP fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ and maintain the fugitive dust emission control, consisting of sufficient water quenching of the coke at the No. 2 Coke Plant quench tower, in order to ensure compliance with the emission limitation prescribed in A.I.1 of these terms and conditions for this operation.

**2.b** The permittee shall employ a wet suppression system, when necessary, to control fugitive particulate emissions from the coke unloading operation (rail car or truck dumping into reclaim hoppers at No. 2 coke plant). This system shall be capable of applying sufficient quanties of water to the coke prior to unloading to the reclaim hoppers to minimize or eliminate visible emissions of fugitive dust from the dumping of coke from the trucks into the reclaim area. Such application of water may be made using a wet suppression system at the point of origin of the coke or by application of water at subsequent handling and storage points. The wet suppression shall be accomplished to minimize or eliminate visible emissions of fugitive dust.

**2.c** The permittee shall maintain conveyor enclosures to minimize or eliminate visible emissions of fugitive dust from the conveyors listed above.

**2.d** The permittee shall employ and maintain total enclosure of the above listed conveyor transfer points in order to minimize or eliminate visible emissions of fugitive dust.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Ore Screen. & Hand. (F008)

**Activity Description:** This includes the ore screening and handling facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Ore surge hopper, vibrating feeders, and screens | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Conveyors Nos. 101 thru 104, 107, 108, and 6 | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Transfer points (all transfer points beginning with Conveyors 5 to 101, 101 to 102, 102 to ore surge hopper to storage bin building (Recycle plant), flop gate to emergency pellet pile and conveyor 104 to 6 (to blast furnace) | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Ore Screening and Handling fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ a wet suppression system, when necessary, to control fugitive particulate emissions from the ore screening and handling operations. This system shall be capable of applying sufficient quantities of water to minimize or eliminate fugitive visible particulate emissions from the emission points identified in A.I.1 of these terms and conditions. The wet suppression shall be accomplished to minimize or eliminate visible emissions of fugitive dust.

The permittee may employ sufficient quantities of water at the ore unloading and handling operation as specified in A.I.2.a of the terms and conditions for emissions unit F010 in order to ensure that the materials contains sufficient moisture to minimize or eliminate fugitive visible particulate emissions.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Iron Ore Unloading (F010)

**Activity Description:** This includes the railcar, truck dump, conveyors and transfer station for the conveyance of ore.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Railcar unloading (rotary dump) | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Truck unloading (rear dump) | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Conveyors | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.c below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Conveyor transfer points | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.c below. |
| Iron Ore Unloading fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ a wet suppression system, when necessary, to control fugitive particulate emissions from the ore unloading and handling operations. This system shall be capable of applying sufficient quantities of water to minimize or eliminate fugitive visible particulate emissions.

**2.b** The permittee shall employ water, when necessary, to control fugitive particulate emissions from the truck unloading operations. This system shall be capable of applying sufficient quantities of water to minimize or eliminate fugitive visible particulate emissions.

**2.c** The permittee shall employ good operating practices for the conveyors to minimize or eliminate fugitive visible particulate emissions.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for the railcar and truck unloading portions of 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** BOF Deslagger (F011)

**Activity Description:** The molten iron deslagging operation is used to remove slag off of the hot metal ladle.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Molten iron deslagging equipped with a baghouse*<br><br>*this is a small baghouse that will be removed and the emissions will be vented to the baghouse used to comply with 40 CFR Part 63, Subpart FFFFF | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | See A.I.2.b below. |
| | OAC rule 3745-17-11(B) | Total particulate emissions from all stacks associated with this emissions unit, combined, shall not exceed 20.4 lbs/hr.<br><br>See A.I.2.a below. |
| | 40 CFR Part 63, Subpart FFFFF | See Part II - Specific Facility Terms and Conditions. |
| Deslagging area | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.c below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| BOF Deslagger fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The particulate emissions limitation of 20.4 pounds per hour is based upon an uncontrolled emission rate of 250 lbs PE/hr and Figure II of OAC rule 3745-17-11. This limit is more stringent than that determined using the maximum process weight of 1000 tons per hour and Table I of OAC rule 3745-17-11.

**2.b** The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture and vent the particulate emissions from the molten iron deslagging operation to baghouse F011BH01. The control equipment shall meet the following requirements:

i. the collection efficiency of the hooding and ventilation equipment associated with the molten iron deslagging operation shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. the control equipment shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the exhaust stack(s) whichever is less stringent.

**2.c** The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of RACM. The deslagging area shall be thoroughly cleaned on a monthly basis to remove the excessive accumulation of kish.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

This provision will no longer apply after the compliance date for the BOF in 40 CFR 63, Subpart FFFFF.

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

This provision will no longer apply after the compliance date for the BOF in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for the BOF in 40 CFR 63, Subpart FFFFF.

**2.** The permittee shall submit semiannual written reports which (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for the BOF in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.c** Emission Limitation:

Total particulate emissions shall not exceed 20.4 pounds per hour

Applicable Compliance Method:

If required*, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

*NOTE: this is a small baghouse that will be removed (within the next 2 years) and the emissions will be vented to the baghouse used to comply with 40 CFR Part 63, Subpart FFFFF.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** BF Raw Matls Hand. (F012)

**Activity Description:** This includes the coke, iron bearing materials and fluxing agents handling equipment for No. 3 Blast Furnace.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Railcar unloading | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Stockhouse storage bins | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Stockhouse conveyors | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Stockhouse transfer points | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.b below. |
| Skip cars used in conveying operation | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.c below. |
| BF Raw Materials Handling fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices during railcar unloading including, but not limited to controlling the release rate of material and the use of a windbreak to minimize or eliminate visible emissions of fugitive dust.

**2.b** The permittee shall maintain enclosures for the storage bins, conveyors, and transfer points* to minimize or eliminate visible emissions of fugitive dust to ensure compliance with the visible fugitive particulate emission limitation specified in A.I.1 of these terms and conditions.

*All stockhouse conveyor transfer points are enclosed except the transfer point at the top of the stockhouse (ends of the conveyor).

**2.c** The permittee shall maintain the integrity of the skip cars to minimize or eliminate visible emissions of fugitive dust.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Slab Scarfing/Slitting (F015)

**Activity Description:** This includes the hand scarfing and slitting of steel slabs.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Hand scarfing and slitting of steel slabs | OAC rule 3745-17-07(B) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Slab Scarfing/Slitting fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good engineering practices to minimize or eliminate the visible emissions of fugitive dust. These practices shall include maintaining the manufacturer's recommended air to fuel mixtures in the burning torches used in the scarfing area.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Backup Quench Station (F021)

**Activity Description:** This is the quenching of hot coke operation. Backup quench station in case the main one is out of service for repairs.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Backup quench station | OAC rule 3745-31-05(A)(3) (PTI 14-05031) | 180.8 lbs/hr PM<br>54.4 lbs/hr PM10<br><br>See Sections A.I.2.a, A.I.2.b and A.II.2.<br><br>The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1), 3745-17-08(B) and OAC rule 3745-31-05(C). |
| | OAC rule 3745-31-05(C) (PTI 14-05031) (Synthetic Minor to avoid PSD) | 24.69 TPY PM and 7.43 TPY PM10, based upon rolling, 12-month summations<br><br>See Term and Condition A.II.1. |
| | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | The permittee shall minimize visible emissions of fugitive dust such that this emissions unit demonstrates compliance with OAC rule 3745-17-07(B)(1). |
| | 40 CFR Part 63, Subpart CCCCC | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall restrict the operation of this emissions unit to only those times when the Wilputte Quench Tower (emissions unit P043) is out of service due to repairs, maintenance or malfunctions.

**2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, the Operational Restrictions in Sections A.II.1, A.II.2, and A.I.2.a.

**2. Additional Terms and Conditions (continued)**

**2.c** The hourly emission limitation(s) outlined are based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.

## II. Operational Restrictions

**1.** The maximum number of pushes from the No. 2 Coke Oven ( emissions unit B918) that are quenched in this emissions unit shall not exceed 2511 pushes per year, based upon a rolling, 12-month summation.

**2.** The permittee shall employ clean quench water with a total dissolved solids concentration of equal to or less than 1500 mg/L during the coke quenching operation. The permittee shall not employ direct by-product contact water in the quenching operation.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain monthly records of the following information:

a. the number of pushes from the No. 2 Coke Oven (B918) that are quenched in this emissions unit;

b. the rolling, 12-month summation of the number of pushes from the No. 2 Coke Oven that are quenched in this emissions unit; and

c. the rolling, 12-month summation of the PM and PM10 emissions.

**2.** The permittee shall collect a monthly sample of the quench water employed in this emissions unit and have it analyzed for total dissolved solids, in mg/L. The permittee shall employ the method specified in Standard Methods for Water and Wastewater Analysis for measuring the total dissolved solids concentrations and shall maintain records of all the analytical results. If the emissions unit does not operate during an entire month, no sample is required.

**3.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitations on the number of pushes and the PM and PM10 emissions.

## IV. Reporting Requirements (continued)

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all records showing that the total dissolved solids concentration in the quench water exceeded the allowable limit of 1500 mg/L.

**3.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

**4.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emissions limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emissions Limitations:

180.8 lbs/hr PM
54.4 lbs/hr PM10

Compliance with the mass PM and PM10 emissions limits shall be demonstrated by using emission factors from AP-42 Tables 12.2-2 and 12.2-4, Coke Production, September 2000 and information supplied by the permittee in the following equations:

actual coke production (tons coke /hr) x coke yield (tons coal/ton coke) x (1.13 lbs PM/ton coal) = lbs/hr PM

actual coke production (tons coke /hr) x coke yield (tons coal/ton coke) x (0.34 lb PM10/ton coal) = lbs/hr PM1(

**1.b** Emissions Limitations:

24.69 TPY PM (rolling, 12-month summation)
7.43 TPY PM10 (rolling, 12-month summation)

Compliance with the mass PM and PM10 emissions limits shall be demonstrated by using emission factors from AP-42 Tables 12.2-2 and 12.2-4, Coke Production, September 2000 and information supplied by the permittee in the following equations:

actual coke production (number of pushes/yr) x coal input (tons coal/push) x (1.13 lb PM/ton coal) x ton/2000 lbs = TPY PM

actual coke production (number of pushes/yr) x coal input (tons coal/push) x E.F. (0.34 lb PM10/ton coal) x ton/2000 lbs = TPY PM10.

**1.c** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Backup Skimmer (F025)

**Activity Description:** Backup BOF Furnace Slag Skimmer.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Backup Skimmer | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a 3-minute average. |
| | 40 CFR Part 63, Subpart FFFFF | See Part II - Specific Facility Terms and Conditions. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit (See A.I.2.a.) |
| | OAC rule 3745-31-05(A)(3) (PTI 14-4477) | 7.5 lbs per hour PM/PM10<br>0.98 tpy PM/PM10 based on a rolling 12-month summation<br><br>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B) and 3745-17-08(B). |

**2. Additional Terms and Conditions**

**2.a** The integrity of the building housing the backup skimmer shall be maintained.

**2.b** The hourly emission limitation specified in this permit is based upon the maximum hourly production/application rate at 24 hours per day. Therefore, no hourly records are required.

### II. Operational Restrictions

**1.** The maximum annual production rate for this emissions unit shall not exceed 260,610 tons of hot metal processed, based on a rolling, 12 month-summation of the production rates.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain monthly records of the following information:

a. the production rate for each month, in tons per month; and

b. the updated rolling, 12-month summation of the production rates.

These monthly records, as well as any supporting analyses and computations, shall be retained in the company's files for a period of not less than five years and shall be made available to the Director or any authorized representative of the Director for review during normal business hours.

**2.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for this emissions unit. The presence 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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

This provision will no longer apply after the compliance date for BOF slag skimming specified in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the annual production rate limitation for this emissions unit of 260,610 tons of hot metal processed based on a rolling 12-month summation of the production rates.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for BOF slag skimming specified in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Emission Limitation:

PE: 0.98 tpy as a rolling 12-month summation

Compliance shall be determined by multiplying the updated 12-month rolling production rate by the emission factor of 0.0075 lb PM/PM10 / ton of hot metal, and dividing by 2000.

**1.c** Emission Limitation:

7.5 lbs per hour PM/PM10

Compliance shall be determined by multiplying the hourly production rate by the emission factor of 0.0075 lb PM/PM10 / ton of hot metal.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Plantwide Gasoline (G001)

**Activity Description:** This is the Pickler Bldg, BOF, and Main Garage diesel and gasoline dispensing facilities.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Gasoline storage tanks - one 15,000-gallon underground storage tank, one 2,000-gallon aboveground storage tank and two 500-gallon aboveground storage tanks | OAC rule 3745-21-09(R) | Stage I vapor control - 90% control efficiency for VOCs, submerged fill |
| Gasoline dispensing operation - four dispensing nozzles, Stage II vapor recovery | OAC rule 3745-21-09(DDD) | Stage II vapor control - 95% control efficiency for VOCs |

**2. Additional Terms and Conditions**

**2.a** Pursuant to OAC rule 3745-21-09 (DDD)(1)(b), the Stage II vapor control system shall be installed, operated, and maintained in accordance with the applicable certification granted by the California Air Resources Board (CARB) as described in Part VI.

Any figures or exhibits identified in this permit are available from the appropriate Ohio EPA District Office or local air agency upon request.

### II. Operational Restrictions

**1.** The permittee shall comply with the following operational restrictions for the Stage I vapor control system:

a. The vapor balance system shall be kept in good working order and shall be used at all times during the transfer of gasoline.

b. There shall be no leaks in the delivery vessel pressure/vacuum relief valves and hatch covers.

c. There shall be no leaks in the vapor lines or liquid lines during the transfer of gasoline.

d. The transfer of gasoline from a delivery vessel to a stationary storage tank shall be conducted by use of submerged fill into the storage tank. The submerged fill pipe(s) are to be installed so they are within six (6) inches of the bottom of the storage tank.

e. The permittee shall repair within 15 days any leak from the vapor balance system or vapor control system which is employed to meet the requirements of paragraph (R)(1) of OAC rule 3745-21-09 when such leak is equal to or greater than 100 percent of the lower explosive limit as propane, as determined under paragraph (K) of OAC rule 3745-21-10.

## II. Operational Restrictions (continued)

**2.** The permittee shall comply with the following operational restrictions for the Stage II vapor control system:

a. The vapor control system shall be installed, operated and maintained in accordance with the manufacturer's specifications and the applicable certification granted by the CARB, and shall be free of the following defects

i. Any component, that is required to be employed at all times pursuant to the system certification granted by the CARB, is absent or disconnected.

ii. A vapor hose is crimped or flattened such that the vapor passage is blocked, or the pressure drop through the vapor hose exceeds by a factor of two or more the requirements in the certification granted by the CARB.

iii. A vacuum producing device is inoperative or malfunctioning.

iv. Pressure/vacuum relief valves, vapor check valves, or dry breaks are inoperative.

v. Any vapor recovery equipment is leaking liquid gasoline or gasoline vapors.

vi. Any other equipment defect identified in the CARB certification as one which substantially impairs the effectiveness of the vapor control system.

b. The vapor control system must have successfully passed the testing requirements contained in paragraph (DDD)(2) of OAC rule 3745-21-09. These testing requirements are also specified in Part II, Section E.

c. Operating instructions for the vapor control system shall be conspicuously posted in each gasoline dispensing area. The operating instructions shall clearly describe how to properly fuel motor vehicles and shall specifically prohibit the topping off of the motor vehicle fuel tank.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the results of any leak checks, including, at a minimum, the following information:

a. Date of inspection.

b. Findings (may indicate no leaks discovered or location, nature, and severity of each leak).

c. Leak determination method.

d. Corrective action (date each leak repaired and reasons for any repair interval in excess of 15 calendar days).

e. Inspector's name and signature.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall maintain records of the following information:

a. The quantity of gasoline delivered to the facility during each calendar month.

b. The results of any tests performed pursuant to the testing requirements specified in this permit.

c. A log of the date and description of all repair and maintenance work performed (including, but not limited to, work performed to meet manufacturer's specifications or CARB certification requirements), or any other modifications made to the vapor control system.

d. A copy of the most recent permit to operate application (including appendix) submitted to the Ohio EPA.

e. A copy of the most recent permit to operate issued by the Ohio EPA.

f. Proof of attendance and completion of the training required by the Ohio EPA for the operator or local manager of the gasoline dispensing facility.

g. Copies of all completed post test inspection forms.

## IV. Reporting Requirements

**1.** Any leak from the vapor balance system or vapor control system that is not repaired within 15 days after identification shall be reported to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the repair is completed.

**2.** A comprehensive written report on the results of any tests performed in accordance with the requirements of this permit shall be submitted within 30 days following the completion of the tests.

## V. Testing Requirements

**1.** The Stage II vapor control system must successfully meet all requirements regarding testing contained in OAC rule 3745-21-09(DDD)(2). In accordance with the test procedures listed in OAC rule 3745-21-10, the following tests shall be performed: static leak test and dynamic pressure performance test.

At intervals not to exceed five (5) years, the permittee shall repeat and demonstrate compliance with the static leak test requirements contained in OAC rule 3745-21-10, Appendix A (unless a greater frequency is specified in the applicable CARB certification), and the dynamic pressure performance test requirements contained in OAC rule 3745-21-10, Appendix B (unless the dynamic pressure performance test is not applicable to the specific Stage II vapor control system, as specified in the applicable CARB certification).

Not later than thirty (30) days prior to any required tests, the permittee shall submit a test notification to the appropriate Ohio EPA District Office or local air agency.

The test notification shall describe the proposed test methods and procedures, the time and the date of the tests, and the person who will be conducting the tests. Failure to submit such notification prior to the tests may result in the Ohio EPA's refusal to accept the results of the tests. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the tests, examine the testing equipment, and acquire data and information during the tests. After completion of any tests, the permittee shall complete and retain on site a copy of the post test inspection form contained in OAC rule 3745-21-10, Appendix C.

## VI. Miscellaneous Requirements

**1.** The Gilbarco Vapor Vac Stage II vapor recovery system employed at this facility, including all associated underground and aboveground plumbing, shall be installed, operated, and maintained in accordance with CARB Executive Order G-70-150-AE, which includes, but is not limited to, the requirements contained within this Section.

## VI. Miscellaneous Requirements (continued)

**2.** The permittee shall comply with the following performance specification from CARB Executive Order G-70-150-AE:

The air-to-liquid ratio (A/L) shall be between 1.00 and 1.25 when tested in accordance with an A/L test procedure adopted by the Ohio EPA.

**3.** The permittee shall comply with the following monitoring requirement from CARB Executive Order G-70-150-AE:

The permittee shall monitor the Stage II vapor recovery system performance and all aspects of operation to the extent necessary to ensure compliance with the conditions and specifications contained within this Section

**4.** The permittee shall comply with the following testing requirement from CARB Executive Order G-70-150-AE:

In accordance with the yearly static pressure decay testing requirement specified in CARB Executive Order G-70-150-AE, the Static Leak Test contained in OAC rule 3745-21-10, Appendix A, shall be successfully conducted at least once in each twelve-consecutive-month period after the date of successful completion of the startup or most recent Static Leak Test. The appropriate Ohio EPA District Office or local air agency shall be notified at least 30 days prior to conducting these annual tests. Test results shall be submitted to the appropriate Ohio EPA District Office or local air agency within 30 days of testing.

**5.** The permittee shall comply with the following record keeping requirement from CARB Executive Order G-70-150-AE:

A log of the date and description of all repair and maintenance work performed on the Gilbarco Vapor Vac system shall be maintained on site or otherwise provided to Ohio EPA field office personnel immediately upon request.

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Shops Spray Paint. (K001)

**Activity Description:** This is a miscellaneous metal parts spray painting operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| miscellaneous metal parts coating (no stack emissions) | OAC rule 3745-21-09(U)(2)(e)(ii) | See A.I.2.a below. |
| | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See A.I.2.b below. |

**2. Additional Terms and Conditions**

**2.a** Although the requirements of OAC rule 3745-21-09(U) allow for an exemption from applicable VOC content limitations, the daily usage exemption allowed in accordance with OAC 3745-21-09(U)(2)(e)(ii) is not part of the federally-approved SIP (for the Cincinnati ozone area). The rule has been revised to reflect an exemption level (3 gallons per day ) that is acceptable to USEPA. Therefore, the 3 gallons per day usage restriction shall apply as the exemption level while OAC rule 3745-21-09(U) is being approved by USEPA, as well as after USEPA approval.

**2.b** The permittee shall employ good operating practices when spray coating operations are performed in order to minimize emissions of fugitive dust. These practices shall include maximizing paint transfer efficiency and directing coating spray in a downward direction whenever possible.

### II. Operational Restrictions

**1.** The permittee shall employ no more than 3 gallons of coating in any one day in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall collect and record the following information for each calendar day the coating line is in operation:

a. the name and identification number of each coating employed;

b. the volume, in gallons, of each coating employed; and

c. the total volume, in gallons, of all of the coatings employed during the calendar day.

## IV. Reporting Requirements

**1.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any daily record showing that the coating line employs more than the applicable maximum daily coating usage limit. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

Visible emission observations shall be made at egress points (e.g., doors closest to the spray coating operation) of the building housing the spray coating operation.

**1.b** Compliance with the three gallon per day usage limitation may be demonstrated by the information collected and recorded in A.III.1 of these terms and conditions.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 3 Slab Fce/WHB (P009)

**Activity Description:** Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 305 mmBtu/hr, direct fired, natural gas, coke oven gas, No. 6 fuel oil, and on-specification used oil (as defined in OAC rule 3745-279-11), reheat furnace | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(2) | Sulfur dioxide emissions shall not exceed 1.1 lbs/mmBtu actual heat input. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

### II. Operational Restrictions

**1.** The quality of the fuel oil and on-specification used oil burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for each shipment of fuel oil or batch of on-specification used oil.

**2.** The quality of the coke oven gas and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for the samples of coke oven gas collected.

## II. Operational Restrictions (continued)

**3.** The permittee shall burn only natural gas, No. 6 fuel oil, on-specification used oil, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** For each day during which the permittee burns a fuel other than natural gas, No. 6 fuel oil, on-specification used oil, or coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil and/or coke oven gas was burned in this emissions unit.

**3.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 1.1 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation while burning No. 6 fuel oil mixed with on-specification used oil in proportion to that burned under normal operating conditions, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 2 Slab Fce/WHB (P010)

**Activity Description:** Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 305 mmBtu/hr, direct fired, natural gas, coke oven gas, No. 6 fuel oil, and on-specification used oil (as defined in OAC rule 3745-279-11), reheat furnace | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(2) | Sulfur dioxide emissions shall not exceed 1.1 lbs/mmBtu actual heat input. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

### II. Operational Restrictions

**1.** The quality of the fuel oil and on-specification used oil burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for each shipment of fuel oil or batch of on-specification used oil.

**2.** The quality of the coke oven gas and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for the samples of coke oven gas collected.

## II. Operational Restrictions (continued)

**3.** The permittee shall burn only natural gas, No. 6 fuel oil, on-specification used oil, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** For each day during which the permittee burns a fuel other than natural gas, No. 6 fuel oil, on-specification used oil, or coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil and/or coke oven gas was burned in this emissions unit.

**3.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 1.1 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation while burning No. 6 fuel oil mixed with on-specification used oil in proportion to that burned under normal operating conditions, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 1 Slab Fce/WHB (P011)

**Activity Description:** Salem pusher slab reheat furnace reheats steel slabs, associated waste heat boiler

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 305 mmBtu/hr, direct fired, natural gas, coke oven gas, No. 6 fuel oil, and on-specification used oil (as defined in OAC rule 3745-279-11), reheat furnace | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(2) | Sulfur dioxide emissions shall not exceed 1.1 lbs/mmBtu actual heat input. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

### II. Operational Restrictions

**1.** The quality of the fuel oil and on-specification used oil burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for each shipment of fuel oil or batch of on-specification used oil.

**2.** The quality of the coke oven gas and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for the samples of coke oven gas collected.

## II. Operational Restrictions (continued)

**3.** The permittee shall burn only natural gas, No. 6 fuel oil, on-specification used oil, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** For each day during which the permittee burns a fuel other than natural gas, No. 6 fuel oil, on-specification used oil, or coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil and/or coke oven gas was burned in this emissions unit.

**3.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 1.1 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation while burning No. 6 fuel oil mixed with on-specification used oil in proportion to that burned under normal operating conditions, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 4 Slab Fce/WHB (P012)

**Activity Description:** Davy International walking beam slab reheat furnace reheats steel slabs, associated waste heat boiler

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 305 mmBtu/hr, direct fired, natural gas, coke oven gas, No. 6 fuel oil, and on-specification used oil (as defined in OAC rule 3745-279-11), reheat furnace | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| | OAC rule 3745-18-15(C)(2) | Sulfur dioxide emissions shall not exceed 1.1 lbs/mmBtu actual heat input. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

### II. Operational Restrictions

**1.** The quality of the fuel oil and on-specification used oil burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for each shipment of fuel oil or batch of on-specification used oil.

**2.** The quality of the coke oven gas and natural gas burned in this emissions unit shall have a combination of sulfur content and heat content which is sufficient to comply with the allowable sulfur dioxide emission limitation of 1.1 pounds sulfur dioxide/mmBtu of actual heat input.

Compliance with the above-mentioned specification shall be based upon the analytical results for the samples of coke oven gas collected.

## II. Operational Restrictions (continued)

**3.** The permittee shall burn only natural gas, No. 6 fuel oil, on-specification used oil, and coke oven gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain records of the fuel oil and on-specification used oil burned in this emissions unit in accordance the following:

a. Alternative 1:

For each shipment of fuel oil or on-specification used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).) A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294,),or equivalent methods as approved by the Director.

b. Alternative 2:

The permittee shall collect a representative grab sample of fuel oil or on-specification used oil that is burned in this emissions unit for each day when the emissions unit burns fuel oil or on-specification used oil. If additional oil is added to the tank serving this emissions unit on a day when the emissions unit is in operation, the permittee shall collect a sufficient number of grab samples to develop a composite sample representative of the oil burned in this emissions unit.

A representative grab sample of oil does not need to be collected on days when this emissions unit does not burn fuel oil or on-specification used oil or when this emissions unit is only operated for the purpose of test firing. The permittee shall maintain records of the total quantity of oil burned each day, except for the purpose of test-firing, the permittee's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F).)

The permittee shall perform or require the supplier to perform the analyses for sulfur content and heat content in accordance with 40 CFR Part 60, Appendix A, Method 19, or the appropriate ASTM methods (such as, ASTM methods D240, D4294), or equivalent methods as approved by the Director.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall collect daily grab samples of the coke oven gas burned in this emissions unit as specified in section A.III.3 of the terms and conditions for emissions unit P067. The following information shall be collected and recorded on a quarterly basis:

a. the total cubic feet of coke oven gas burned;

b. the average sulfur content of the samples taken, recorded in percent by weight, of the coke oven gas (the grains of hydrogen sulfide (H2S) per 100 dry standard cubic feet of coke oven gas shall be converted to a decimal fraction of sulfur by multiplying the grains of H2S per 100 cubic feet times 1 pound H2S per 7000 grains of H2S times 0.94 pound of sulfur per 1 pound of H2S, and dividing by the density of coke oven gas (0.027 pound per cubic feet));

c. The heat content of the coke oven gas, in BTU per cubic foot. (The heat content shall be determined using the ASTM D1826-88 Method Thermo Electron Corporation Flo-Cal Instrument continuous recording calorimeter in the slab furnace/waste heat boiler complex on the Coke Oven Gas supply line). The average heat content of natural gas shall assumed to be 1000 Btu/cubic foot; and

d. the average sulfur dioxide emission rate for the coke oven gas, recorded as pounds of SO2/mmBtu actual heat input (the resulting decimal fraction of sulfur and heat content determined in (b) and (c) above shall be used as input into the equation defined in OAC rule 3745-18-04(F) to calculate the sulfur dioxide emission rate).

The hydrogen sulfide content, heat content, and sampling procedures for the coke oven gas shall be based on approved ASTM procedures.

**3.** Monitoring and record keeping for sulfur content is not required for natural gas because the sulfur dioxide emission rate from the burning of natural gas is less than the allowable sulfur dioxide emission rate in Section A.I.1 of these terms and conditions.

**4.** For each day during which the permittee burns a fuel other than natural gas, No. 6 fuel oil, on-specification used oil, or coke oven gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the allowable sulfur dioxide emission limitation based upon the calculated sulfur dioxide emission rates from Section A.III above.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas, fuel oil, on-specification used oil and/or coke oven gas was burned in this emissions unit.

**3.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitation in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Sulfur dioxide emissions shall not exceed 1.1 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. The record keeping in Section A.III.1 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning fuel oil or on-specification used oil.

ii. The record keeping in Section A.III.2 of these terms and conditions shall be used to determine compliance with the SO2 emission limitation when burning coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation while burning No. 6 fuel oil mixed with on-specification used oil in proportion to that burned under normal operating conditions, in accordance with 40 CFR Part 60, Appendix A, Methods 6 and 6C and the procedures in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 4 Coating Line (P019)

**Activity Description:** The No. 4 Coating Line is an aluminum coating of steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| direct fired, natural gas, pre-heater | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| rust preventative oil application (no stack) | OAC rule 3745-21-09(OO)(2) | The VOC of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.c below.) |
| anti-galling spray application (no stack) | OAC rule 3745-21-09(OO)(3) | The VOC of the anti-galling material employed shall not exceed 6.4 pounds of VOC per gallon of material, excluding water and exempt solvents. |
| | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.c below.) |
| aluminum coating pot | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.c below.) |
| prelube oil application (no stack) | OAC rule 3745-21-09(OO)(4) | The VOC content of any prelube oil employed shall not exceed 0.8 pound of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from the combustion of natural gas in this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

**2.c** The permittee shall minimize overspray when coating operations are performed in order to minimize or eliminate visible emissions of fugitive dust.

**II. Operational Restrictions**

**1.** The permittee shall burn only natural gas in this emissions unit.

**III. Monitoring and/or Record Keeping Requirements**

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rust preventative oil and prelube oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rust preventative oil and prelube oil employed.

**3.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each anti-galling material employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each anti-galling material employed.

## III. Monitoring and/or Record Keeping Requirements (continued)

**4.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative oil, prelube oil or anti-galling material was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

**3.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

Visible emission observations shall be made at the egress points (e.g., doors closest to the coating operation) of the building housing the coating operation.

## V. Testing Requirements (continued)

**1.b** Compliance with the VOC content limitations specified in A.I.1 may be demonstrated by the information collected and recorded in A.III.2 and A.III.3 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and the Director and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 3 Coating Line (P022)

**Activity Description:** The No. 3 Coating Line is a zinc coating of steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| direct fired natural gas pre-heater | OAC rule 3745-17-11 | None. See A.I.2.a below. |
| | OAC rule 3745-17-07(A) | None. See A.I.2.b below. |
| rust preventative oil application (no stack) | OAC rule 3745-21-09(OO)(2) | The VOC of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.c below.) |
| zinc coating pot | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.c below.) |
| prelube oil application (no stack) | OAC rule 3745-21-09(OO)(4) | The VOC content of any prelube oil employes shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The uncontrolled mass rate of particulate emissions from the combustion of natural gas in this emissions unit is less than 10 pounds per hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight, as defined in OAC rule 3745-17-01(B)(14), is equal to zero.

**2.b** This emissions unit is exempt from the visible particulate matter emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

**2.c** The permittee shall operate this emission unit in such a manner as to minimize fugitive dust emissions during the rust preventative oil application, zinc coating operation, and prelube oil application.

## II. Operational Restrictions

**1.** The permittee shall burn only natural gas in this emissions unit.

## III. Monitoring and/or Record Keeping Requirements

**1.** For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rust preventative oil and prelube oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rust preventative oil and prelube oil employed.

**3.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the fugitive egress points for this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative oil, prelube oil or anti-galling material was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## IV. Reporting Requirements (continued)

**3.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

Visible emission observations shall be made at egress points (i.e., doors closest to the coating operation) of the building housing the coating operation.

**1.b** Compliance with the VOC content limitations specified in A.I.1 may be demonstrated by the information collected and recorded in A.III.2 and A.III.3 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, the permittee determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and the Director and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 5 Pickler (P023)

**Activity Description:** The Wean Unique HCl Pickler is used to remove scale from hot rolled steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Number 5 continuous steel pickling line using HCl, equipped with wet scrubber P023SC01 controlling the emissions from the pickling tank | 40 CFR Part 63 Subpart CCC | See A.I.2.a, A.I.2.b and A.II.1-A.II.9 below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from the wet scrubber outlet shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | See A.I.2.c below. |
| Rinse tank equipped with wet scrubber P023SC02 controlling the emissions from the rinse tank | OAC rule 3745-17-07(A) | Visible particulate emissions from the wet scrubber outlet shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | PE from the rinse tank shall not exceed 9.57 pounds per hour*.<br><br>*This emission limitation represents the emissions unit's potential to emit HCl (particulate emissions are assumed to be equal to or less than HCl emissions). Therefore, no additional monitoring, record keeping or reporting requirements are necessary to demonstrate compliance with this emission limitation. |
| Rust preventative oil application | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08 | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.d below.) |
| | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee is subject to the General Provisions of 40 CFR Part 63, Subpart A, identified in Table 1 of 40 CFR Part 63 Subpart CCC.

**2.b** The permittee shall not cause or allow to be discharged into the atmosphere from this pickling line:

i. Any gases that contain HCl in a concentration in excess of 18 parts per million by volume (ppmv); or

ii. HCl at a mass emission rate that corresponds to a collection efficiency of less than 97 percent.

**2.c** The particulate emission limitation from this rule is less stringent than the requirements of 40 CFR Part 63 Subpart CCC.

**2.d** The permittee shall operate the pickling line in such a manner as to minimize visible emissions of fugitive dust.

**II. Operational Restrictions**

**1.** The permittee shall adhere to the Operation and Maintenance Plan required in 40 CFR 63.1160(b)(2) for each emission control device associated with this emissions unit. At a minumum the Operation and Maintenace Plan is required to comply with the provisions of 40 CFR Part 63.1160(b)(2).

**2.** The permittee shall operate and maintain this emissions unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the level required by the standard at all times, including during any period of startup, shutdown, or malfunction. Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

**3.** Scrubber P023SC01 shall be equipped with a viewport or access hatch allowing visual inspection of the scrubber operation. Should the permittee not equip scrubber P023SC01 with a viewport or access hatch an alternative method of inspection approved by the Hamilton County Department of Environmental Services is required.

**4.** For scrubber P023SC01, the permittee shall provide for cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling.

**5.** For scrubber P023SC01, the permittee shall follow the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans.

**6.** The permittee shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the Operation and Maintenance Plan identified in A.II.1. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of 40 CFR Part 63, Subpart CCC.

## II. Operational Restrictions (continued)

**7.** The scrubber makeup water flow rate and recirculation water flow rate for scrubber P023SC01 shall be maintained at or above the minimum scrubber makeup water flow rate and recirculation water flow rate established during the most recent stack test which demonstrated the emissions unit to be in compliance. The procedures specified in 40 CFR 63.1161(b) shall be followed to determine the minimum scrubber flow rates and the minimum recirculation flow rates.

Operation of wet scrubber P023SC01 with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in 40 CFR 63.1160(b)(2).

The permittee may reestablish compliant operating parameter values for the scrubber makeup water flow rates and recirculation flow rates as part of any performance test that is conducted subsequent to the initial test or tests.

**8.** All HCl emissions from the pickle tank shall be vented to scrubber P023SC01.

**9.** The permittee shall provide and operate, except during loading and unloading of acid, a closed-vent system for each hydrochloric acid storage vessel associated with this pickling line. Loading and unloading shall be conducted either through enclosed lines or each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.

**10.** Should the rinse tank solution exceed a hydrochloric acid content of six percent by weight and a temperature of 100 degrees Fahrenheit, the rinse tank shall become subject to the requirements of 40 CFR Part 63 Subpart CCC.

**11.** All HCl emissions from the rinse tank shall be vented to scrubber P023SC02.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain a record of each inspection performed for scrubber P023SC01. Each inspection shall be signed by the responsible maintenance official and show the date of each inspection, any problem(s) identified, a description of repair(s), replacement(s), or other corrective action(s) taken, and the date of the repair(s), replacement(s), or other corrective action(s) taken. At a minimum the inspections conducted must comply with 40 CFR 63.1160(b)(2)(iv). The requirements of 40 CFR 63.1160(b)(2)(iv) are as follows:

Scrubber P023SC01 shall be inspected at intervals of no less than 3 months. Based on this inspection, the following actions are required when problems are noted:

a. cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;

b. repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;

c. repair or replacement of droplet eliminator elements as needed;

d. repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and

e. adjustment of damper settings for consistency with the required air flow.

**2.** The permittee shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, or malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard.

## III. Monitoring and/or Record Keeping Requirements (continued)

**3.** The permittee shall properly operate and maintain equipment to continuously monitor the scrubber makeup water flow rate and the recirculation water flow rate for scrubber P023SC01 while this emissions unit is in operation.

The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.

The permittee shall collect and record the following information:

a. the scrubber makeup water flow rate for the scrubber, in gallons per minute, on a once per shift basis;

b. the recirculation water flow rate for the scrubber, in gallons per minute, on a once per shift basis;

c. the downtimes for the capture (collection) system, control device, and monitoring equipment when this emissions unit is in operation;

d. manufacturer certification that monitoring devices are accurate to within 5 percent; and

e. the date, the method used, and the results of the annual calibration requirements.

Failure to record each of the operating parameters listed in paragraph 40 CFR 63.1162(a)(2) is a violation of the monitoring requirements of 40 CFR Part 60, Subpart CCC.

**4.** The owner or operator of an affected hydrochloric acid storage vessel shall inspect each vessel semiannually to determine that the closed-vent system and either the air pollution control device or the enclosed loading and unloading line, whichever is applicable, are installed and operating when required.

**5.** As required by 40 CFR 63.10(b)(2) of Subpart A, the owner or operator shall maintain records for 5 years from the date of each record of:

a. the occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

b. the occurrence and duration of each malfunction of the air pollution control equipment;

c. all maintenance performed on the air pollution control equipment;

d. actions taken during periods of startup, shutdown, and malfunction and the dates of such actions (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when these actions are different from the procedures specified in the startup, shutdown, and malfunction plan;

e. all information necessary to demonstrate conformance with the startup, shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan;

f. all required measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart CCC, and to support the data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests;

g. all results of initial or subsequent performance tests;

h. all documentation supporting initial notifications and notifications of compliance status; and

i. records of any applicability determination, including supporting analyses.

## III. Monitoring and/or Record Keeping Requirements (continued)

**6.** The permittee shall keep the written Operation and Maintenance Plan on record after it is developed to be made available for inspection, upon request, by the Hamilton County Department of Environmental Services for the life of the emissions unit or until the emissions unit is no longer subject to the provisions of 40 CFR Part 63, Subpart CCC. In addition, if the operation and maintenance plan is revised, the permittee shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection by the Hamilton County Department of Environmental Services for a period of 5 years after each revision to the plan.

**7.** The permittee shall collect and record the temperature of the rinse tank solution, in degrees Fahrenheit, on a monthly basis. (The temperature range of the rinse tank has historically remained in the range of 85-95 degrees Fahrenheit, therefore, monthly monitoring has been determined to be sufficient to demonstrate that the temperature remains below 100 degrees Fahrenheit).

**8.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rust preventative oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rust preventative oil employed.

**9.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber stacks 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**10.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If any abnormal visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit an annual report identifying the dates the inspections required in A.III.1 and A.III.4 were conducted, a listing of any problems identified during the inspections, a listing of corrective actions taken to correct any problems identified, and the dates the corrective actions were taken. These reports shall be submitted in accordance with the requirements of 40 CFR Part 63, Subpart CCC.

## IV. Reporting Requirements (continued)

**2.** As required by 40 CFR 63.10(d)(5)(i), the permittee shall submit the following reports:

a. if actions taken by the permittee during a startup, shutdown, or malfunction of this emissions unit (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan, the owner or operator shall state such information in a semiannual report. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half; or

b. any time an action taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the permittee shall comply with all requirements of 40 CFR 63.10(d)(5)(ii).

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels for scrubber P023SC01:

a. the scrubber makeup water flow rate; and

b. the scrubber water recirculation rate.

Should any deviations occur, the corrective action taken to remedy the deviation, along with the date the corrective action taken shall be submitted.

**4.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the rinse tank temperature exceeded 100 degrees Fahrenheit.

**5.** The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.

**6.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative oil was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

**7.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the scrubber stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**8.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

Visible emission observations shall be made at egress points (i.e., doors closest to the pickler) of the building housing the pickler.

**1.c** Compliance with the VOC content limitation specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.8 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

**1.d** Compliance with the operational restrictions listed in A.II.1-A.II.9 shall be determined by the information collected and recorded in A.III.3.

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

**2.a** The emission testing shall be conducted within 2.5 years after the initial performance test which demonstrated compliance with the emission limitation specified in A.I.2.b of this permit. The testing shall be conducted for scrubber P023SC01.

**2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitation specified in A.I.2.b of this permit.

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

40 CFR Part 60, Appendix A, Methods 1-4 and 26A.

In addition to the above mentioned methods, the permittee shall follow the procedures and methods specified in 40 CFR 63.1161(a) and (b), Performance Testing and Test Methods established to comply with 40 CFR Part 63 Subpart CCC.

**2.d** The test(s) shall be conducted while the emissions unit is operating under conditions representative of normal operations as required by 40 CFR 63, Subpart CCC, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

## V. Testing Requirements (continued)

**2.e** Not less than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 4 Pickler (P024)

**Activity Description:** The Wean Unique HCl Pickler is used to remove scale from hot rolled steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Number 4 continuous steel pickling line using HCl, equipped with wet scrubber P024SC01 controlling the emissions from the pickling tank | 40 CFR Part 63 Subpart CCC | See A.I.2.a, A.I.2.b and A.II.1-A.II.9 below. |
| | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from the wet scrubber outlet shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | See A.I.2.c below. |
| Rinse tank equipped with wet scrubber P024SC02 controlling the emissions from the rinse tank | OAC rule 3745-17-07(A) | Visible particulate emissions from the wet scrubber outlet shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule. |
| | OAC rule 3745-17-11(B)(1) | PE from the rinse tank shall not exceed 9.57 pounds per hour*.<br><br>*This emission limitation represents the emissions unit's potential to emit HCl (particulate emissions are assumed to be equal to or less than HCl emissions). Therefore, no additional monitoring, record keeping or reporting requirements are necessary to demonstrate compliance with this emission limitation. |
| Rust preventative oil application | OAC rule 3745-17-07(B)(1) | Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08 | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.d below.) |
| | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Scale breaker vented to baghouse | OAC rule 3745-17-07(A) | Visible particulate emissions from the baghouse outlet shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule. |
| | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust source shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | See A.I.2.e below. |

**2. Additional Terms and Conditions**

**2.a** The permittee is subject to the General Provisions of 40 CFR Part 63, Subpart A, identified in Table 1 of 40 CFR Part 63 Subpart CCC.

**2.b** The permittee shall not cause or allow to be discharged into the atmosphere from this pickling line:

i. Any gases that contain HCl in a concentration in excess of 18 parts per million by volume (ppmv); or

ii. HCl at a mass emission rate that corresponds to a collection efficiency of less than 97 percent.

**2.c** The particulate emission limitation from this rule is less stringent than the requirements of 40 CFR Part 63 Subpart CCC.

**2.d** The permittee shall operate the pickling line in such a manner as to minimize visible emissions of fugitive dust.

**2.e** The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust from the scale breaking operation. The control equipment associated with the scale breaking operation shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. the control equipment shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the exhaust stack(s) whichever is less stringent.

**II. Operational Restrictions**

**1.** The permittee shall adhere to the Operation and Maintenance Plan required in 40 CFR 63.1160(b)(2) for each emission control device associated with this emissions unit. At a minumum the Operation and Maintenace Plan is required to comply with the provisions of 40 CFR Part 63.1160(b)(2).

## II. Operational Restrictions (continued)

**2.** The permittee shall operate and maintain this emissions unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the level required by the standard at all times, including during any period of startup, shutdown, or malfunction. Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

**3.** Scrubber P024SC01 shall be equipped with a viewport or access hatch allowing visual inspection of the scrubber operation. Should the permittee not equip scrubber P024SC01 with a viewport or access hatch an alternative method of inspection approved by the Hamilton County Department of Environmental Services is required.

**4.** For scrubber P024SC01, the permittee shall provide for cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling.

**5.** For scrubber P024SC01, the permittee shall follow the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans.

**6.** The permittee shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the Operation and Maintenance Plan identified in A.II.1. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of 40 CFR Part 63, Subpart CCC.

**7.** The scrubber makeup water flow rate and recirculation water flow rate for scrubber P024SC01 shall be maintained at or above the minimum scrubber makeup water flow rate and recirculation water flow rate established during the most recent stack test which demonstrated the emissions unit to be in compliance. The procedures specified in 40 CFR 63.1161(b) shall be followed to determine the minimum scrubber flow rates and the minimum recirculation flow rates.

Operation of wet scrubber P024SC01 with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in 40 CFR 63.1160(b)(2).

The permittee may reestablish compliant operating parameter values for the scrubber makeup water flow rates and recirculation flow rates as part of any performance test that is conducted subsequent to the initial test or tests.

**8.** All HCl emissions from the pickle tank shall be vented to scrubber P024SC01.

**9.** The permittee shall provide and operate, except during loading and unloading of acid, a closed-vent system for each hydrochloric acid storage vessel associated with this pickling line. Loading and unloading shall be conducted either through enclosed lines or each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.

**10.** Should the rinse tank solution exceed a hydrochloric acid content of six percent by weight and a temperature of 100 degrees Fahrenheit, the rinse tank shall become subject to the requirements of 40 CFR Part 63 Subpart CCC.

**11.** All HCl emissions from the rinse tank shall be vented to scrubber P024SC02.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain a record of each inspection performed for scrubber P024SC01. Each inspection shall be signed by the responsible maintenance official and show the date of each inspection, any problem(s) identified, a description of repair(s), replacement(s), or other corrective action(s) taken, and the date of the repair(s), replacement(s), or other corrective action(s) taken. At a minimum the inspections conducted must comply with 40 CFR 63.1160(b)(2)(iv). The requirements of 40 CFR 63.1160(b)(2)(iv) are as follows:

Scrubber P024SC01 shall be inspected at intervals of no less than 3 months. Based on this inspection, the following actions are required when problems are noted:

a. cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;

b. repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;

c. repair or replacement of droplet eliminator elements as needed;

d. repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and

e. adjustment of damper settings for consistency with the required air flow.

**2.** The permittee shall develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, or malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standard.

**3.** The permittee shall properly operate and maintain equipment to continuously monitor the scrubber makeup water flow rate and the recirculation water flow rate for scrubber P024SC01 while this emissions unit is in operation.

The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.

The permittee shall collect and record the following information:

a. the scrubber makeup water flow rate for the scrubber, in gallons per minute, on a once per shift basis;

b. the recirculation water flow rate for the scrubber, in gallons per minute, on a once per shift basis;

c. the downtimes for the capture (collection) system, control device, and monitoring equipment when this emissions unit is in operation;

d. manufacturer certification that monitoring devices are accurate to within 5 percent; and

e. the date, the method used, and the results of the annual calibration requirements.

Failure to record each of the operating parameters listed in paragraph 40 CFR 63.1162(a)(2) is a violation of the monitoring requirements of 40 CFR Part 60, Subpart CCC.

**4.** The owner or operator of an affected hydrochloric acid storage vessel shall inspect each vessel semiannually to determine that the closed-vent system and either the air pollution control device or the enclosed loading and unloading line, whichever is applicable, are installed and operating when required.

## III. Monitoring and/or Record Keeping Requirements (continued)

**5.** As required by 40 CFR 63.10(b)(2) of Subpart A, the owner or operator shall maintain records for 5 years from the date of each record of:

a. the occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

b. the occurrence and duration of each malfunction of the air pollution control equipment;

c. all maintenance performed on the air pollution control equipment;

d. actions taken during periods of startup, shutdown, and malfunction and the dates of such actions (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) when these actions are different from the procedures specified in the startup, shutdown, and malfunction plan;

e. all information necessary to demonstrate conformance with the startup, shutdown, and malfunction plan when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan;

f. all required measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart CCC, and to support the data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests;

g. all results of initial or subsequent performance tests;

h. all documentation supporting initial notifications and notifications of compliance status; and

i. records of any applicability determination, including supporting analyses.

**6.** The permittee shall keep the written Operation and Maintenance Plan on record after it is developed to be made available for inspection, upon request, by the Hamilton County Department of Environmental Services for the life of the emissions unit or until the emissions unit is no longer subject to the provisions of 40 CFR Part 63, Subpart CCC. In addition, if the operation and maintenance plan is revised, the permittee shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection by the Hamilton County Department of Environmental Services for a period of 5 years after each revision to the plan.

**7.** The permittee shall collect and record the temperature of the rinse tank solution, in degrees Fahrenheit, on a monthly basis. (The temperature range of the rinse tank has historically remained in the range of 85-95 degrees Fahrenheit, therefore, monthly monitoring has been determined to be sufficient to demonstrate that the temperature remains below 100 degrees Fahrenheit).

**8.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rust preventative oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rust preventative oil employed.

**9.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber stacks 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**10.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If any abnormal visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**11.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit an annual report identifying the dates the inspections required in A.III.1 and A.III.4 were conducted, a listing of any problems identified during the inspections, a listing of corrective actions taken to correct any problems identified, and the dates the corrective actions were taken. These reports shall be submitted in accordance with the requirements of 40 CFR Part 63, Subpart CCC.

**2.** As required by 40 CFR 63.10(d)(5)(i), the permittee shall submit the following reports:

a. if actions taken by the permittee during a startup, shutdown, or malfunction of this emissions unit (including actions taken to correct a malfunction) are consistent with the procedures specified in the startup, shutdown, and malfunction plan, the owner or operator shall state such information in a semiannual report. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half; or

b. any time an action taken by the permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the permittee shall comply with all requirements of 40 CFR 63.10(d)(5)(ii).

## IV. Reporting Requirements (continued)

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels for scrubber P024SC01:

a. the scrubber makeup water flow rate; and

b. the scrubber water recirculation rate.

Should any deviations occur, the corrective action taken to remedy the deviation, along with the date the corrective action taken shall be submitted.

**4.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the rinse tank temperature exceeded 100 degrees Fahrenheit.

**5.** The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.

**6.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative oil was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

**7.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the scrubber stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**8.** The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions of fugitive dust from this emissions unit were observed at the points of egress to the ambient air and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**9.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse 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 Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

Visible emission observations shall be made at egress points (i.e., doors closest to the pickler) of the building housing the pickler.

**1.c** Compliance with the VOC content limitation specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.8 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

**1.d** Compliance with the operational restrictions listed in A.II.1-A.II.9 shall be determined by the information collected and recorded in A.III.3.

**1.e** Emission Limitation:

0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases from the baghouse stack

Applicable Compliance Method:

If required, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Based on the monitoring and record keeping requirements specified in Section A.III.11, it will be assumed that this emissions unit is in compliance with the applicable particulate emission limitation if there are no visible emissions from the stack associated with this emissions unit.

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

**2.a** The emission testing shall be conducted within 2.5 years after the initial performance test which demonstrated compliance with the emission limitation specified in A.I.2.b of this permit. The testing shall be conducted for scrubber P024SC01.

**2.b** The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitation specified in A.I.2.b of this permit.

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

40 CFR Part 60, Appendix A, Methods 1-4 and 26A.

In addition to the above mentioned methods, the permittee shall follow the procedures and methods specified in 40 CFR 63.1161(a) and (b), Performance Testing and Test Methods established to comply with 40 CFR Part 63 Subpart CCC.

**2.d** The test(s) shall be conducted while the emissions unit is operating under conditions representative of normal operations as required by 40 CFR 63, Subpart CCC, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

## V. Testing Requirements (continued)

**2.e** Not less than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Wilp.Quench Tower (P043)

**Activity Description:** This is the quenching of hot coke operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Wilputte quench tower with baffles | OAC rule 3745-17-07(A) | Visible particulate emissions shall not exceed twenty percent opacity as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B)(1) | Particulate emissions shall not exceed 49.6 pounds per hour. See A.I.2.a below. |
| | 40 CFR Part 63, Subpart CCCCC | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** The particulate emission limitation of 49.6 pounds per hour is based upon a process weight rate of 84.5 tons of coke per hour and Table I of OAC rule 3745-17-11. Figure II of OAC rule 3745-17-11 does not apply because the uncontrolled mass rate of emissions cannot be ascertained.

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall inspect the baffle system on a monthly basis. The results of the monthly inspections shall be maintained in a log including the following information:

a. the date of the inspection;

b. the name of the inspector;

c. a description of the condition of the baffles; and

d. a description of corrective actions taken as a result of the inspection.

The permittee shall clean the baffle system as needed, based on the monthly inspections. A record of each baffle cleaning shall be maintained in a log, including the date and name of operator.

Written inspection and cleaning procedures shall be maintained on site and available for review during normal business hours.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. any month when an inspection of the baffle system was not performed; and

b. all corrective actions initiated as a result of a monthly inspection, including cleaning of the baffle system.

**2.** The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part 1 - General Term and Condition A.1.c of this permit.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

Particulate emissions shall not exceed 49.6 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated by muliplying the particulate emission factor of 0.31 pound per ton of coal charged by the maximum hourly tons of coal charged (144.0 tons coal charged/hr). The particulate emission factor was obtained from section 1.4, Table 12.2-12 of the draft AP-42 document dated August 2001.

Stack testing for particulate emissions from the quench tower is not possible.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** HMT/Desulf. Station (P047)

**Activity Description:** This is a combination hot metal pouring and desulfurization facility.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Hot metal pouring and desulfurization process with baghouse | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from the baghouse outlet shall not exceed twenty percent opacity as a six-minute average except as provided by rule. |
| | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | See A.I.2.a below. |
| | OAC rule 3745-18-15(C)(10) | Sulfur dioxide emissions shall not exceed 0.40 pound of sulfur dioxide per ton of product from the station. This emissions unit shall not be operated when emissions unit P956 is in operation. |
| | 40 CFR Part 63, Subpart FFFFF | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust from the hot metal pouring and desulfurization process. The control equipment associated with the hot metal pouring and desulfurization process shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. the control equipment shall achieve an outlet emission rate of not greater than .030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the exhaust stack(s) whichever is less stringent.

**2. Additional Terms and Conditions (continued)**

**2.b** Based on information provided in AP-42, Fifth Edition, Section 12.5.2.3, Emissions and Controls for hot metal desulfurization, and emission information provided by AK Steel, the potential to emit for sulfur dioxide emissions from this emissions unit is well below the allowable emission rate; therefore, it is not necessary to establish monitoring, record keeping, and reporting requirements to ensure ongoing compliance. AP-42 lists no SO2 emissions from the hot metal metal desulfurization processs, and the permittee estimates 1.5 lbs/hr SO2, at maximum production levels. This equates to a maximum emission rate well below the allowable SO2 emission limit listed in section A.I.1 of this permit.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain a record of all times this emissions unit was in operation concurrently with emissions unit P956.

**2.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

This provision will no longer apply after the compliance date for hot metal desulfurization specified in 40 CFR 63, Subpart FFFFF.

**3.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

This provision will no longer apply after the compliance date for hot metal desulfurization specified in 40 CFR 63, Subpart FFFFF.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify any time periods when emissions units P956 and P047 were in operation at the same time.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for hot metal desulfurization specified in 40 CFR 63, Subpart FFFFF.

**3.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for hot metal desulfurization specified in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the BOF building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.c** Emission Limitation:

0.030 grain/dry standard cubic foot from the exhaust gases from baghouse P047BH01

Applicable Compliance Method:

If required, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Based on the monitoring and record keeping requirements specified in Section A.III.3, it will be assumed that this emissions unit is in compliance with the applicable particulate emission limitation if there are no visible emissions from the stack associated with this emissions unit.

**1.d** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.40 pound of sulfur dioxide per ton of product from the station.

Applicable Compliance Method:

If required, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 and the procedures specified in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 2 EG Line (P062)

**Activity Description:** This is an electrolytic zinc coating or zinc-nickel coating of steel coils operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Electrogalvanizing line consisting of a precleaning station (uncontrolled), a caustic degreasing station (uncontrolled), a surface preperation tank, an electrogalvanizing tank, and dissolving station (The surface preparation tank, electro-galvanizing tank, and dissolving station are vented to two packed bed scrubbers in parallel.) | OAC rule 3745-31-05(A)(3) (PTI 14-3806) | The total particulate emissions (PE) from the exhaust gases exiting the stacks associated with scrubber P062SC01, scrubber P062SC02, the caustic degreasing station, and the precleaning station, combined, shall not exceed the following:<br><br>5.36 lbs PE/hr; and<br>4.22 lbs PM10/hr.<br><br>The requirements of this rule also include compliance with OAC rule 3745-17-07(A), 3745-17-08(B), OAC rule 3745-17-07(B), 3745-21-09(OO)(2), and 3745-21-09(OO)(4). |
| | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed twenty percent opacity as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust source shall not exceed 20 percent opacity as a three-minute average, except as provided by the rule. |
| | OAC rule 3745-17-08 | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.b below.) |
| | OAC rule 3745-17-11 | The emission limitation specified in OAC rule 3745-17-11 is less stringent than that established in PTI 14-3806.<br><br>See A.I.2.a. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Rust preventative oil application | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Prelube oil application | OAC rule 3745-21-09(OO)(4) | The VOC content of the prelube oil employed shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The emission limitation established in PTI 14-3806 for the total PE exiting the stacks associated with this emission unit is 5.36 lbs/hr.

The particulate emission limitation from Figure II of OAC rule 3745-17-11, based on an uncontrolled particulate emission rate of 49.6 lbs/hr is 7.19 lbs/hr, which is less stringent than that established in PTI 14-3806.

The particulate emission limitation from Table I of OAC rule 3745-17-11, based on a maximum process weight of 306 TPH, is 63.2 lbs/hr, which is also less stringent than that established in PTI 14-3806.

**2.b** The permittee shall employ reasonably available control measures as appropriate to minimize or eliminate visible particulate emissions of fugitive dust.

## II. Operational Restrictions

**1.** The emissions from the surface preparation tank, electrogalvanizing tank, and dissolving station shall be vented to scrubbers P062SC01 and P062SC02 in parallel.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber stacks 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**2.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for this emissions unit. The presence or absence of any visible fugitive 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 location and 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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**3.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rust preventative and prelube oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rust preventative and prelube oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the scrubber stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**3.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative oil or prelube oil was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

**1.b** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.c** Compliance with the VOC content limitation specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC content of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

**1.d** Emission Limitation:

The total particulate emissions (PE) from the exhaust gases exiting the stacks associated with scrubber P062SC01, scrubber P062SC02, the caustic degreasing station, and the precleaning station, combined, shall not exceed the following:

5.36 lbs PE/hr; and
4.22 lbs PM10/hr.

Applicable Compliance Method:

Compliance shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, the procedures specified in OAC rule 3745-17-03(B)(10) and previous emission testing performed at AK Steel for the precleaning station and caustic degreasing station. The particulate emission rate of 0.08 lb/hr from the precleaning and caustic degreasing station as determined during the December 16, 1991 emission test, shall be added to the particulate emission rate determined by the testing requirements specified in A.V.2 to determine the total particulate emission rate.

Should additional testing be required to determine the particulate emission rate from the stacks associated with the precleaning and caustic degreasing stations stack, the testing shall be conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5, the procedures specified in OAC rule 3745-17-03(B)(10)

**2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

## V. Testing Requirements (continued)

**2.b** The emission testing shall be conducted at the outlet of scrubbers P062SC01 and P062SC02 to demonstrate compliance with the allowable mass emission limitation for particulates of 5.32 lbs per hour (see A.V.1.d for additional information).

**2.c** The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 and of 40 CFR Part 60, Appendix A. Visible emissions readings, using USEPA Method 22 from Precleaner Stack ID No. P0620 and Caustic Degreaser Stack ID No. P0621, shall be performed during each test run.

**2.d** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not less than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 3 Cold Mill (P065)

**Activity Description:** The United 5 Stand Tandem Cold Mill is a cold rolling steel operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Cold mill equipped with settling chamber | OAC rule 3745-17-07(A) | Visible particulate emissions from the any stack shall not exceed twenty percent opacity as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08 | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (See Section A.I.2.b below.) |
| | OAC rule 3745-17-11 | Particulate emissions from all stacks associated with this emisisons unit shall not exceed 74.9 pounds per hour. See A.I.2.a below. |
| Rolling Oil Application | OAC rule 3745-21-09(OO)(1) | The VOC content of the rolling oil employed shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The particulate emissions limitation of 74.9 pounds per hour is based upon a process weight rate of 812 tons per hour and Table I of OAC rule 3745-17-11. Figure II of OAC rule 3745-17-11 does not apply because the uncontrolled mass rate of emissions cannot be ascertained.

**2.b** When cold rolling of strip steel is occurring, the permittee shall vent fugitive emissions to the settling chamber to minimize fugitive dust emissions. The capture efficiency of the cold mill settling chamber shall be sufficient to minimize or eliminate visible emissions of fugitive dust.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**3.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rolling oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rolling oil employed.

## IV. Reporting Requirements

**1.** 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 minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed at the points of capture for this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**3.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rolling oil was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

**1.b** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.c** Compliance with the VOC content limitation specified in A.I.1 may be demonstrated by the information collected and recorded in A.III.3 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

**1.d** Emission Limitation:

PE emissions from the stack associated with this emissions unit shall not exceed 74.9 lbs/hr.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

## V. Testing Requirements (continued)

**2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of the settling chamber to demonstrate compliance with the allowable mass emission limitation for particulates.

**2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Visible emission readings, using USEPA Method 9, shall be performed during each test run.

**2.d** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

**2.e** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Gas Holder/Flare (P067)

**Activity Description:** The gas holder/flare is used to flare excess coke oven gas.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Coke oven gas holder vessel with flare | OAC rule 3745-17-07(A)(1) | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. |
| | OAC rule 3745-21-07(J)(2) | The combustion of coke oven gas associated with this emissions unit shall be performed only through the use of smokeless flare equipment. |
| | OAC rule 3745-18-15(C)(8) | The hydrogen sulfide content of the coke oven gas vented to the flare shall not exceed two hundred eighty grains of hydrogen sulfide per one hundred dry standard cubic feet of coke oven gas. |

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**1.** A pilot flame shall be maintained at all times in the flare's pilot light burner.

**2.** The permittee shall operate the flare in a smokeless manner, i.e., there shall be no visible emissions from the flare for more than 5 minutes during any 2 consecutive hours.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the flare. The visible emission observations shall be conducted in accordance with 40 CFR, Appendix A, Method 22. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

If the permittee observes visible emissions from the flare, the permittee shall monitor the visible emissions for a minimum of 30 minutes in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 and record the results in an operations log.

If the daily checks show emissions that the operation of the flare is "smokeless" for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates that the operation of the flare is not "smokeless", the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of "smokeless" operation of the flare.

**2.** The permittee shall properly operate and maintain a device to continuously monitor the presence of a pilot flame when the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals. The permittee shall record all periods during which the pilot flame was not present.

**3.** The permittee shall take daily grab samples of the coke oven gas for analysis of the hydrogen sulfide content. A minimum of one sample shall be taken each day on Monday through Friday of each week, except for any day(s) when no gas is delivered to this emissions unit. The hydrogen sulfide content of each of the samples shall be determined using the "Tutwiler Method," and the resulting hydrogen sulfide content shall be expressed in terms of grains of hydrogen sulfide per 100 dry standard cubic feet of coke oven gas. The hydrogen sulfide content of each of the daily samples during the week shall be averaged to estimate the hydrogen sulfide content of the coke oven gas burned on the weekend and on any days when no gas is delivered to the vessel. The grains of hydrogen sulfide ($H_2S$) per 100 dry standard cubic feet of COG shall be converted to the decimal fraction of sulfur by multiplying the grains of $H_2S$ per 100 cubic feet times 1 pound $H_2S$ per 7000 grains of $H_2S$ and times 0.94 pound of sulfur per 1 pound of $H_2S$, and then dividing by the density of COG (0.027 pound per cubic foot).

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly reports which include all visible emission readings conducted pursuant to the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22 as a result of the presence of visible emissions from the flare. These quarterly reports shall be be submitted by January 31, April 30, July 31 and October 31 of each year and shall address the data obtained during the previous calendar quarter.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the pilot flame was not functioning.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the coke oven gas sulfur content limitation specified in Section A.I.1 of these terms and conditions.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

The hydrogen sulfide content of coke oven gas vented to the flare shall not exceed two hundred eighty grains of hydrogen sulfide per one hundred dry standard cubic feet of coke oven gas..

Applicable Compliance Method:

Compliance may be demonstrated by the information collected and recorded in A.III.3.

If testing is required, the hydrogen sulfide content of coke oven gas samples shall be determined using the "Tutwiler Method."

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Wilp. Exhausters (P068)

**Activity Description:** The two Wilputte exhausters for the coke oven gas distribution throughout the by-products facility

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Two coke oven gas exhausters (gas distribution system throughout the by-products facility) | 40 CFR Part 61, Subpart L | Benzene emissions equal to or in excess of 10,000 ppm from an exhauster shall constitute a leak as defined in Subpart L. Upon detection of a leak, the permittee shall initiate the control measures/repair procedures in A.III below. |
| | 40 CFR Part 61, Subpart V | Leak detection and repair program for fugitive VOC emissions from equipment in benzene service ( See A.III. below.) |

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**1.** Each exhauster shall be monitored quarterly to detect leaks by the methods outlined in 40 CFR 61.245(b), Subpart V.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall record the following, pursuant to 40 CFR 61.246 Subpart V, when a leak is detected:

a. the instrument and the operator identification number or name and the exhauster identification number;

b. the date the leak was detected and the dates of each attempt to repair the leak;

c. the repair method applied in each attempt to repair the leak;

d. marked as "above 10,000" for any maximum instrument reading that is equal to or greater than 10,000 ppm of benzene, taken after each repair attempt;

e. marked as "repair delayed" and the reason(s) for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;

f. the signature of the owner or operator (or designee) whose decision it was that a repair could not be effected without a process shutdown;

g. the expected date of the successful repair of the leak, if a leak is not repaired within 15 calendar days; and

h. the date of the successful repair of the leak.

**3.** Upon the detection of a benzene leak from an exhauster, the permittee shall initiate the following procedures:

a. When a leak is detected a weatherproof and readily visible identification (tag) marked with the exhauster identification number shall be attached to the leaking exhauster. The tag may be removed after the leak has been repaired.

b. When a leak is detected it shall be repaired as soon as practicable, but no later than 15 calendar days. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected except as provided by 40 CFR 61.242-10 when the repair is technically infeasible without a process unit shutdown.

**4.** Each exhauster shall be marked in a manner that it can be distinguished readily from other pieces of equipment in benzene service.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual reports which include the following information from the quarterly monitoring of each exhauster required in A.III.2. of these terms and conditions:

a. the number of exhausters that were detected leaking;

b. the number of exhausters for which leaks were repaired; and

c. a statement signed by the owner or operator stating whether all provisions of 40 CFR 61, Subpart L have been fulfilled during the reporting period.

The permittee shall submit such reports on a semiannual basis to the Hamilton County Department of Environmental Services. The permittee shall submit the reports by February 15 and August 15 of each year and shall cover the previous six calendar months (July through December and January through June, respectively).

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Compliance with the leak monitoring and repair provisions specified in A.I.1 and A.I.2.a shall be demonstrated by the information collected and recorded in A.III.1 and A.III.2 of these terms and conditions.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** FC, WO Tanks & Dec (P070)

**Activity Description:** This includes the final cooler, wash oil tanks and decanter within the by-products.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| by-products plant equipment consisting of final cooler, wash oil tanks, and decanter, with gas blanketing | 40 CFR Part 61, Subpart L | See A.I.2.a - A.I.2.c below. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall enclose and seal all openings on each process vessel, tar storage tank, and tar-intercepting sump.

**2.b** The permittee shall duct gases from each process vessel, tar storage tank, and tar-intercepting sump to the gas collection system, gas distribution system, or other enclosed point in the by-product recovery process where the benzene in the gas will be recovered or destroyed. This control system shall be designed and operated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by the methods specified in 40 CFR 61.245(c). This system can be designed as a closed, positive pressure, gas blanketing system.

Except, the permittee may elect to install, operate, and maintain a pressure relief device, vacuum relief device, an access hatch, and a sampling port on each process vessel, tar storage tank, and tar-intercepting sump. Each access hatch and sampling port must be equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use.

The permittee may elect to leave open to the atmosphere the portion of the liquid surface in each tar decanter necessary to permit operation of a sludge conveyor. If the permittee elects to maintain an opening on part of the liquid surface of the tar decanter, the permittee shall install, operate, and maintain a water leg seal on the tar decanter roof near the sludge discharge chute to ensure enclosure of the major portion of liquid surface not necessary for the operation of the sludge conveyor.

**2.c** No (zero) emissions are allowed from the final coolers or the final-cooler cooling towers at the coke by-product recovery plant.

**2.d** The permittee has indicated that the equipment identified in A.I.1 above is not "in benzene service" as defined in 40 CFR Part 61.131. Therefore, the Leak Detection and Repair provisions specified in 40 CFR Part 61, Subpart V do not apply. See A.III.4 below.

**2.e** OAC rule 3745-21-09(DD) ("Leaks from process units that produce organic chemicals") is not an applicable requirement for this emissions unit since "tar" is the only organic by-product from this emissions unit and "tar" is not one of the chemicals listed in Appendix A of OAC rule 3745-21-09 for which the requirements of OAC rule 3745-21-09(DD) are applicable.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall monitor the connections and seals on each control system to determine if it is operating with no detectable emissions, using Method 21 (40 CFR part 60, appendix A) and procedures specified in 40 CFR 61.245(c), and shall visually inspect each source (including sealing materials) and the ductwork of the control system for evidence of visible defects such as gaps or tears. This monitoring and inspection shall be conducted on a semiannual basis and at any other time after the control system is repressurized with blanketing gas following removal of the cover or opening of the access hatch.

If an instrument reading indicates an organic chemical concentration more than 500 ppm above a background concentration, as measured by Method 21, a leak is detected.

If visible defects such as gaps in sealing materials are observed during a visual inspection, a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

A first attempt at repair of any leak or visible defect shall be made no later than 5 calendar days after each leak is detected.

The following information shall be recorded for each semiannual inspection:

a. the date of the inspection and the name of the inspector;

b. a brief description of each visible defect in the source or control equipment and the method and date of repair of the defect; and

c. the presence of a leak, as measured using the method described in 40 CFR 61.245(c). The record shall include the date of attempted and actual repair and method of repair of the leak.

**2.** The permittee shall conduct a maintenance inspection of the control system on an annual basis for evidence of system abnormalities, such as blocked or plugged lines, sticking valves, plugged condensate traps, and other maintenance defects that could result in abnormal system operation. The permittee shall make a first attempt at repair within 5 days, with repair within 15 days of detection.

The following information shall be recorded for each annual maintenance inspection:

a. the date of the inspection and the name of the inspector; and

b. a brief description of any system abnormalities found during the annual maintenance inspection, the repairs made, the date of attempted repair, and the date of actual repair.

**3.** The permittee shall maintain the following information pertaining to the design of control equipment installed to comply with 40 CFR 61.132 through 40 CFR 61.134:

a. detailed schematics, design specifications, and piping and instrumentation diagrams; and

b. the dates and descriptions of any changes in the design specifications.

This information shall be recorded and kept in a readily accessible location.

**4.** The permitee shall maintain records that demonstrate that the equipment identified in A.I.1 above is not "in benzene service" as defined in 40 CFR Part 61.131. As specified in 40 CFR 61.137(b), to determine whether or not a piece of equipment is in benzene service, the methods in 40 CFR 61.245(d) shall be used, except that, for exhausters, the percent benzene shall be 1 percent by weight, rather than the 10 percent by weight described in 40 CFR 61.245(d).

## IV. Reporting Requirements

**1.** The permittee shall submit a semiannual report to the Hamilton County Department of Environmental Services, which includes the following information:

a. a brief description of any visible defect in the source or ductwork;

b. the number of leaks detected and repaired;

c. a brief description of any system abnormalities found during each annual maintenance inspection that occurred in the reporting period and the repairs made; and

d. a statement stating whether all provisions of 40 CFR part 61, Subpart L, have been fulfilled during the semiannual reporting period. Should non-compliance with the terms and conditions of this permit occurr during the semiannual reporting period, each non-compliance issue and period of non-compliance shall be reported.

These semiannual reports shall be submitted by January 31 and July 31 of each year and cover the previous semiannual period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Leak check monitoring and reporting requirements of 40 CFR Part 61, Subpart L

Applicable Compliance Method:

Compliance with 40 CFR Part 61, Subpart L shall be determined by a review of records, review of performance test results, inspections, or any combination thereof, using the methods and procedures specified in 40 CFR 61.137.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Wilp. Tar & FL Vess. (P075)

**Activity Description:** This includes the Wilputte tar and flushing liquor processing vessels within the by-products.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| by-products plant equipment consisting of Wilputte tar and flushing liquor processing vessels with gas blanketing | 40 CFR Part 61, Subpart L | See A.I.2.a - A.I.2.c below. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall enclose and seal all openings on each process vessel, tar storage tank, and tar-intercepting sump.

**2.b** The permittee shall duct gases from each process vessel, tar storage tank, and tar-intercepting sump to the gas collection system, gas distribution system, or other enclosed point in the by-product recovery process where the benzene in the gas will be recovered or destroyed. This control system shall be designed and operated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by the methods specified in 40 CFR 61.245(c). This system can be designed as a closed, positive pressure, gas blanketing system.

Except, the permittee may elect to install, operate, and maintain a pressure relief device, vacuum relief device, an access hatch, and a sampling port on each process vessel, tar storage tank, and tar-intercepting sump. Each access hatch and sampling port must be equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use.

The permittee may elect to leave open to the atmosphere the portion of the liquid surface in each tar decanter necessary to permit operation of a sludge conveyor. If the permittee elects to maintain an opening on part of the liquid surface of the tar decanter, the permittee shall install, operate, and maintain a water leg seal on the tar decanter roof near the sludge discharge chute to ensure enclosure of the major portion of liquid surface not necessary for the operation of the sludge conveyor.

**2.c** No (zero) emissions are allowed from the final coolers or the final-cooler cooling towers at the coke by-product recovery plant.

**2.d** The permittee has indicated that the equipment identified in A.I.1 above is not "in benzene service" as defined in 40 CFR Part 61.131. Therefore, the Leak Detection and Repair provisions specified in 40 CFR Part 61, Subpart V do not apply. See A.III.4 below.

**2.e** OAC rule 3745-21-09(DD) ("Leaks from process units that produce organic chemicals") is not an applicable requirement for this emissions unit since "tar" is the only organic by-product from this emissions unit and "tar" is not one of the chemicals listed in Appendix A of OAC rule 3745-21-09 for which the requirements of OAC rule 3745-21-09(DD) are applicable.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall monitor the connections and seals on each control system to determine if it is operating with no detectable emissions, using Method 21 (40 CFR part 60, appendix A) and procedures specified in 40 CFR 61.245(c), and shall visually inspect each source (including sealing materials) and the ductwork of the control system for evidence of visible defects such as gaps or tears. This monitoring and inspection shall be conducted on a semiannual basis and at any other time after the control system is repressurized with blanketing gas following removal of the cover or opening of the access hatch.

If an instrument reading indicates an organic chemical concentration more than 500 ppm above a background concentration, as measured by Method 21, a leak is detected.

If visible defects such as gaps in sealing materials are observed during a visual inspection, a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

A first attempt at repair of any leak or visible defect shall be made no later than 5 calendar days after each leak is detected.

The following information shall be recorded for each semiannual inspection:

a. the date of the inspection and the name of the inspector;

b. a brief description of each visible defect in the source or control equipment and the method and date of repair of the defect; and

c. the presence of a leak, as measured using the method described in 40 CFR 61.245(c). The record shall include the date of attempted and actual repair and method of repair of the leak.

**2.** The permittee shall conduct a maintenance inspection of the control system on an annual basis for evidence of system abnormalities, such as blocked or plugged lines, sticking valves, plugged condensate traps, and other maintenance defects that could result in abnormal system operation. The permittee shall make a first attempt at repair within 5 days, with repair within 15 days of detection.

The following information shall be recorded for each annual maintenance inspection:

a. the date of the inspection and the name of the inspector; and

b. a brief description of any system abnormalities found during the annual maintenance inspection, the repairs made, the date of attempted repair, and the date of actual repair.

**3.** The permittee shall maintain the following information pertaining to the design of control equipment installed to comply with 40 CFR 61.132 through 40 CFR 61.134:

a. detailed schematics, design specifications, and piping and instrumentation diagrams; and

b. the dates and descriptions of any changes in the design specifications.

This information shall be recorded and kept in a readily accessible location.

**4.** The permitee shall maintain records that demonstrate that the equipment identified in A.I.1 above is not "in benzene service" as defined in 40 CFR Part 61.131. As specified in 40 CFR 61.137(b), to determine whether or not a piece of equipment is in benzene service, the methods in 40 CFR 61.245(d) shall be used, except that, for exhausters, the percent benzene shall be 1 percent by weight, rather than the 10 percent by weight described in 40 CFR 61.245(d).

## IV. Reporting Requirements

**1.** The permittee shall submit a semiannual report to the Hamilton County Department of Environmental Services, which includes the following information:

a. a brief description of any visible defect in the source or ductwork;

b. the number of leaks detected and repaired;

c. a brief description of any system abnormalities found during each annual maintenance inspection that occurred in the reporting period and the repairs made; and

d. a statement stating whether all provisions of 40 CFR part 61, Subpart L, have been fulfilled during the semiannual reporting period. Should non-compliance with the terms and conditions of this permit occurr during the semiannual reporting period, each non-compliance issue and period of non-compliance shall be reported.

These semiannual reports shall be submitted by January 31 and July 31 of each year and cover the previous semiannual period.

## V. Testing Requirements

**1.** Compliance with the emission limitation in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Leak check monitoring and reporting requirements of 40 CFR Part 61, Subpart L

Applicable Compliance Method:

Compliance with 40 CFR Part 61, Subpart L shall be determined by a review of records, review of performance test results, inspections, or any combination thereof, using the methods and procedures specified in 40 CFR 61.137.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 5 Temper Mill (P091)

**Activity Description:** This equipment includes a four high set of rolls used for cold working (tempering) steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| No. 5 temper mill | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Rolling oil application | OAC rule 3745-21-09(OO)(1) | The VOC content of the rolling oil employed shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Rust preventive oil application | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Prelube oil application | OAC rule 3745-21-09(OO)(4) | The VOC content of the prelube oil employed shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices when operating the temper mill to minimize fugitive dust emissions.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points of the building containing 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of were observed from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rolling oil, rust preventative, and/or prelube oil was (were) employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Compliance with the VOC content limitations specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 6 Temper Mill (P092)

**Activity Description:** This equipment includes a four high set of rolls used for cold working (tempering) steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| No. 6 temper mill | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Rolling oil application | OAC rule 3745-21-09(OO)(1) | The VOC content of the rolling oil employed shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Rust preventive oil application | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Prelube oil application | OAC rule 3745-21-09(OO)(4) | The VOC content of the prelube oil employed shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices when operating the temper mill to minimize fugitive dust emissions.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points of the building containing 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of were observed from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rolling oil, rust preventative, and/or prelube oil was (were) employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Compliance with the VOC content limitations specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 1 CR Line (P093)

**Activity Description:** This equipment includes payoff reel, shears, inspection station, oiler, and a winding reel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| No. 1 Corrective rewind line | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Rust preventive oil application | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Prelube oil application | OAC rule 3745-21-09(OO)(4) | The VOC content of the prelube oil employed shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices when operating the No. 1 Corrective rewind line to minimize fugitive dust emissions.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points of the building containing 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of were observed from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rust preventative and/or prelube oil was (were) employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Compliance with the VOC content limitations specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Hot Strip Mill (P094)

**Activity Description:** The Hot Strip Mill is a hot rolling of steel slabs operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Hot strip mill rolling of steel slabs | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Rolling oil application | OAC rule 3745-21-09(OO)(1) | The VOC of the rolling oil employed shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices when hot rolling steel slabs to minimize fugitive dust emissions.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions from the fugitive egress points of the building containing 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each rolling oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each rolling oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of were observed from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rolling oil was employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

## V. Testing Requirements (continued)

**1.b** Compliance with the VOC content limitation specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 7 Temper Mill (P095)

**Activity Description:** This equipment includes a two high set of rolls used for cold working (tempering) steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| No. 7 temper mill | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See A.I.2.a below. |
| Rolling oil application | OAC rule 3745-21-09(OO)(1) | The VOC content of the rolling oil employed shall not exceed 6.9 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Rust preventive oil application | OAC rule 3745-21-09(OO)(2) | The VOC content of the rust preventative oil employed shall not exceed 3.3 pounds of VOC per gallon of oil, excluding water and exempt solvents. |
| Prelube oil application | OAC rule 3745-21-09(OO)(4) | The VOC content of the prelube oil employed shall not exceed 0.8 pounds of VOC per gallon of oil, excluding water and exempt solvents. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ good operating practices when operating the temper mill to minimize fugitive dust emissions.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points of the building containing 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

**2.** The permittee shall collect and record the following information on a monthly basis:

a. the name and identification of each oil employed; and

b. the VOC content, as applied, excluding water and exempt solvents, in pounds per gallon, of each oil employed.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of were observed from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing that a noncompliant rolling oil, rust preventative, and/or prelube oil was (were) employed. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Compliance with the VOC content limitations specified in A.I.1 shall be demonstrated by the information collected and recorded in A.III.2 of these terms and conditions.

The VOC contents of the coatings employed shall be determined by USEPA Method 24. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Flux Handling (P901)

**Activity Description:** This includes the unloading and conveying of flux material to the BOF.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Rail car unloading of flux | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.<br><br>See A.I.2.a below. |
| Truck unloading of flux | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.<br><br>See A.I.2.b below. |
| Conveyor and transfer points equipped with an enclosure and/or baghouse | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | See A.I.2.c below. |
| | OAC rule 3745-17-11(B) | Particulate emissions from the baghouse shall not exceed 69.0 lbs/hr, based upon a process weight rate of 506 tons per hour.<br><br>See A.I.2.d below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Flux handling fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The reasonably available control measure for the rail car unloading is the use of bottom unloading.

**2.b** The reasonably available control measure for the truck dumping area is the maintenance of a two-sided building with a roof to enclose the truck dumping area.

**2.c** The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust from the transfer and conveying operation to the baghouse. The capture and ventilation system associated with the transfer and conveying operation shall have a collection efficiency that is sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the points of capture to the extent possible with good engineering design.

**2.d** The particulate emissions limitation of 69.0 pounds per hour is based upon a process weight rate of 506 tons per hour and Table I of OAC rule 3745-17-11. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II of OAC rule 3745-17-11 is more stringent than 69.0 lbs/hour, the permittee shall comply with the more stringent limitation.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis when in operation.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**3.** 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 baghouse 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed at the points of capture serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

**1.c** Emission Limitation:

Particulate emissions from the baghouse shall not exceed 69.0 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

**2.** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements.

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of baghouse P901BH01 to demonstrate compliance with the allowable mass emission limitation for particulates and for compliance with the visible particulate emission limitation.

**2.c** A particulate emissions test also shall be conducted at the inlet of baghouse P901BH01 to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11.

**2.d** The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

**2.e** During each mass emission test run, the following test method shall be employed to demonstrate compliance with the allowable visible particulate emission limit: Method 9 of 40 CFR Part 60, Appendix A.

## V. Testing Requirements (continued)

**2.f** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Continuous Caster (P902)

**Activity Description:** Molten steel is continuous cast into steel slabs at this operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| BOF continuous casting hot metal transfer to tundish | OAC rule 3745-17-07(B) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Maintain good operating practices for the hot metal transfer to the tundish at the inlet of the caster, in order to minimize or eliminate visible emissions of fugitive dust. |
| BOF continuous casting - casting machine | OAC rule 3745-17-07(A) | Visible particulate emissions from the stack associated with this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B) | Particulate emissions from all stacks associated with this emissions unit shall not exceed 73.0 pounds per hour. See A.I.2.a below. |
| BOF continuous casting - torch cutting operation | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Maintain good operating practices for torch cutting in order to minimize or eliminate visible emissions of fugitive dust. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Continuous Caster fugitive emissions | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27). |

**2. Additional Terms and Conditions**

**2.a** The particulate emissions limitation of 73.0 pounds per hour is based upon a process weight rate of 700 tons per hour and Table I of OAC rule 3745-17-11. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II of OAC rule 3745-17-11 is more stringent than 73.0 lbs/hour, the permittee shall comply with the more stringent limitation.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the fugitive egress points for this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the fugitive egress points for this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

**1.c** Emission Limitation:

Particulate emissions from the baghouse shall not exceed 73.0 pounds per hour.

Applicable Compliance Method:

If required, compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 3 Blast Furnace (P925)

**Activity Description:** Arthur G. McKee unique blast furnace produces hot metal.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 740 tons/hr blast furnace with settling chamber and scrubber (stove stack emissions) and blast furnace flare | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | OAC rule 3745-17-11(B) | Particulate emissions from the scrubber shall not exceed 73.8 pounds per hour.<br><br>See A.I.2.b below. |
| Blast furnace charging and dry flue dust handling from the settling chamber; emergency pressure relief (bleeder valves) | OAC rule 3745-17-07(A) | Visible PE from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>See A.I.2.c.i and A.I.2.d below. |
| Blast furnace tapping (East and West casthouse fugitive emissions) with flame suppression system | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>See A.I.2.c.ii and A.I.2.d below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-08(A)(3)(b)(i) | See A.I.2.e below. |
| | 40 CFR Part 63, Subpart FFFFF | See A.I.2.f below. |

**2. Additional Terms and Conditions**

**2.a** To the maximum extent practicable, the flare shall be maintained and operated in a manner consistent with good practice for minimizing CO emissions.

**2.b** The particulate emission limitation of 73.8 pounds per hour is based upon an a maximum process weight of 740 TPH and Table I of OAC rule 3745-17-11. This emission limitation is more stringent than that obtained from applying the uncontrolled particulate emission rate of 15,000 lbs/hr and Figure II of OAC rule 3745-17-11.

**2.c** i. The permittee shall minimize or eliminate visible emisions of fugitive dust through the employment of RACM. These measures shall include, but not be limited to the use of water sprays or steam injection into the dry flue dust when discharged from the settling chamber into a railcar.

ii. The permittee shall operate and maintain a flame suppression control system to reduce fugitive emissions from the casthouses associated with this emissions unit.

The technical specifications of the flame suppression system shall be in accordance with AK Steel's Flame Suppression System Design Drawing Nos. 591580-86 and AK Steel's March 27, 2000 letter to HCDES.

The flame suppression control system shall be designed and operated to minimize or eliminate visible fugitive emissions from the roof monitors and other openings of the casthouse, and shall utilize natural gas as its primary fuel.

The permittee shall keep the runner covers in place except when such covers are undergoing maintenance.

iii. The provisions specified above will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**2.d** Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27).

After the date set forth in the DATE2 column of Section (e) of Paragraph 10 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006), the requirements of 40 CFR Part 52.1870(C)(27) shall not apply to this emissions unit.

**2.e** The exemption set forth in OAC rule 3745-17-08(A)(3)(b)(i) shall expire on the date set forth in the DATE2 column of Section (e) of Paragraph 10 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2.f** This emissions unit shall be subject to and shall comply with the requirements of 40 CFR Part 63, Subpart FFFFF as specified in Part II - Specific Facility Terms and Conditions on the date set forth in the DATE2 column of Section (e) of Paragraph 10 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2. Additional Terms and Conditions (continued)**

**2.g** Emissions units P925, P926, and P927 are subject to the USEPA's MACT requirements in 40 CFR Part 63, Subpart FFFFF and, on and after the effective date of the Consent Order and Final Judgement Entry (April 1, 2004), to the terms and provisions of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000. Compliance with these requirements should result in compliance with OAC rules 3745-17-07(B) and 3745-17-08(B) and should abate the public nuisance alleged by the State to exist as a result of the operation of these emissions units and result in compliance with OAC rule 3745-15-07.

## II. Operational Restrictions

**1.** The permittee shall operate the flare at all times when the emissions unit is in operation and blast furnace gas is vented to it (i.e., a waste gas bleeder valve was open).

**2.** The prescrubber water flow rates and RS scrubber water flow rates for scrubber P925SC01 shall be maintained at or above the minimum prescrubber water flow rates and RS scrubber water flow rates established during the most recent emission test that demonstrated the emissions unit was in compliance.

**3.** The pressure drop across the scrubber P925SC01 shall be continuously maintained at a minimum of 50 inches of water at all times while the emissions unit is in operation.

**4.** Water sprays or steam injection shall be employed at all times for the dry flue dust when it is discharged from the settling chamber into a rail car.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop, the prescrubber water flow rate and the RS scrubber water flow rate for scrubber P925SC01 while the emissions unit is in operation.

The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information:

a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;

b. the prescrubber water flow rate, in gallons per minute, on a once per shift basis;

c. the RS scrubber water flow rate, in gallons per minute, on a once per shift basis; and

d. the downtime for the capture (collection) system, control device, and monitoring equipment when this emissions unit was in operation.

**2.** Within 12 months of the effective date of the permit, the permittee shall install and operate an alarm system to alert the blast furnace operator when the pilot flame for the waste gas flare is not lit. The permittee shall also operate and maintain equipment that allows the blast furnace operator to monitor the position of the waste gas bleeder valve. The alarm system and the valve position monitor shall be maintained and operated in a manner consistent with manufacturer's recommendations and good operating practices.

The permittee shall record all periods of time that the pilot flame for the waste gas flare is not lit and the position of the waste gas bleeder valve (open or closed) during such periods of time.

## III. Monitoring and/or Record Keeping Requirements (continued)

**3.** The flame suppression control system shall be equipped with gas monitoring and recording equipment to assure that, when operational, the system is operating at design levels to achieve maximum reduction of fugitive emissions from the casthouses.

Gas flow records, in the form of recording charts or equivalent, shall identify the following:

a. the time of day; and

b. the gas flow rate.

In addition, the permittee shall maintain daily records of the start and end times of each tapping operation and of each use of the flame suppression control system.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**4.** The permittee shall perform visible emission readings of the fugitive emissions from the casthouse roof monitor. The visible emission readings shall be performed by certified smoke readers in accordance with the procedures contained in paragraph (B)(3) of OAC rule 3745-17-03.

Readings taken during one entire cast shall be performed at least once per week and shall be recorded on forms which have been approved by the Director. Observations shall commence when tapping occurs.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**5.** The permittee shall maintain daily records that document whether or not the water sprays or steam injection system was [were] properly employed when the dry flue dust was discharged from the settling chamber into a rail car.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**6.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from stove stacks 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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following parameters were not maintained at or above the required levels for scrubber P925SC01:

a. the static pressure drop across the scrubber;

b. the prescrubber water flow rate; and

c. the RS scrubber water flow rate.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time when the pilot flame for the waste gas flare is not lit and a waste gas bleeder valve was open.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods during which the water spray and/or steam injection system was [were] not in operation or not functioning properly. The reports shall include the date, time, and duration of each such period.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**4.** The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Term and Condition A.1.c.

**5.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stove stacks serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These semiannual reports shall be submitted by January 31 and July 31 of each year and shall cover the previous 6-month period.

**6.** On a quarterly basis, the permittee shall submit to the Hamilton County Department of Environmental Services the results of all Method 9 visible emission readings performed in accordance with section A.III.4 above. Each report shall be submitted by the last day of the month following the calendar quarter, and shall cover the previous calendar quarter.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

**7.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any gas flow record required in section A.III.3 that was not kept and identify all periods of time the flame suppression system was not operated in a manner to minimize or eliminate visible fugitive emissions from the roof monitors and other openings of the casthouse. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter.

This provision will no longer apply after the compliance date for the blast furnace in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

## V. Testing Requirements (continued)

**1.b** Compliance with the control requirements for the blast furnace charging and dry flue dust handling from the settling chamber shall be demonstrated by the record keeping requirements in section A.III.5 of these terms and conditions.

**1.c** Compliance with the control requirements for the flame suppression system which controls the blast furnace tapping (east and west casthouse fugitive emissions) shall be demonstrated by the record keeping requirements in section A.III.3 and A.III.4 of these terms and conditions.

**2.** Emission Limitation:

Particulate emissions from the scrubber exhaust gases, stove stack, and flare shall not exceed 73.8 pounds per hour.

Applicable Compliance Method:

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

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of the stove stack (the flare stack cannot be tested) to demonstrate compliance with the allowable mass emission limitation for particulates from the venturi scrubber of 73.8 lbs per hour.

**2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

**2.d** The scrubber pressure drop and combined recirculating and makeup water flow rate shall be recorded at five-minute intervals during the emission testing.

**2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

**2.f** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 15 Vessel (P926)

**Activity Description:** The No. 15 basic oxygen furnace produces molten steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Basic oxygen furnace, hot metal charging to vessel, equipped with a closed hood and 60,000 acfm high draft fan vented to a venturi scrubber<br><br>Basic oxygen furnace steel refining (oxygen lancing/melting) equipped with a closed hood, 60,000 acfm high draft fan vented to a venturi scrubber and smokeless flare<br><br>Basic oxygen furnace tapping, equipped with a closed hood and 60,000 acfm high draft fan vented to a venturi scrubber<br><br>Basic oxygen furnace slagging off process equipped with a 60,000 acfm high draft fan vented to a venturi scrubber | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | OAC rule 3745-17-11(B) | PE from the venturi scrubber shall not exceed 71.1 pounds per hour.<br><br>See A.I.2.b below. |
| | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>See A.I.2.c and A.I.2.d below. |
| | OAC rule 3745-17-08(A)(3)(b)(ii) | See A.I.2.e below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | 40 CFR Part 63, Subpart FFFFF | See A.I.2.f below. |

**2. Additional Terms and Conditions**

**2.a** To the maximum extent practicable, the flare shall be maintained and operated in a manner consistent with good practice for minimizing CO emissions.

**2.b** The particulate emission limitation of 71.1 pounds per hour is based upon an a maximum process weight of 600 TPH and Table I of OAC rule 3745-17-11. This emission limitation is more stringent than that obtained from applying the uncontrolled particulate emission rate of 29070 lbs/hr and Figure II of OAC rule 3745-17-11. The allowable particulate emissions using Figure II is 141.4 lbs/hr. The uncontrolled mass rate of emission was calculated using the maximum process weight rate of 1020 tons per hour (the combined maximum process weight rates for emissions units P926 and P927 per OAC rule 3745-17-11(A)(3)) provided in the permit application and an emission factor of 28.5 pounds per ton for uncontrolled basic oxygen furnace (BOF) particulate emissions from AP-42, Table 12.5-1 (10/86).

**2.c** The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of RACM. These measures shall include, but not be limited to the following:

i. Hot metal charging of the vessel shall be done with the vessel tilted no more than 40 degrees from the vertical postion. Hot metal charging shall be conducted with the full draft on the primary exhaust system.

ii. Scrap inspection and segregation procedures shall occur to assure that excessively oily scrap will be excluded from charging to the vessels. No turnings or borings shall be charged to the vessel.

iii. Scrap graded as No. 2 Bundles that are charged to the vessel shall not exceed five percent of the metallic charge, averaged on a weekly basis.

iv. Oxygen lancing sequencing with hood skirt position shall be optimized for minimizing emissions at the beginning of the oxygen blows.

v. Furnace tapping shall be conducted with full draft on the primary exhaust system.

The provisions specified above will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

**2.d** Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27).

After the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006), the requirements of 40 CFR Part 52.1870(C)(27) shall not apply to this emissions unit.

**2.e** The exemption set forth in OAC rule 3745-17-08(A)(3)(b)(ii) shall expire on the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2.f** This emissions unit shall be subject to and shall comply with the requirements of 40 CFR Part 63, Subpart FFFFF as specified in Part II - Specific Facility Terms and Conditions on the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2. Additional Terms and Conditions (continued)**

**2.g** Emissions units P925, P926, and P927 are subject to the USEPA's MACT requirements in 40 CFR Part 63, Subpart FFFFF and, on and after the effective date of the Consent Order and Final Judgement Entry (April 1, 2004), to the terms and provisions of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000. Compliance with these requirements should result in compliance with OAC rules 3745-17-07(B) and 3745-17-08(B) and should abate the public nuisance alleged by the State to exist as a result of the operation of these emissions units and result in compliance with OAC rule 3745-15-07.

## II. Operational Restrictions

**1.** The permittee shall operate the flare at all times when the emissions unit is in operation and oxygen blows are occuring.

**2.** During all oxygen blows, the scrubber water flow rate for scrubber P926SC01 shall be maintained at or above the minimum scrubber water flow rate established during the most recent emission tests that demonstrated the emissions unit was in compliance.

**3.** The static pressure on the ID fan for scrubber P926SC01 shall be maintained at or above 45 inches of water during all oxygen blows.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall properly operate and maintain equipment to continuously monitor the static pressure on the ID fan and the scrubber water flow rate for scrubber P926SC01 while the emissions unit is in operation.

The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information:

a. the static pressure on the ID fan, in inches of water, on a once per shift basis;

b. the scrubber water flow rate for the scrubber, in gallons per minute, on a once per shift basis; and

c. the downtime for the capture (collection) system, control device, and monitoring equipment when this emissions unit was in operation.

**2.** Within 12 months of the effective date of the permit, the permittee shall install and operate an alarm system to alert the BOF operator when the pilot flame for the flare is not lit when oxygen blows are occuring. The alarm system shall be maintained and operated in a manner consistent with manufacturer's recommendations and good operating practices.

The permittee shall record all periods of time that the pilot flame for the flare is not lit when oxygen blows are occuring.

**3.** The permittee shall collect and record the following information on a weekly basis:

a. the total amount of No.2 bundles charged to the vessel in tons;

b. the total metallic charge to the vessel, in tons; and

c. the percentage of No.2 bundles charged to the vessel (the amount recorded in line a. divided by the amount recorded in line b, multiplied by 100)

This provision will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following parameters were not maintained at or above the required levels for scrubber P926SC01:

a. the static pressure on the ID fan; and

b. the scrubber water flow rate.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time when the pilot flame for the flare was not lit when oxygen blows were occuring.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each week the percentage of No. 2 bundles exceeded five percent of the total metallic charge.

This provision will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

**4.** The quarterly deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**2.** Emission Limitation:

PE from the venturi scrubber shall not exceed 71.1 pounds per hour.

Applicable Compliance Method:

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

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of P926SC01 to demonstrate compliance with the allowable mass emission limitation for particulates.

**2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

**2.d** The static pressure on the ID fan and the scrubber water flow rate for scrubber P926SC01 shall be recorded at five-minute intervals during the emission testing.

**2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services. The emission test(s) shall include periods of oxygen blows which is representative of normal operations for this emissions unit.

## V. Testing Requirements (continued)

**2.f** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** No. 16 Vessel (P927)

**Activity Description:** The No. 16 basic oxygen furnace produces molten steel.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Basic oxygen furnace, hot metal charging to vessel, equipped with a closed hood and 60,000 acfm high draft fan vented to a venturi scrubber<br><br>Basic oxygen furnace steel refining (oxygen lancing/melting) equipped with a closed hood, 60,000 acfm high draft fan vented to a venturi scrubber and smokeless flare<br><br>Basic oxygen furnace tapping, equipped with a closed hood and 60,000 acfm high draft fan vented to a venturi scrubber<br><br>Basic oxygen furnace slagging off process equipped with a 60,000 acfm high draft fan vented to a venturi scrubber | OAC rule 3745-17-07(A) | Visible particulate emissions (PE) from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule. |
| | OAC rule 3745-17-11(B) | PE from the venturi scrubber shall not exceed 71.1 pounds per hour.<br><br>See A.I.2.b below. |
| | 40 CFR Part 52.1870(C)(27) | On February 18, and March 13, 1981, the Governor of Ohio submitted Rule 08 of Chapter 3745-17 of the Ohio Administrative Code for Middletown and the operating permits for the fugitive sources located at ARMCO's (now AK Steel Corporation) Middletown Works Plant.<br><br>See A.I.2.c and A.I.2.d below. |
| | OAC rule 3745-17-08(A)(3)(b)(iii) | See A.I.2.e below. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | 40 CFR Part 63, Subpart FFFFF | See A.I.2.f below. |

**2. Additional Terms and Conditions**

**2.a** To the maximum extent practicable, the flare shall be maintained and operated in a manner consistent with good practice for minimizing CO emissions.

**2.b** The particulate emission limitation of 71.1 pounds per hour is based upon an a maximum process weight of 600 TPH and Table I of OAC rule 3745-17-11. This emission limitation is more stringent than that obtained from applying the uncontrolled particulate emission rate of 29070 lbs/hr and Figure II of OAC rule 3745-17-11. The allowable particulate emissions using Figure II is 141.4 lbs/hr. The uncontrolled mass rate of emission was calculated using the maximum process weight rate of 1020 tons per hour (the combined maximum process weight rates for emissions units P926 and P927 per OAC rule 3745-17-11(A)(3)) provided in the permit application and an emission factor of 28.5 pounds per ton for uncontrolled basic oxygen furnace (BOF) particulate emissions from AP-42, Table 12.5-1 (10/86).

**2.c** The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of RACM. These measures shall include, but not be limited to the following:

i. Hot metal charging of the vessel shall be done with the vessel tilted no more than 40 degrees from the vertical postion. Hot metal charging shall be conducted with the full draft on the primary exhaust system.

ii. Scrap inspection and segregation procedures shall occur to assure that excessively oily scrap will be excluded from charging to the vessels. No turnings or borings shall be charged to the vessel.

iii. Scrap graded as No. 2 Bundles that are charged to the vessel shall not exceed five percent of the metallic charge, averaged on a weekly basis.

iv. Oxygen lancing sequencing with hood skirt position shall be optimized for minimizing emissions at the beginning of the oxygen blows.

v. Furnace tapping shall be conducted with full draft on the primary exhaust system.

The provisions specified above will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

**2.d** Compliance with the terms and conditions of this Title V operating permit shall constitute compliance with the operating permit for this emissions unit, as specified in 40 CFR Part 52.1870(C)(27).

After the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006), the requirements of 40 CFR Part 52.1870(C)(27) shall not apply to this emissions unit.

**2.e** The exemption set forth in OAC rule 3745-17-08(A)(3)(b)(iii) shall expire on the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2.f** This emissions unit shall be subject to and shall comply with the requirements of 40 CFR Part 63, Subpart FFFFF as specified in Part II - Specific Facility Terms and Conditions on the date set forth in Section (h) of Paragraph 11 of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000 (i.e., May 22, 2006).

**2. Additional Terms and Conditions (continued)**

**2.g** Emissions units P925, P926, and P927 are subject to the USEPA's MACT requirements in 40 CFR Part 63, Subpart FFFFF and, on and after the effective date of the Consent Order and Final Judgement Entry (April 1, 2004), to the terms and provisions of the Consent Order and Final Judgement Entry entered in the Butler County Court of Common Pleas civil action, State ex. rel. Petro v. AK Steel Corporation, Case No. CV 2004 03 1000. Compliance with these requirements should result in compliance with OAC rules 3745-17-07(B) and 3745-17-08(B) and should abate the public nuisance alleged by the State to exist as a result of the operation of these emissions units and result in compliance with OAC rule 3745-15-07.

## II. Operational Restrictions

**1.** The permittee shall operate the flare at all times when the emissions unit is in operation and oxygen blows are occuring.

**2.** During all oxygen blows, the scrubber water flow rate for scrubber P927SC01 shall be maintained at or above the minimum scrubber water flow rate established during the most recent emission tests that demonstrated the emissions unit was in compliance.

**3.** The static pressure on the ID fan for scrubber P927SC01 shall be maintained at or above 45 inches of water during all oxygen blows.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall properly operate and maintain equipment to continuously monitor the static pressure on the ID fan and the scrubber water flow rate for scrubber P927SC01 while the emissions unit is in operation.

The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information:

a. the static pressure on the ID fan, in inches of water, on a once per shift basis;

b. the scrubber water flow rate for the scrubber, in gallons per minute, on a once per shift basis; and

c. the downtime for the capture (collection) system, control device, and monitoring equipment when this emissions unit was in operation.

**2.** Within 12 months of the effective date of the permit, the permittee shall install and operate an alarm system to alert the BOF operator when the pilot flame for the flare is not lit when oxygen blows are occuring. The alarm system shall be maintained and operated in a manner consistent with manufacturer's recommendations and good operating practices.

The permittee shall record all periods of time that the pilot flame for the flare is not lit when oxygen blows are occuring.

**3.** The permittee shall collect and record the following information on a weekly basis:

a. the total amount of No.2 bundles charged to the vessel in tons;

b. the total metallic charge to the vessel, in tons; and

c. the percentage of No.2 bundles charged to the vessel (the amount recorded in line a. divided by the amount recorded in line b, multiplied by 100)

This provision will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following parameters were not maintained at or above the required levels for scrubber P927SC01:

a. the static pressure on the ID fan; and

b. the scrubber water flow rate.

**2.** The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time when the pilot flame for the flare was not lit when oxygen blows were occuring.

**3.** The permittee shall submit quarterly deviation (excursion) reports that identify each week the percentage of No. 2 bundles exceeded five percent of the total metallic charge.

This provision will no longer apply after the compliance date for the basic oxygen process furnace (BOPF) in 40 CFR 63, Subpart FFFFF.

**4.** The quarterly deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**2.** Emission Limitation:

PE from the venturi scrubber shall not exceed 71.1 pounds per hour.

Applicable Compliance Method:

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

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of P927SC01 to demonstrate compliance with the allowable mass emission limitation for particulates.

**2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60, Appendix A.

**2.d** The static pressure on the ID fan and the scrubber water flow rate for scrubber P927SC01 shall be recorded at five-minute intervals during the emission testing.

**2.e** The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services. The emission test(s) shall include periods of oxygen blows which is representative of normal operations for this emissions unit.

## V. Testing Requirements (continued)

**2.f** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** CAS/OB (P934)

**Activity Description:** This is a steel refining station using argon stirring and oxygen blowing for certain steel grades.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Molten steel refining station vented to a baghouse | OAC rule 3745-31-05(A)(3) (PTI 14-1663) | Particulate emissions shall not exceed 9.1 TPY.<br><br>See Section A.I.2.<br><br>Carbon monoxide emissions shall not exceed 100 pounds per day* and 20 TPY*.<br><br>The requirements of this rule also include compliance with OAC rule 3745-17-08(B)(3).<br><br>*These emission limitations represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping, or reporting requirements are necessary to demonstrate compliance with these emission limitations. |
| | OAC rule 3745-17-07(A) | The visible emission limitations specified in OAC rule 3745-17-07(A) are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-07(B)(1) | The visible emission limitation specified in OAC rule 3745-17-07(B)(1) is less stringent than that established pursuant to OAC rule 3745-31-05(A)(3). |
| | OAC rule 3745-17-08(B)(3) | The particulate emissions from the refining station shall be vented to the baghouse in a manner that will minimize or eliminate visible emissions of fugitive dust. |

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| | OAC rule 3745-17-11(B)(1) | The emission limitation specified in OAC rule 3745-17-11(B)(1) is less stringent than those established pursuant to OAC rule 3745-31-05(A)(3). |
| | 40 CFR Part 63, Subpart FFFFF | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** Visible particulate emissions from the baghouse outlet shall not exceed five percent opacity as a six-minute average.

**2.b** Visible emissions of fugitive dust from the vacuum degas building shall not exceed six percent opacity as a six-minute average.

**2.c** The particulate emissions from the baghouse associated with this emissions unit shall not exceed the following, whichever is less stringent:

i. 0.020 grain per dry standard cubic feet; or
ii. 1.92 lbs/hr.

**II. Operational Restrictions**

**1.** The pressure drop across baghouse P934/5BH01 shall be maintained within the range established during the most recent emission test that demonstrated compliance with the particulate emission limitation.

**III. Monitoring and/or Record Keeping Requirements**

**1.** The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a once per shift basis.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF in order to ensure ongoing compliance with the mass and opacity limitations established pursuant to OAC rule 3745-31-05(A)(3) in PTI 14-1663.

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF in order to ensure ongoing compliance with the mass and opacity limitations established pursuant to OAC rule 3745-31-05(A)(3) in PTI 14-1663.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

## III. Monitoring and/or Record Keeping Requirements (continued)

**3.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for this emissions unit. The presence or absence of any visible fugitive 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 location and 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.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF in order to ensure ongoing compliance with the mass and opacity limitations established pursuant to OAC rule 3745-31-05(A)(3) in PTI 14-1663.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF in order to ensure ongoing compliance with the mass and opacity limitations established pursuant to OAC rule 3745-31-05(A)(3) in PTI 14-1663.

**3.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed at the points of capture serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed six percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

Visible PE observations shall be made at egress points of the building housing the CAS/OB.

**1.b** Emission Limitation:

Visible particulate emissions from the baghouse associated with this emissions unit shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.c** Emission Limitation:

Particulate emissions from the baghouse shall not exceed 1.92 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

**1.d** Emission Limitation:

0.020 grain/dry standard cubic foot of exhaust gases from the baghouse.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

**1.e** Emission Limitation:

Particulate emissions shall not exceed 9.1 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

**1.f** Emission Limitation:

Carbon monoxide emissions shall not exceed 100 pounds per day.

Applicable Compliance Method:

If required, compliance shall be determined through emission testing performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10 to determine the hourly emission rate and the result multiplied by the daily hours of operation.

## V. Testing Requirements (continued)

**1.g** Emission Limitation:

Carbon monoxide emissions shall not exceed 20 TPY.

Applicable Compliance Method:

The annual emission limitation was established by multiplying the daily emission limitation by 365 days of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the daily limitation.

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

**2.a** The emission testing shall be conducted within 12 months of the effective date of this permit.

**2.b** The emission testing shall be conducted at the outlet of P934/5BH01 to demonstrate compliance with the allowable mass emission limitation for particulates from the CAS/OB of 1.92 lbs per hour. In addition to the pounds of particulate per hour emission rate from P934/5BH01, the grain per dry standard cubic foot emission rate shall be calculated to determine compliance with the 0.020 grain per dry standard cubic foot emission limit for the exhaust gases of the baghouse.

**2.c** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60 Appendix A. During each test run, visible emission readings shall be performed in accordance with USEPA Method 9 to demonstrate compliance with the opacity limitations for the degas building and the baghouse outlet.

**2.d** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Vacuum Degasser (P935)

**Activity Description:** The vacuum degassing system is a molten steel refining station for certain steel grades.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Vacuum degassing equipped with two condensers and CAS/OB baghouse P934 (same baghouse used on emissions unit P934) | OAC rule 3745-17-07(A) | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule. |
| | OAC rule 3745-17-11(B) | Particulate emissions from all stacks associated with this emissions unit shall not exceed 73.1 pounds per hour. See A.I.2.a below. |
| Unloading of additive into hoppers, enclosed in a building enclosure | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B) | Reasonably available control measures (RACM) that are sufficient to minimize or eliminate visible emissions of fugitive dust<br><br>See section A.I.2.b below. |

**2. Additional Terms and Conditions**

**2.a** The particulate emissions limitation of 73.1 pounds per hour is based upon a process weight rate of 700 tons per hour and Table I of OAC rule 3745-17-11. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II of OAC rule 3745-17-11 is more stringent than 73.1 lbs/hour, the permittee shall comply with the more stringent limitation.

**2.b** The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of RACM. These measures shall include, but not be limited to, the use of partial enclosures surrounding the additive handling operation.

### II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points venting to the ambient air (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

**2.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations (see terms and conditions for P934).

## IV. Reporting Requirements

**1.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will continue to apply after the compliance date for BOPF shop ancillary operations (see terms and conditions for P934).

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

**1.a** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.b** Emission Limitation:

Particulate emissions from the exhaust gases from all stacks associated with this emission unit shalll not exceed 73.1 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined through stack testing performed using the requirements established in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

**1.c** Emission Limitation:

Visible emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

Visible emission observations shall be made at the appropriate egress points of the building housing the material handling operation.

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

**2.a** The emission testing shall be conducted within 12 months of the permit effective date.

**2.b** The emission testing shall be conducted at the outlets of the baghouse to demonstrate compliance with the allowable mass emission limitation for particulates of 73.1 lbs per hour.

The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

**2.c** A particulate emissions test also shall be conducted at the inlet of the baghouse to determine the uncontrolled mass rate of emission for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11.

**2.d** The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 of 40 CFR Part 60 Appendix A. In addition, visible emission readings, using USEPA Method 22, shall be performed during each test run.

## V. Testing Requirements (continued)

**2.e** Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Desul. Station (P956)

**Activity Description:** This is a spare desulfurization facility used during routine maintenance of the main operation.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| Hot metal pouring and desulfurization process with baghouse | OAC rule 3745-17-07(A) | Visible particulate emissions from the baghouse outlet shall not exceed twenty percent opacity as a six-minute average except as provided by rule. |
| | OAC rule 3745-17-07(B)(1) | Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average. |
| | OAC rule 3745-17-08(B)(3) | See A.I.2.a below. |
| | OAC rule 3745-18-15(C)(9) | Sulfur dioxide emissions shall not exceed 0.29 pound of sulfur dioxide per ton of product from the station. This emissions unit shall not be operated when emissions unit P956 is in operation. |
| | 40 CFR Part 63, Subpart FFFFF | See Part II - Specific Facility Terms and Conditions. |

**2. Additional Terms and Conditions**

**2.a** The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust from the hot metal pouring and desulfurization process. The control equipment associated with the hot metal pouring and desulfurization process shall meet the following requirements:

i. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and

ii. the control equipment shall achieve an outlet emission rate of not greater than .030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there are no visible particulate emissions from the exhaust stack(s) whichever is less stringent.

**2. Additional Terms and Conditions (continued)**

**2.b** Based on information provided in AP-42, Fifth Edition, Section 12.5.2.3, Emissions and Controls for hot metal desulfurization, and emission information provided by AK Steel, the potential to emit for sulfur dioxide emissions from this emissions unit is well below the allowable emission rate; therefore, it is not necessary to establish monitoring, record keeping, and reporting requirements to ensure ongoing compliance. AP-42 lists no SO2 emissions from the hot metal metal desulfurization processs, and the permittee estimates 1.5 lbs/hr SO2, at maximum production levels. This equates to a maximum emission rate well below the allowable SO2 emission limit listed in section A.I.1 of this permit.

## II. Operational Restrictions

**None**

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall maintain a record of all times this emissions unit was in operation concurrently with emissions unit P047.

**2.** The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the fugitive egress points for 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 location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

**3.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse 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. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

## IV. Reporting Requirements

**1.** The permittee shall submit quarterly deviation (excursion) reports that identify any time periods when emissions units P956 and P047 were in operation at the same time.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I, Section A.1.c.ii of the General Term and Conditions.

## IV. Reporting Requirements (continued)

**2.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

**3.** The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

This provision will no longer apply after the compliance date for BOPF shop ancillary operations specified in 40 CFR 63, Subpart FFFFF.

## V. Testing Requirements

**1.** Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The points of observation for visible emission observations shall include any non-stack egress points from the BOF building housing this emissions unit. Such egress points shall include, but are not limited to: doorways, windows, and roof monitors.

**1.b** Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

**1.c** Emission Limitation:

0.030 grain/dry standard cubic foot from the exhaust gases from baghouse P956BH01

Applicable Compliance Method:

If required, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

Based on the monitoring and record keeping requirements specified in Section A.III.3, it will be assumed that this emissions unit is in compliance with the applicable particulate emission limitation if there are no visible emissions from the stack associated with this emissions unit.

## V. Testing Requirements (continued)

**1.d** Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.29 pound of sulfur dioxide per ton of product from the station.

Applicable Compliance Method:

If required, compliance shall be determined through emission testing conducted in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6 and the procedures specified in OAC rule 3745-18-04.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

# Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** E.Tar Storage Tank (T002)

**Activity Description:** The east tar storage tank is used to store tar, a coke by-product.

## A. State and Federally Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|
| 700,000-gallon, fixed roof, tar storage tank with gas blanketing | 40 CFR Part 61, Subpart L | No detectible fugitive VOC emissions from equipment in benzene service |
| | OAC rule 3745-21-09(L) | See A.I.2.a below. |

**2. Additional Terms and Conditions**

**2.a** Pursuant to OAC rule 3745-21-09(L)(4), this emissions unit is exempt from the requirements of OAC rule 3745-21-09(L) since tar is the only material stored in this tank and the true vapor pressure of tar is less than 1.52 pounds per square inch absolute.

### II. Operational Restrictions

**1.** The permittee shall operate and maintain a gas blanketing system for the by-products recovery plant in accordance with the requirements of 40 CFR 61.132.

**1.a** The permittee shall enclose and seal all openings on each process vessel, tar storage tank, and tar-intercepting sump.

The permittee shall duct gases from each process vessel, tar storage tank, and tar-intercepting sump to the gas collection system, gas distribution system, or other enclosed point in the by-product recovery process where the benzene in the gas will be recovered or destroyed. This control system shall be designed and operated for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by the methods specified in 40 CFR 61.245(c). This system can be designed as a closed, positive pressure, gas blanketing system.

i. Except, the permittee may elect to install, operate, and maintain a pressure relief device, vacuum relief device, an access hatch, and a sampling port on each process vessel, tar storage tank, and tar-intercepting sump. Each access hatch and sampling port must be equipped with a gasket and a cover, seal, or lid that must be kept in a closed position at all times, unless in actual use.

**2.** The permittee shall not store any material in this emissions unit that has a true vapor pressure greater than 1.52 pounds per square inch absolute.

## III. Monitoring and/or Record Keeping Requirements

**1.** The permittee shall monitor the connections and seals on each control system to determine if it is operating with no detectable emissions, using Reference Method 21 (40 CFR Part 60, Appendix A) and procedures specified in 40 CFR 61.245(c), and shall visually inspect each source (including sealing materials) and the ductwork of the control system for evidence of visible defects such as gaps or tears. This monitoring and inspection shall be conducted on a semiannual basis and at any other time after the control system is repressurized with blanketing gas following removal of the cover or opening of the access hatch.

a. If an instrument reading indicates an organic chemical concentration more than 500 ppm above a background concentration, as measured by Reference Method 21, a leak is detected.

b. If visible defects such as gaps in sealing materials are observed during a visual inspection, a leak is detected.

c. When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

d. A first attempt at repair of any leak or visible defect shall be made no later than 5 calendar days after each leak is detected.

**2.** The permittee shall conduct a maintenance inspection of the control system on an annual basis for evidence of system abnormalities, such as blocked or plugged lines, sticking valves, plugged condensate traps, and other maintenance defects that could result in abnormal system operation. The permittee shall make a first attempt at repair within 5 days, with repair within 15 days of detection.

**3.** After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 61.242-10.

No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 61.245(c).

**4.** To determine whether or not a piece of equipment is in benzene service, the methods in 40 CFR 61.245(d) shall be used, except that, for exhausters, the percent benzene shall be 1 percent by weight, rather than the 10 percent by weight described in 40 CFR 61.245(d).

**5.a** Each piece of equipment within a process unit that can conceivably contain equipment in VHAP service is presumed to be in VHAP service unless the permittee demonstrates that the piece of equipment is not in VHAP service. For a piece of equipment to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10 percent by weight. For purposes of determining the percent VHAP content of the process fluid that is contained in or contacts equipment, procedures that conform to the methods described in ASTM Method D-2267 shall be used.

**5.b** The permittee may use engineering judgment rather than the procedures in 40 CFR 61.245(d)(1) to demonstrate that the percent VHAP content does not exceed 10 percent by weight, provided that the engineering judgment demonstrates that the VHAP content clearly does not exceed 10 percent by weight. When the permittee and the Administrator do not agree on whether a piece of equipment is not in VHAP service, however, the procedures in 40 CFR 61.245(d)(1) shall be used to resolve the disagreement.

If the permittee determines that a piece of equipment is in VHAP service, the determination can be revised only after following the procedures in 40 CFR 61.245(d)(1).

**5.c** Samples used in determining the percent VHAP content shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

## III. Monitoring and/or Record Keeping Requirements (continued)

**6.** The following information pertaining to the design of control equipment installed to comply with 40 CFR 61.132 through 61.134 and the design requirements for closed-vent systems and control devices described in 40 CFR 61.242-11 shall be recorded and kept in a readily accessible location:

a. detailed schematics, design specifications, and piping and instrumentation diagrams;

b. the dates and descriptions of any changes in the design specifications

c. a description of the parameter or parameters monitored, as required in 40 CFR 61.242-11(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring;

d. periods when the closed-vent systems and control devices required in 40 CFR 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9 are not operated as designed, including periods when a flare pilot light does not have a flame; and

e. dates of startups and shutdowns of the closed-vent systems and control devices required in 40 CFR 61.242-2, 61.242-3, 61.242-4, 61.242-5 and 61.242-9.

**7.** The following information pertaining to sources subject to 40 CFR 61.132 and sources subject to 40 CFR 61.133 shall be recorded and maintained for 2 years following each semiannual (and other) inspection and each annual maintenance inspection:

a. the date of the inspection and the name of the inspector;

b. a brief description of each visible defect in the source or control equipment and the method and date of repair of the defect;

c. the presence of a leak, as measured using the method described in 40 CFR 61.245(c). The record shall include the date of attempted and actual repair and method of repair of the leak; and

d. a brief description of any system abnormalities found during the annual maintenance inspection, the repairs made, the date of attempted repair, and the date of actual repair.

**8.** The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in the applicability section of 40 CFR Part 61, Subpart L:

a. an analysis demonstrating the design capacity of the process unit; and

b. an analysis demonstrating that equipment is not in VHAP service.

**9.** Information and data used to demonstrate that a piece of equipment is not in VHAP service shall be recorded in a log that is kept in a readily accessible location.

**10.** For each day during which the permittee stores any material in this emissions unit that has a true vapor pressure greater than 1.52 pounds per square inch absolute, the permittee shall maintain records of the type and maximum true vapor pressure of the material stored in this emissions unit.

## IV. Reporting Requirements

**1.** A report shall be submitted semiannually starting 6 months after the initial reports required in 40 CFR 61.138(e) and 40 CFR 61.10, which includes the information in a through e below.

a. for sources subject to 40 CFR 61.132 and sources subject to 40 CFR 61.133:

i. a brief description of any visible defect in the source or ductwork;

ii. the number of leaks detected and repaired; and

iii. a brief description of any system abnormalities found during each annual maintenance inspection that occurred in the reporting period and the repairs made.

b. for equipment in benzene service subject to 40 CFR 61.135(a), information required by 40 CFR 61.247(b);

c. for each exhauster subject to 40 CFR 61.135 for each quarter during the semiannual reporting period:

i. the number of exhausters for which leaks were detected as described in 40 CFR 61.135(d) and (e)(5);

ii. the number of exhausters for which leaks were repaired as required in 40 CFR 61.135(d) and (e)(6); and

iii. the results of performance tests to determine compliance with 40 CFR 61.135(g) conducted within the semiannual reporting period;

d. a statement signed by the permittee stating whether all provisions of 40 CFR Part 61, Subpart L have been fulfilled during the semiannual reporting period; and

e. revisions to items reported according to 40 CFR 61.138(e) if changes have occurred since the initial report or subsequent revisions to the initial report.

**2.** The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing that a material with a true vapor pressure greater than 1.52 pounds per square inch absolute was stored in this emissions unit. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the calendar quarter during which the exceedance occurs.

## V. Testing Requirements

**1.** Compliance with the emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

**1.a** Emission Limitation:

no detectible fugitive VOC emissions from equipment in benzene service [40 CFR Part 61, Subpart L]

Applicable Compliance Method:

Compliance with 40 CFR Part 61, Subpart L shall be determined by a review of records, review of performance test results, inspections, or any combination thereof, using the methods and procedures specified in 40 CFR 61.137.

## VI. Miscellaneous Requirements

**None**

## B. State Enforceable Section

### I. Applicable Emissions Limitations and/or Control Requirements

**1.** The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

| Operations, Property, and/or Equipment | Applicable Rules/ Requirements | Applicable Emissions Limitations/Control Measures |
|---|---|---|

**2. Additional Terms and Conditions**

**None**

### II. Operational Restrictions

**None**

### III. Monitoring and/or Record Keeping Requirements

**None**

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

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## THIS IS THE LAST PAGE OF THE PERMIT

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Federal Register

Monday,
September 13, 2004

# Part II

# Environmental Protection Agency

## 40 CFR Part 63

## National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

**[OAR–2002–0058; FRL–7633–9]**

**RIN 2060–AG69**

## National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The EPA is promulgating national emission standards for hazardous air pollutants (NESHAP) for industrial, commercial, and institutional boilers and process heaters. The EPA has identified industrial, commercial, and institutional boilers and process heaters as major sources of hazardous air pollutants (HAP) emissions. The final rule will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emissions standards reflecting the application of the maximum achievable control technology (MACT). The final rule is expected to reduce HAP emissions by 50,600 to 58,000 tons per year (tpy).

The HAP emitted by facilities in the boiler and process heater source category include arsenic, cadmium, chromium, hydrogen chloride (HCl), hydrogen fluoride, lead, manganese, mercury, nickel, and various organic HAP. Exposure to these substances has been demonstrated to cause adverse health effects such as irritation to the lung, skin, and mucus membranes, effects on the central nervous system, kidney damage, and cancer. These adverse health effects associated with the exposure to these specific HAP are further described in this preamble. In general, these findings only have been shown with concentrations higher than those typically in the ambient air.

The final rule contains numerous compliance provisions including health-based compliance alternatives for the hydrogen chloride and total selected metals emission limits.

**DATES:** The final rule is effective November 12, 2004. The incorporation by reference of certain publications listed in the final rule is approved by the Director of the Federal Register as of November 12, 2004.

**ADDRESSES:** The official public docket is the collection of materials that is available for public viewing at the Office of Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center, Room B–102, 1301 Constitution Avenue, NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** For information concerning applicability and rule determinations, contact your State or local representative or appropriate EPA Regional Office representative. For information concerning rule development, contact Jim Eddinger, Combustion Group, Emission Standards Division (C439–01), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5426, fax number (919) 541–5450, electronic mail address *eddinger.jim@epa.gov.*

**SUPPLEMENTARY INFORMATION:** Regulated Entities. Categories and entities potentially regulated by this action include:

| Category | NAICS code | SIC code | Examples of potentially regulated entities |
|---|---|---|---|
| Any industry using a boiler or process heater as defined in the final rule. | 211 | 13 | Extractors of crude petroleum and natural gas. |
| | 321 | 24 | Manufacturers of lumber and wood products. |
| | 322 | 26 | Pulp and paper mills. |
| | 325 | 28 | Chemical manufacturers. |
| | 324 | 29 | Petroleum refineries, and manufacturers of coal products. |
| | 316, 326, 339 | 30 | Manufacturers of rubber and miscellaneous plastic products. |
| | 331 | 33 | Steel works, blast furnaces. |
| | 332 | 34 | Electroplating, plating, polishing, anodizing, and coloring. |
| | 336 | 37 | Manufacturers of motor vehicle parts and accessories. |
| | 221 | 49 | Electric, gas, and sanitary services. |
| | 622 | 80 | Health services. |
| | 611 | 82 | Educational services. |

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists examples of the types of entities EPA is now aware could potentially be regulated by this action. Other types of entities not listed could also be affected. To determine whether your facility, company, business, organization, etc., is regulated by this action, you should examine the applicability criteria in § 63.7485 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*Docket.* The EPA has established an official public docket for this action under Docket ID No. OAR–2002–0058 and Docket ID No. A–96–47. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. Although a part of the official docket, the public docket does not include Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Office of Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202)

566–1742. A reasonable fee may be charged for copying docket materials.

*Electronic Access.* You may access this **Federal Register** document electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr/.*

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select ''search,'' then key in the appropriate docket identification number.

*Worldwide Web (WWW).* In addition to being available in the docket, an electronic copy of the final rule is also available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the final rule will be posted on the TTN policy and guidance page for newly proposed or promulgated rules at the following address: *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

*Judicial Review.* Under section 307(b)(1) of the CAA, judicial review of the NESHAP is available by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by November 12, 2004. Only those objections to the final rule that were raised with reasonable specificity during the period for public comment may be raised during judicial review. Under section 307(b)(2) of the CAA, the requirements that are the subject of the final rule may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

*Background Information Document.* The EPA proposed the NESHAP for industrial, commercial, and institutional boilers and process heaters on January 13, 2003 (68 FR 1660) and received 218 comment letters on the proposal. A memorandum ''National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, Summary of Public Comments and Responses,'' containing EPA's responses to each public comment is available in Docket No. OAR–2002–0058.

*Outline.* The information presented in this preamble is organized as follows:

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B. What criteria are used in the development of NESHAP?
C. How was the final rule developed?
D. What is the relationship between the final rule and other combustion rules?
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I. National Technology Transfer and Advancement Act
J. Congressional Review Act

## I. Background Information

### *A. What Is the Statutory Authority for the Final Rule?*

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. Industrial boilers, commercial and institutional boilers, and process heaters were listed on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit greater than 10 tpy of any one HAP or 25 tpy of any combination of HAP.

### *B. What Criteria Are Used in the Development of NESHAP?*

Section 112(c)(2) of the CAA requires that we establish NESHAP for control of HAP from both existing and new major sources, based upon the criteria set out in CAA section 112(d). The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable, taking into consideration the cost of achieving the emission reduction, any non-air quality health and environmental impacts, and energy requirements. This level of control is commonly referred to as the MACT.

The minimum control level allowed for NESHAP (the minimum level of stringency for MACT) is the ''MACT floor,'' as defined under section 112(d)(3) of the CAA. The MACT floor for existing sources is the emission limitation achieved by the average of the best-performing 12 percent of existing sources for categories and subcategories with 30 or more sources, or the average of the best-performing five sources for categories or subcategories with fewer than 30 sources. For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source.

### *C. How Was the Final Rule Developed?*

We proposed standards for industrial, commercial, and institutional boilers and process heaters on January 13, 2003 (68 FR 1660). Public comments were solicited at the time of proposal. The public comment period lasted from January 13, 2003, to March 14, 2003.

We received a total of 218 public comment letters on the proposed rule. Comments were submitted by industry trade associations, owners/operators of boilers and process heaters, State regulatory agencies and their representatives, and environmental groups. Today's final rule reflects our consideration of all of the comments and additional information received. Major public comments on the proposed rules, along with our responses to those comments, are summarized in this preamble.

*D. What Is the Relationship Between the Final Rule and Other Combustion Rules?*

The final rule regulates source categories covering industrial boilers, institutional and commercial boilers, and process heaters. These source categories potentially include combustion units that are already regulated by other MACT standards. Therefore, we are excluding from the final rule any combustion units that are already or will be subject to regulation under another MACT standard under 40 CFR part 63.

Combustion units that are regulated by other standards and are therefore excluded from the final rule include solid waste incineration units covered by section 129 of the CAA; boilers or process heaters required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by the hazardous waste combustor NESHAP in 40 CFR part 63, subpart EEE [1]; and recovery boilers or furnaces covered by 40 CFR part 63, subpart MM.

With regards to solid waste incineration units covered by section 129 of the CAA, EPA solicited on February 17, 2004 (69 FR 7390) public comments on the definition of ''commercial and industrial solid waste incineration unit'' for the purpose of determining which combustion sources to regulate under section 129 and which to regulate under section 112 (*e.g.*, boilers and process heaters). As stated above, combustion units covered under section 129 are not subject to the final rule.

Electric utility steam generating units are not subject to the final rule. An electric utility steam generating unit is a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit. Non-fossil fuel-fired utility boilers and electric utility steam generating units less than 25 megawatts are covered by the final rule.

In 1986, EPA codified the NSPS for industrial boilers (40 CFR part 60, subparts Db and Dc) and revised portions of them in 1999. The NSPS regulates emissions of particulate matter (PM), sulfur dioxide, and nitrogen oxides from boilers constructed after June 19, 1984. Sources subject to the NSPS are also subject to the final rule because the final rule regulates sources of hazardous air pollutants while the NSPS does not. However, in developing the final rule for industrial, commercial, and institutional boilers and process heaters, EPA minimized the monitoring requirements, testing requirements, and recordkeeping requirements to avoid duplicating requirements.

Because of the broad applicability of the final rule due to the definition of a process heater, certain process heaters could appear to fit the applicability of another existing MACT rule. We have, therefore, included in the list of combustion units not subject to the final rule refining kettles subject to the secondary lead MACT rule (40 CFR part 63, subpart X); ethylene cracking furnaces covered by 40 CFR part 63, subpart YY; and blast furnace stoves described in the EPA document entitled ''National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Plants—Background Information for Proposed Standards'' (EPA–453/R–01–005).

*E. What Are the Health Effects of Pollutants Emitted From Industrial, Commercial, and Institutional Boilers and Process Heaters?*

The final rule protects air quality and promotes the public health by reducing emissions of some of the HAP listed in section 112(b)(1) of the CAA. As noted above, emissions data collected during development of the proposed rule show that HCl emissions represent the predominant HAP emitted by industrial boilers. Industrial boilers emit lesser amounts of hydrogen fluoride, chlorine, metals (arsenic, cadmium, chromium, mercury, manganese, nickel, and lead), and organic HAP emissions. Although numerous organic HAP may be emitted from industrial boilers and process heaters, only a few account for essentially all the mass of organic HAP emissions. These organic HAP are: Formaldehyde, benzene, and acetaldehyde.

Exposure to high levels of these HAP is associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (*e.g.*, irritation of the lung, skin, and mucus membranes, effects on the central nervous system, and damage to the kidneys), and acute health disorders (*e.g.*, lung irritation and congestion, alimentary effects such as nausea and vomiting, and effects on the kidney and central nervous system). We have classified three of the HAP as human carcinogens and five as probable human carcinogens. Our screening assessment for respiratory HAP and for central nervous system (CNS) HAP, using health protective assumptions, indicates that manganese and chlorine are the only boiler-related HAP that are reasonably expected to approach health based criteria concentrations at receptor locations at or beyond facility boundaries. Emissions of all other HAP modeled on an individual basis appears to be insignificant relative to the concentration that would produce the health effects that they represent. The maximal hazard index (HI) for summation of the HAP modeled in the screening assessment for respiratory effects, including chlorine, was less than 3. The maximal HI for summation of the HAP modeled in the screening assessment for CNS effects, including manganese, was less than 3. Therefore, effects noted below for HAP at high concentrations are not expected to occur prior or after regulation as a result of emissions from these facilities, and are provided to illustrate the nature of the contaminant's effects at high dose. A screening assessment was also conducted for acute effects, and no exceedances were seen. Therefore, potential acute effects are not discussed below. However, to the extent the adverse effects do occur, the final rule will reduce emissions and subsequent exposures.

Acetaldehyde

Acetaldehyde is ubiquitous in the environment and may be formed in the body from the breakdown of ethanol (ethyl alcohol). In humans, symptoms of chronic (long-term) exposure to acetaldehyde resemble those of alcoholism. Long-term inhalation exposure studies in animals reported effects on the nasal epithelium and mucous membranes, and increased kidney weight. The EPA has classified acetaldehyde as a probable human carcinogen (Group B2) based on animal studies that have shown nasal tumors in rats and laryngeal tumors in hamsters.

[1] Please note that boilers that burn small quantities of hazardous waste under the exemptions provided by 40 CFR 266.108 are subject to today's final rule.


Attachment I
Attachment I

Arsenic

Chronic (long-term) inhalation exposure to inorganic arsenic in humans is associated with irritation of the skin and mucous membranes. Human data suggest a relationship between inhalation exposure for women working at or living near metal smelters and an increased risk of reproductive effects. Inorganic arsenic exposure in humans by the inhalation route has been shown to be strongly associated with lung cancer, while ingestion of inorganic arsenic in humans has been linked to a form of skin cancer and also to bladder, liver, and lung cancer. The EPA has classified inorganic arsenic as a Group A, human carcinogen.

Benzene

Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene. The EPA has classified benzene as a Group A, known human carcinogen.

Beryllium

Chronic (long-term) inhalation exposure of humans to high levels of beryllium has been reported to cause chronic beryllium disease (berylliosis), in which granulomatous (noncancerous) lesions develop in the lung. Inhalation exposure to high levels of beryllium has been demonstrated to cause lung cancer in rats and monkeys. Human studies are limited, but suggest a causal relationship between beryllium exposure and an increased risk of lung cancer. We have classified beryllium as a Group B1, probable human carcinogen, when inhaled; data are inadequate to determine whether beryllium is carcinogenic when ingested.

Cadmium

Chronic (long-term) inhalation or oral exposure to cadmium leads to a build-up of cadmium in the kidneys that can cause kidney disease. Cadmium has been shown to be a developmental toxicant at high doses in animals, resulting in fetal malformations and other effects, but no conclusive evidence exists in humans. Animal studies have demonstrated an increase in lung cancer from long-term inhalation exposure to cadmium. The EPA has classified cadmium as a Group B1, probable carcinogen.

Chlorine

Chlorine is a commonly used household cleaner and disinfectant. Chlorine is an irritant to the eyes, the upper respiratory tract, and lungs. Chronic (long-term) exposure to chlorine gas in workers has resulted in respiratory effects, including eye and throat irritation and airflow obstruction. No information is available on the carcinogenic effects of chlorine in humans from inhalation exposure. A National Toxicology Program (NTP) study showed no evidence of carcinogenic activity in male rats or male and female mice, and equivocal evidence in female rats, from ingestion of chlorinated water. The EPA has not classified chlorine for potential carcinogenicity.

Chromium

Chromium may be emitted by industrial boilers in two forms, trivalent chromium (chromium III) or hexavalent chromium (chromium VI). The respiratory tract is the major target organ for chromium VI toxicity for inhalation exposures. Bronchitis, decreased pulmonary function, pneumonia, and other respiratory effects have been noted from chronic high dose exposure in occupational settings to chromium VI. Limited human studies suggest that chromium VI inhalation exposure may be associated with complications during pregnancy and childbirth, while animal studies have not reported reproductive effects from inhalation exposure to chromium VI. Human and animal studies have clearly established that inhaled chromium VI is a carcinogen, resulting in an increased risk of lung cancer. The EPA has classified chromium VI as a Group A, human carcinogen.

Chromium III is less toxic than chromium VI. The respiratory tract is also the major target organ for chromium III toxicity, similar to chromium VI. Chromium III is an essential element in humans, with a daily intake of 50 to 200 micrograms per day recommended for an adult. The body can detoxify some amount of chromium VI to chromium III. The EPA has not classified chromium III with respect to carcinogenicity.

Formaldehyde

Exposure to formaldehyde irritates the eyes, nose, and throat. Reproductive effects, such as menstrual disorders and pregnancy problems, have been reported in female workers exposed to high levels of formaldehyde. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. The EPA considers formaldehyde a probable human carcinogen (Group B2).

Hydrogen chloride

Hydrogen chloride, also called hydrochloric acid, is corrosive to the eyes, skin, and mucous membranes at high concentration. Chronic (long-term) occupational exposure to high levels of hydrochloric acid has been reported to cause gastritis, bronchitis, and dermatitis in workers. Prolonged exposure to lower concentrations may also cause dental discoloration and erosion. No information is available on the reproductive or developmental effects of hydrochloric acid in humans. In rats exposed to high levels of hydrochloric acid by inhalation, altered estrus cycles have been reported in females and increased fetal mortality and decreased fetal weight have been reported in offspring. The EPA has not classified hydrochloric acid for carcinogenicity.

Hydrogen fluoride

Chronic (long-term) exposure to fluoride at low levels has a beneficial effect of dental cavity prevention and may also be useful for the treatment of osteoporosis. Exposure to higher levels of fluoride may cause dental fluorosis. One study reported menstrual irregularities in women occupationally exposed to fluoride. The EPA has not classified hydrogen fluoride for carcinogenicity.

Lead

Lead can cause a variety of effects at low dose levels. Chronic (long-term) exposure to high levels of lead in humans results in effects on the blood, central nervous system (CNS), blood pressure, and kidneys. Children are particularly sensitive to the chronic effects of lead, with slowed cognitive development, reduced growth and other effects reported. Reproductive effects, such as decreased sperm count in men and spontaneous abortions in women, have been associated with lead exposure. The developing fetus is at particular risk from maternal lead exposure, with low birth weight and slowed postnatal neurobehavioral development noted. Human studies are inconclusive regarding lead exposure and cancer, while animal studies have reported an increase in kidney cancer from high-dose lead exposure by the oral route. The EPA has classified lead as a Group B2, probable human carcinogen.


Attachment I
Attachment I

Manganese

Health effects in humans have been associated with both deficiencies and excess intakes of manganese. Chronic (long-term) exposure to low levels of manganese in the diet is considered to be nutritionally essential in humans, with a recommended daily allowance of 2 to 5 milligrams per day (mg/d). Chronic exposure to high levels of manganese by inhalation in humans results primarily in CNS effects. Visual reaction time, hand steadiness, and eye-hand coordination were affected in chronically-exposed workers. Impotence and loss of libido have been noted in male workers afflicted with manganism attributed to high-dose inhalation exposures. The EPA has classified manganese in Group D, not classifiable as to carcinogenicity in humans.

Mercury

Mercury exists in three forms: Elemental mercury, inorganic mercury compounds (primarily mercuric chloride), and organic mercury compounds (primarily methyl mercury). Each form exhibits different health effects. Various major sources may release elemental or inorganic mercury; environmental methyl mercury is typically formed by biological processes after mercury has precipitated from the air.

Chronic (long-term) exposure to elemental mercury in humans also affects the CNS, with effects such as increased excitability, irritability, excessive shyness, and tremors. The EPA has not classified elemental mercury with respect to cancer.

The major effect from chronic exposure to inorganic mercury is kidney effects. Reproductive and developmental animal studies have reported effects such as alterations in testicular tissue, increased embryo resorption rates, and abnormalities of development. Mercuric chloride (an inorganic mercury compound) exposure has been shown to result in tumors in experimental animals. The EPA has classified mercuric chloride as a Group C, possible human carcinogen.

Nickel

Nickel is an essential element in some animal species, and it has been suggested it may be essential for human nutrition. Nickel dermatitis, consisting of itching of the fingers, hand and forearms, is the most common effect in humans from chronic (long-term) skin contact with nickel. Respiratory effects have also been reported in humans from inhalation exposure to nickel. No information is available regarding the reproductive or developmental effects of nickel in humans, but animal studies have reported such effects, although a consistent dose-response relationship has not been seen. Nickel forms released from industrial boilers include soluble nickel compounds, nickel subsulfide, and nickel carbonyl. Human and animal studies have reported an increased risk of lung and nasal cancers from exposure to nickel refinery dusts and nickel subsulfide. Animal studies of soluble nickel compounds (*i.e.*, nickel carbonyl) have reported lung tumors. The EPA has classified nickel refinery subsulfide as Group A, human carcinogens and nickel carbonyl as a Group B2, probable human carcinogen.

Selenium

Selenium is a naturally occurring substance that is toxic at high concentrations but is also a nutritionally essential element. Studies of humans chronically (long-term) exposed to high levels of selenium in food and water have reported discoloration of the skin, pathological deformation and loss of nails, loss of hair, excessive tooth decay and discoloration, lack of mental alertness, and listlessness. The consumption of high levels of selenium by pigs, sheep, and cattle has been shown to interfere with normal fetal development and to produce birth defects. Results of human and animal studies suggest that supplementation with some forms of selenium may result in a reduced incidence of several tumor types. One selenium compound, selenium sulfide, is carcinogenic in animals exposed orally. We have classified elemental selenium as a Group D, not classifiable as to human carcinogenicity, and selenium sulfide as a Group B2, probable human carcinogen.

## II. Summary of the Final Rule

### *A. What Source Categories and Subcategories Are Affected by the Final Rule?*

The final rule affects industrial boilers, institutional and commercial boilers, and process heaters. In the final rule, process heater means an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to heat a transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Waste heat boilers are excluded from the definition of boiler. A waste heat boiler (or heat recovery steam generator) means a device, without controlled flame combustion, that recovers normally unused energy and converts it to usable heat. Waste heat boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat boiler are considered boilers and not waste heat boilers. Emissions from a combustion unit with a waste heat boiler are regulated by the applicable standards for the particular type of combustion unit. For example, emissions from a commercial or industrial solid waste incineration unit, or other incineration unit with a waste heat boiler are regulated by standards established under section 129 of the CAA.

Hot water heaters also are not regulated under the final rule. A hot water heater is a closed vessel, with a capacity of no more than 120 U.S. gallons, in which water is heated by combustion of gaseous or liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 pounds per square inch gauge and water temperatures not exceeding 210 degree Fahrenheit (99 degrees Celsius).

Temporary boilers also are not regulated under the final rule. A temporary boiler is any gaseous or liquid fuel-fired boiler that is designed, and is capable of, being carried or moved from one location to another, and remains at any one location for less than 180 consecutive days. Additionally, any new temporary boiler that replaces an existing temporary boiler and is intended to perform the same or similar function will be included in the determination of the consecutive 180-day time period.

Boilers or process heaters that are used specifically for research and development are not regulated under the final rule. However, units that only provide steam to a process at a research and development facility are still subject to the final rule.

### *B. What Is the Affected Source?*

In the final rule, the affected source is defined as follows: (1) The collection of all existing industrial, commercial, or institutional boilers and process heaters within a subcategory located at a major source; or (2) each new or reconstructed industrial, commercial or institutional

boiler and process heater located at a major source.

The affected source does not include combustion units that are subject to another standard under 40 CFR part 63, or covered by other standards listed in this preamble.

*C. What Pollutants Are Emitted and Controlled?*

Boilers and process heaters can emit a wide variety of HAP, depending on the material burned. Because of the large number of HAP potentially present in emissions and the disparity in the quantity and quality of the emissions information available, we use several surrogates to control multiple HAP in the final rule. This will reduce the burden of implementation and compliance on both regulators and the regulated community.

We grouped the HAP into four common categories: mercury, non-mercury metallic HAP, inorganic HAP, and organic HAP. In general, the pollutants within each group have similar characteristics and can be controlled with the same techniques.

Next, we identified compounds that could be used as surrogates for all the compounds in each pollutant category. For the non-mercury metallic HAP, we chose to use PM as a surrogate. Most, if not all, non-mercury metallic HAP emitted from combustion sources will appear on the flue gas fly-ash. Therefore, the same control techniques that would be used to control the fly-ash PM will control non-mercury metallic HAP. Particulate matter was also chosen instead of specific metallic HAP because all fuels do not emit the same type and amount of metallic HAP but most generally emit PM. The use of PM as a surrogate will also eliminate the cost of performance testing to comply with numerous standards for individual metals.

However, we are sensitive to the fact that some sources burn fuels containing very little metals, but would have sufficient PM emissions to require control under the PM provisions of the proposed rule. In such cases, PM would not be an appropriate surrogate for metallic HAP. Therefore, in the final rule, an alternative metals emission limit is included. A source may choose to comply with the alternative metals emissions limit instead of the PM limit to meet the final rule.

For inorganic HAP, we chose to use HCl as a surrogate. The emissions test information available indicate that the primary inorganic HAP emitted from boilers and process heaters are acid gases, with HCl present in the largest amounts. Other inorganic compounds emitted are found in much smaller quantities. Also, control technologies that would reduce HCl would also control other inorganic compounds that are acid gases. Thus, the best controls for HCl would also be the best controls for other inorganic HAP that are acid gases. Therefore, HCl is a good surrogate for inorganic HAP because controlling HCl will result in a corresponding control of other inorganic HAP emissions.

For organic HAP, we chose to use carbon monoxide (CO) as a surrogate to represent the variety of organic compounds, including dioxins, emitted from the various fuels burned in boilers and process heaters. Because CO is a good indicator of incomplete combustion, there is a direct correlation between CO emissions and the formation of organic HAP emissions. Monitoring equipment for CO is readily available, which is not the case for organic HAP. Also, it is significantly easier and less expensive to measure and monitor CO emissions than to measure and monitor emissions of each individual organic HAP. Therefore, using CO as a surrogate for organic HAP is a reasonable approach because minimizing CO emissions will result in minimizing organic HAP emissions.

*D. Does the Final Rule Apply to Me?*

The final rule applies to you if you own or operate a boiler or process heater located at a major source meeting the requirements in the final rule.

*E. What Are the Emission Limitations and Work Practice Standards?*

You must meet the emission limits and work practice standards for the subcategories in Table 1 of this preamble for each of the pollutants listed. Emission limits and work practice standards were developed for new and existing sources; and for large, small, and limited use solid, liquid, and gas fuel-fired units. Large units are those watertube boilers and process heaters with heat input capacities greater than 10 million British thermal units per hour (MMBtu/hr). Small units are any firetube boilers or any boiler and process heater with heat input capacities less than or equal to 10 MMBtu/hr. Limited use units are those large units with capacity utilizations less than or equal to 10 percent as required in a federally enforceable permit.

If your new or existing boiler or process heater is permitted to burn a solid fuel (either as a primary fuel or a backup fuel), or any combination of solid fuel with liquid or gaseous fuel, the unit is in one of the solid subcategories. If your new or existing boiler or process heater burns a liquid fuel, or a liquid fuel in combination with a gaseous fuel, the unit is in one of the liquid subcategories, except if the unit burns liquid only during periods of gas curtailment. If your new or existing boiler or process heater burns a gaseous fuel not combined with any liquid or solid fuels, or burns liquid fuel only during periods of gas curtailment or gas supply emergencies, the unit is in the gaseous subcategory.

TABLE 1—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR BOILERS AND PROCESS HEATERS

[(Pounds per million British thermal units (lb/MMBtu)]

| Source | Subcategory | Particulate Matter (PM) | or | Total Selected Metals | Hydrogen Chloride (HCl) | Mercury (Hg) | Carbon Monoxide (CO) (ppm) |
|---|---|---|---|---|---|---|---|
| New or reconstructed Boiler or Process Heater. | Solid Fuel, Large Unit. | 0.025 | or | 0.0003 | 0.02 | 0.000003 | 400 (@7% oxygen). |
| | Solid Fuel, Small Unit. | 0.025 | or | 0.0003 | 0.02 | 0.000003 | |
| | Solid Fuel, Limited Use. | 0.025 | or | 0.0003 | 0.02 | 0.000003 | 400 (@7% oxygen). |
| | Liquid Fuel, Large Unit. | 0.03 | ..... | ..... | 0.0005 | ..... | 400 (@3% oxygen). |

TABLE 1—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR BOILERS AND PROCESS HEATERS—Continued

[(Pounds per million British thermal units (lb/MMBtu)]

| Source | Subcategory | Particulate Matter (PM) | or | Total Selected Metals | Hydrogen Chloride (HCl) | Mercury (Hg) | Carbon Monoxide (CO) (ppm) |
|---|---|---|---|---|---|---|---|
| | Liquid Fuel, Small Unit. | 0.03 | ..... | ..... | 0.0009 | ..... | |
| | Liquid Fuel, Limited Use. | 0.03 | ..... | ..... | 0.0009 | ..... | 400 (@3% oxygen). |
| | Gaseous Fuel, Large Unit. | | ..... | ..... | ..... | ..... | 400 (@3% oxygen). |
| | Gaseous Fuel, Small Unit. | | ..... | ..... | ..... | ..... | |
| | Gaseous Fuel Limited Use. | | ..... | ..... | ..... | ..... | 400 (@3% oxygen). |
| Existing Boiler or Process Heater. | Solid Fuel, Large Unit. | 0.07 | or | 0.001 | 0.09 | 0.000009 | |
| | Solid Fuel, Small Unit. | | ..... | ..... | ..... | ..... | |
| | Solid Fuel, Limited Use. | 0.21 | or | 0.004 | ..... | ..... | |
| | Liquid Fuel, Large Unit. | | ..... | ..... | ..... | ..... | |
| | Liquid Fuel, Small Unit. | | ..... | ..... | ..... | ..... | |
| | Liquid Fuel, Limited Use. | | ..... | ..... | ..... | ..... | |
| | Gaseous Fuel ..... | | ..... | ..... | ..... | ..... | |

For solid fuel-fired boilers or process heaters, sources may choose one of two emission limit options: (1) Existing and new affected units may choose to limit PM emissions to the level listed in Table 1 of this preamble, or (2) existing and new affected units may choose to limit total selected metals emissions to the level listed in Table 1 of this preamble. Sources meeting the emission limits must also meet operating limits.

We have provided several compliance alternatives in the final rule. Sources may choose to demonstrate compliance based on the fuel pollutant content. Sources are also allowed to demonstrate compliance for existing large solid fuel units using emissions averaging.

*F. What Are the Testing and Initial Compliance Requirements?*

As the owner or operator of a new or existing boiler or process heater, you must conduct performance tests (*i.e.* stack testing) or an initial fuel analysis to demonstrate compliance with any applicable emission limits. The applicable emission limits and, therefore, the required performance tests and fuel analysis are different depending on the subcategory classification of the unit. Existing units in the small solid fuel subcategory and existing units in any of the liquid or gaseous fuel subcategories do not have applicable emission limits and, therefore, are not required to conduct stack tests or fuel analyses. Other units are required to conduct the following compliance tests or fuel analyses where applicable:

(1) Conduct initial and annual stack tests to determine compliance with the PM emission limits using EPA Method 5 or Method 17 in appendix A to part 60 of this chapter.

(2) Affected sources in the solid fuel subcategories may choose to comply with an alternative total selected metals emission limit instead of PM. Sources would conduct initial and annual stack tests to determine compliance with the total selected metals emission limit using EPA Method 29 in appendix A to part 60 of this chapter.

(3) Conduct initial and annual stack tests to determine compliance with the mercury emission limits using EPA Method 29 in appendix A to part 60 of this chapter or the ASTM D6784–02.

(4) Conduct initial and annual stack tests to determine compliance with the HCl emission limits using EPA Method 26 in appendix A to part 60 of this chapter (for boilers without wet scrubbers) or EPA Method 26A in appendix A to part 60 of this chapter (for boilers with wet scrubbers).

(5) For new boilers and process heaters in any of the limited use subcategories and new boilers and process heaters in any of the large subcategories with heat input capacities greater than 10 MMBtu/hr but less than 100 MMBtu/hr, conduct initial and annual stack tests to determine compliance with the CO work practice limit using EPA Method 10, 10A, or 10B in appendix A to part 60 of this chapter.

(6) Use EPA Method 19 in appendix A to part 60 of this chapter to convert measured concentration values to pounds per million British thermal units (MMBtu) values.

(7) For new units in any of the liquid fuel subcategories that do not burn residual oil, instead of conducting an initial and annual compliance test you may submit a signed statement in the Notification of Compliance Status report that indicates that you only burn liquid fossil fuels other than residual oil.

(8) For affected sources that choose to meet the emission limits based on fuel analysis, conduct the fuel analysis using method ASTM D5865–01ae1 or ASTM E711–87 to determine heat content; ASTM D3684–01 (for coal), SW–846–7471A (for solid samples) or SW–846–7470A (for liquid samples) to determine mercury levels; SW–846–6010B or ASTM D3683–94 (for coal) or ASTM E885–88 (for biomass) to determine total selected metals concentration; SW–846–9250 or ASTM E776–87 (for biomass) to determine chlorine concentration; and ASTM D3173 or ASTM E871 to determine moisture content.

As part of the initial compliance demonstration, you must monitor specified operating parameters during the initial performance tests that demonstrate compliance with the PM (or metals), mercury, and HCl emission limits. You must calculate the average parameter values measured during each

test run over the 3-run performance test. The minimum or maximum of the three average values (depending on the parameter measured) for each applicable parameter establishes the site-specific operating limit. The applicable operating parameters for which operating limits must be established are based on the emissions limits applicable to your unit as well as the types of add-on controls on the unit. A summary of the operating limits that must be established for the various types of controls are as follows:

(1) For boilers and process heaters without wet scrubbers that must comply with the mercury emission limit and either a PM emission limit or a total selected metals emission limit, you must meet an opacity limit of 20 percent for existing sources (based on 6-minute averages), except for one 6-minute period per hour of not more than 27 percent, or 10 percent for new sources (based on 1-hour block averages). Or, if the unit is controlled with a fabric filter, instead of meeting an opacity operating limit, you may elect to operate the fabric filter using a bag leak detection system such that corrective actions are initiated within 1 hour of a bag leak detection system alarm and you operate and maintain the fabric filter such that the alarm is not engaged for more than 5 percent of the total operating time in a 6-month reporting period.

(2) For boilers and process heaters without wet or dry scrubbers that must comply with an HCl emission limit, you must determine the average chloride content level in the input fuel(s) during the HCl performance test. This is your maximum chloride input operating limit.

(3) For boilers and process heaters with wet scrubbers that must comply with a mercury, PM (or total selected metals) and/or an HCl emission limit, you must measure pressure drop and liquid flow rate of the scrubber during the performance test and calculate the average value for each test run. The minimum test run average establishes your site-specific pressure drop and liquid flow rate operating levels. If different average parameter levels are measured during the mercury, PM (or metals) and HCl tests, the highest of the minimum test run average values establishes your site-specific operating limit. If you are complying with an HCl emission limit, you must measure pH during the performance test for HCl and determine the average for each test run and the minimum value for the performance test. This establishes your minimum pH operating limit.

(4) For boilers and process heaters with dry scrubbers that must comply with an HCl emission limit, you must measure the sorbent injection rate during the performance test for mercury and HCl and calculate the average for each test run. The minimum test run average during the performance test establishes your site-specific minimum sorbent injection rate operating limit.

(5) For boilers and process heaters with fabric filters in combination with wet scrubbers that must comply with a mercury emission limit, PM (or total selected metals) emission limit and/or an HCl emission limit, you must measure the pH, pressure drop, and liquid flowrate of the wet scrubber during the performance test and calculate the average value for each test run. The minimum test run average establishes your site-specific pH, pressure drop, and liquid flowrate operating limits for the wet scrubber. Furthermore, the fabric filter must be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during any 6-month period.

(6) For boilers and process heaters with electrostatic precipitators (ESP) in combination with wet scrubbers that must comply with a mercury, PM (or total selected metals) and/or an HCl emission limit, you must measure the pH, pressure drop, and liquid flow rate of the wet scrubber during the HCl performance test, and you must measure the voltage and secondary current of the ESP collection plates or total power input during the mercury and PM (or metals) performance test. Calculate the average value of these parameters for each test run. The minimum test run averages establish your site-specific minimum pH, pressure drop, and liquid flowrate operating limit for the wet scrubber and the minimum voltage and current operating limits for the ESP.

(7) For boilers and process heaters that choose to comply with the alternative total selected metals emission limit instead of PM, you must determine the total selected metals content of the inlet fuels that were burned during the total selected metals performance test. This value is your maximum fuel inlet metals content operating limit.

(8) For boilers and process heaters that burn a mixture of multiple fuels, you must determine the mercury content of the inlet fuels that were burned during the mercury performance test. This value is your maximum fuel inlet mercury operating limit. Units burning only a single fuel type (not including start-up fuels) do not need to determine, by fuel analysis, the fuel inlet operating limit when conducting performance tests.

(9) For new boilers and process heaters in any of the large subcategories and with heat input capacities greater or equal to 100 MMBtu/hr, you must monitor CO to demonstrate that average CO emissions, on a 30-day rolling average, are at or below an exhaust concentration of 400 parts per million (ppm) by volume on a dry basis corrected to 3 percent oxygen for units in the liquid subcategories and corrected to 7 percent for units in the solid subcategories. For new boilers and process heaters in any of the limited use subcategories or with heat input capacities less than 100 MMBtu/hr, you must conduct initial test of CO emissions to demonstrate compliance with the CO work practice limit.

The final rule also provides you another compliance alternative. You may demonstrate compliance by emissions averaging for existing large solid fuel boilers in States that choose to allow emissions averaging in their operating permit program.

*G. What Are the Continuous Compliance Requirements?*

To demonstrate continuous compliance with the emission limitations, you must monitor and comply with the applicable site-specific operating limits established during the performance tests or fuel analysis. Upon detecting an excursion or exceedance, you must restore operation of the unit to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance. Such actions may include initial inspections and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to below the work practice standard.

(1) For boilers and process heaters without wet scrubbers that must comply with a mercury emission limit and either a PM emission limit or a total selected metals emission limit, you must continuously monitor opacity and maintain the opacity at or below the maximum opacity operating limit for new and existing sources. Or, if the unit is controlled with a fabric filter, instead of continuous monitoring opacity, the fabric filter may be continuously operated such that the bag leak detection system alarm does not sound

more than 5 percent of the operating time during any 6-month period.

(2) For boilers and process heaters without wet or dry scrubbers that must comply with an HCl emission limit, you must maintain monthly records of fuel use that demonstrate that you have burned no new fuel types or new mixtures such that you have maintained the fuel HCl content level at or below your site-specific maximum HCl input operating limit. If you plan to burn a new fuel type or a new mixture than what was burned during the initial performance test, then you must re-calculate the maximum HCl input anticipated from the new fuels based on supplier data or your own fuel analysis. If the results of re-calculating the HCl input exceeds the average HCl content level established during the initial test, then you must conduct a new performance test to demonstrate continuous compliance with the HCl emission limit.

(3) For boilers and process heaters with wet scrubbers that must comply with a mercury, PM (or total selected metals) and/or an HCl emission limit, you must monitor pressure drop and liquid flow rate of the scrubber and maintain the 3-hour block averages at or above the operating limits established during the performance test. You must monitor the pH of the scrubber and maintain the 3-hour block average at or above the operating limit established during the performance test to demonstrate continuous compliance with the HCl emission limits.

(4) For boilers and process heaters with dry scrubbers that must comply with a PM (or total selected metals) or mercury emission limit, and/or an HCl emission limit, you must continuously monitor the sorbent injection rate and maintain it at or above the operating limits established during the HCl performance test.

(5) For boilers and process heaters with fabric filters in combination with wet scrubbers, you must monitor the pH, pressure drop, and liquid flow rate of the wet scrubber and maintain the levels at or above the operating limits established during the HCl performance test. You must also maintain the operation of the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during any 6-month period.

(6) For boilers and process heaters with ESP in combination with wet scrubbers that must comply with a mercury, PM and/or an HCl emission limit, you must monitor the pH, pressure drop, and liquid flow rate of the wet scrubber and maintain the 3-hour block averages at or above the operating limits established during the HCl performance test. Also, you must monitor the voltage and secondary current of the ESP collection plates or total power input and maintain the 3-hour block averages at or above the operating limits established during the mercury or PM (or metals) performance test.

(7) For boilers and process heaters that choose to comply with the alternative total selected metals limit instead of PM emission limit, you must maintain monthly fuel records that demonstrate that you burned no new fuel type or new mixtures such that the total selected metals content of the inlet fuel was maintained at or below your maximum fuel inlet metals content operating limit set during the metals performance test. If you plan to burn a new fuel type or new mixture, then you must re-calculate the maximum metals input anticipated from the new fuels based on supplier data or own fuel analysis. If the results of re-calculating the metals input exceeds the average metals content level established during the initial test, then you must conduct a new performance test to demonstrate continuous compliance with the alternate selected metals emission limit.

(8) For boilers and process heaters that must comply with the mercury emission limit, you must maintain monthly fuel records that demonstrate that you burned no new fuel type or new mixture such that the total selected mercury content of the inlet fuel was maintained at or below your maximum fuel inlet metals content operating limit set during the mercury performance test. If you plan to burn a new fuel type or new mixture than what was burned during the initial performance test, then you must re-calculate the maximum mercury input anticipated from the new fuels based on supplier data or own fuel analysis. If the results of re-calculating the mercury input exceeds the average mercury content level established during the initial test, then you must conduct a new performance test to demonstrate continuous compliance with the mercury emission limit.

(9) For boilers and process heaters that choose to comply with any emission limit based on fuel analysis, you must maintain monthly fuel records to demonstrate that the content of fuel is maintained below the appropriate applicable emission limit.

(10) For new boilers and process heaters in any of the large subcategories with heat input capacities greater or equal to 100 MMBtu/hr, you must continuously monitor CO and maintain the 30-day rolling average CO emissions at or below 400 ppm by volume on a dry basis (corrected to 3 percent oxygen for units in the liquid or gaseous subcategories, and 7 percent for units in the solid fuel subcategories) to demonstrate compliance with the work practice standards at all times except during startup, shutdown, and malfunction and when the unit is operating less than 50 percent of the rated capacity.

If a control device other than the ones specified in this section is used to comply with the final rule, you must establish site-specific operating limits and establish appropriate continuous monitoring requirements, as approved by the EPA Administrator.

If you choose to comply using emissions averaging, you must demonstrate on a monthly basis that mercury, metals, PM, and HCl emission limits can be met over a 12-month period.

*H. What Are the Notification, Recordkeeping and Reporting Requirements?*

If your boiler or process heater is in the existing large gaseous fuel subcategory, or existing limited use gaseous fuel subcategory, or existing large liquid fuel subcategory, or existing limited use liquid fuel subcategory, or a new small liquid fuel unit that only burn gaseous fuels or distillate oil, you only have to submit the initial notification report. If your boiler or process heater is in the existing small gaseous, liquid, or solid fuel subcategories or new small gaseous fuel subcategory, you are not required to keep any records or submit any reports.

If your boiler or process heater is in any other subcategory, then you must keep the following records:

(1) All reports and notifications submitted to comply with the final rule.

(2) Continuous monitoring data as required in the final rule.

(3) Each instance in which you did not meet each emission limit work practice and operating limit, including periods of startup, shutdown, and malfunction (*i.e.*, deviations from the final rule).

(4) Monthly hours of operation by each source that is in a limited use subcategory.

(5) Monthly fuel use by each boilers and process heaters subject to an emission limit including a description of the type(s) of fuel(s) burned, amount of each fuel type burned, and units of measure.

(6) Calculations and supporting information of chloride fuel input, as required in the final rule.


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(7) Calculations and supporting information of total selected metals and mercury fuel input, as required in the final rule, if applicable.

(8) A copy of the results of all performance tests, fuel analysis, opacity observations, performance evaluations, or other compliance demonstrations conducted to demonstrate initial or continuous compliance with the final rule.

(9) A copy of any federally enforceable permit that limits the annual capacity factor of the source to less than or equal to 10 percent.

(10) A copy of your site-specific startup, shutdown, and malfunction plan.

(11) A copy of your site-specific monitoring plan developed for the final rule, if applicable.

(12) A copy of your site-specific fuel analysis plan developed for the final rule, if applicable.

(13) A copy of the emissions averaging plan, if applicable.

You must submit the following reports and notifications:

(1) Notifications required by the General Provisions.

(2) Initial Notification no later than 120 calendar days after you become subject to the final rule.

(3) Notification of Intent to conduct performance tests and/or compliance demonstration at least 30 calendar days before the performance test and/or compliance demonstration is scheduled.

(4) Notification of Compliance Status 60 calendar days following completion of the performance test and/or compliance demonstration.

(5) Notification of intent to demonstrate compliance by emissions averaging.

(6) Notification of intent to demonstrate eligibility for either health-based compliance alternative.

(7) Compliance reports semi-annually.

*I. What Are the Health-Based Compliance Alternatives, and How Do I Demonstrate Eligibility?*

HCl Compliance Alternative

As an alternative to the requirement for each large solid fuel-fired boiler to demonstrate compliance with the HCl emission limit in the final rule, you may demonstrate compliance with a health-based HCl equivalent allowable emission limit.

The procedures for demonstrating eligibility for the HCl compliance alternative (as outlined in appendix A of the final rule) are:

(1) You must include in your demonstration every emission point covered under the final rule.

(2) You must conduct HCl and chlorine emissions tests for every emission point covered under the final rule.

(3) You must determine the total maximum hourly mass HCl-equivalent emission rate for your affected source by summing the maximum hourly emission rates of HCl and chlorine for each of the affected units at your facility covered under the final rule.

(4) Use the look-up table in the appendix A of the final rule to determine if your facility is in compliance with the health-based HCl-equivalent emission limit.

(5) Select the maximum allowable HCl-equivalent emission rate from the look-up table in appendix A of the final rule for your affected source using the average stack height of your emission units covered under the final rule as your stack height and the minimum distance between any affected emission point and the property boundary as your property boundary.

(6) Your facility is in compliance if your maximum HCl-equivalent emission rate does not exceed the value specified in the look-up table in appendix A of the final rule.

(7) As an alternative to using the look-up table, you may conduct a site-specific compliance demonstration (as outlined in appendix A of the final rule) which demonstrates that the subpart DDDDD units at your facility are not expected to cause an individual chronic inhalation exposure from HCl and chlorine which can exceed a Hazard Index (HI) value of 1.0.

Total Selected Metals Compliance Alternative

In lieu of complying with the emission standard for total selected metals (TSM) in the final rule based on the sum of emissions for the eight selected metals, you may demonstrate eligibility for complying with the TSM standard based on excluding manganese emissions from the summation of TSM emissions for the affected source unit(s).

The procedures for demonstrating eligibility for the TSM compliance alternative (as outlined in appendix A of the final rule) are:

(1) You must include in your demonstration every emission point covered under the final rule that emits manganese.

(2) You must conduct manganese emissions tests for every emission point covered under the final rule that emits manganese.

(3) You must determine the total maximum hourly manganese emission rate from your affected source by summing the maximum hourly manganese emission rates for each of the affected units at your facility covered under the final rule.

(4) Use the look-up table in appendix A of the final rule to determine if your facility is eligible for complying with the alternative TSM limit based on the sum of emissions for seven metals (excluding manganese) for the affected source units.

(5) Select the maximum allowable manganese emission rate from the look-up table in appendix A of the final rule for your affected source using the average stack height of your emission units covered under the final rule as your stack height and the minimum distance between any of those emission points and the property boundary as your property boundary.

(6) Your facility is eligible if your maximum manganese emission rate does not exceed the value specified in the look-up table in appendix A of the final rule.

(7) As an alternative to using look-up table to determine if your facility is eligible for the TSM compliance alternative, you may conduct a site-specific compliance demonstration (as outlined in appendix A of the final rule) which demonstrates that the subpart DDDDD units at your facility are not expected to cause an individual chronic inhalation exposure from manganese which can exceed a Hazard Quotient (HQ) value of 1.0.

If you elect to demonstrate eligibility for either of the health-based compliance alternatives, you must submit certified documentation supporting compliance with the procedures at least 1 year before the compliance date.

You must submit supporting documentation including documentation of all maximum capacities, existing control devices used to reduce emissions, stack parameters, and property boundary distances to each affected source of HCl-equivalent and/or manganese emissions.

You must keep records of the information used in developing the eligibility demonstration for your affected source.

To be eligible for either health-based compliance alternative, the parameters that defined your affected source as eligible for the health-based compliance alternatives (including, but not limited to, fuel type, type of control devices, process parameters reflecting the emission rates used for your eligibility demonstration) must be incorporated as Federally enforceable limits into your title V permit. If you do not meet these criteria, then your affected source is subject to the applicable emission

limits, operating limits, and work practice standards in the final rule.

If you intend to change key parameters (including distance of stack to the property boundary) that may result in lower allowable health-based emission limits, you must recalculate the limits under the provisions of this section, and submit documentation supporting the revised limits prior to initiating the change to the key parameter.

If you intend to install a new solid fuel-fired boiler or process heater or change any existing emissions controls that may result in increasing HCl-equivalent and/or manganese emissions, you must recalculate the total maximum hourly HCl-equivalent and/or manganese emission rate from your affected source, and submit certified documentation supporting continued eligibility under the revised information prior to initiating the new installation or change to the emissions controls.

## III. What Are the Significant Changes Since Proposal?

### *A. Definition of Affected Source*

The definition of affected source in § 63.7490 has been revised to be: (1) The collection of all existing industrial, commercial, or institutional boilers or process heaters within a subcategory located at a major source; and/or (2) each new or reconstructed industrial, commercial, or institutional boiler or process heater located at a major source.

### *B. Sources Not Covered by the NESHAP*

The applicability section of the final rule (§ 63.7490(c)) has been written to clarify that the following are not subject to the final rule: Blast furnace stoves, any boiler or process heater specifically listed as an affected source in another MACT standard, temporary boilers, and blast furnace gas fuel-fired boilers and process heaters.

### *C. Emission Limits*

The emission limit for mercury in the existing large solid fuel subcategories has been written as 0.000009 lb/MMBtu (from 0.000007 lb/MMBtu at proposal).

### *D. Definitions Added or Revised*

The EPA has written the definitions of large, limited use, and small gaseous subcategories to include gaseous fuel-fired boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies.

The final rule also includes a definition of fuel type which is used in the fuel analysis compliance options. Fuel type means each category of fuels that share a common name of classification. Examples include, but are not limited to: bituminous coal, subbituminous coal, lignite, anthracite, biomass, construction/demolition material, salt water laden wood, creosote treated wood, tires, and residual oil. Individual fuel types received from different suppliers are not considered new fuel types except for construction/demolition material.

Construction/demolition material means waste building material that result from the construction or demolition operations on houses and commercial and industrial buildings.

Unadulterated wood, component of biomass, means wood or wood products that have not been painted, pigment-stained, or pressure treated with compounds such as chromate copper arsenate, pentachlorophenol, and creosote. Plywood, particle board, oriented strand board, and other types of wood products bound by glues and resins are included in this definition.

We have included a definition for temporary boiler to mean any gaseous or liquid fuel-fired boiler that is designed, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period.

The final rule also contains a definition written for waste heat boiler that identifies waste heat boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat boiler as not being waste heat boilers, but are considered boilers and subject to the final rule.

### *E. Requirements for Sources in Subcategories Without Emission Limits or Work Practice Requirements*

In the final rule, we have clarified that sources in the existing large and limited use gaseous fuel subcategories, existing large and limited use liquid fuel subcategories, and new small liquid fuel subcategory that burn only distillate oil are only subject to the initial notification requirements in § 63.9(b) of subpart A of this part and are not required to submit as startup, shutdown, and malfunction (SSM) plan as part of their initial notification. We have written the final rule to state that sources in the existing small gaseous fuel, liquid fuel, and solid fuel subcategories and in the new small gaseous fuel subcategory are not subject to any requirements in the final rule or of subpart A of this part.

### *F. Carbon Monoxide Work Practice Emission Levels and Requirements*

The final rule provides revisions to the CO work practice emission levels. For new sources in the solid fuel subcategory, the work practice standard has been written to be corrected to 7 percent oxygen rather than 3 percent. Units in the gaseous and liquid fuel subcategories still have to correct to 3 percent oxygen.

The final rule also allows sources with heat input capacities greater than 10 MMBtu/hr but less than 100 MMBtu/hr to conduct initial and annual compliance tests to demonstrate compliance with the CO limit. Sources greater than 100 MMBtu/hr must still demonstrate compliance using CO continuous emission monitors (CEMS).

The final rule also does not allow you to calculate data average using data recorded during periods where your boiler or process heater is operating at less than 50 percent of its rated capacity, monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. You must use all data collected during all other periods in assessing compliance.

### *G. Fuel Analysis Option*

We have clarified the fuel analysis options in the final rule. You are not required to conduct performance tests for hydrogen chloride, mercury, or total selected metals if you demonstrate compliance with the hydrogen chloride, mercury, or total selected metals limits based on the fuel pollutant content. Your operating limit is then the emission limit of the applicable pollutant. You are not required to conduct emission tests.

If you demonstrate compliance with the HCl, mercury, or TSM limit by performance tests, then your operating limits are the operating limits of the control device (if used) and the fuel pollutant content of the fuel type/mixture burned. Units burning multiple fuel types are required to determine by fuel analysis, the fuel pollutant content of the fuel/mixture burned during the performance test.

The final rule specifies the testing and initial and continuous compliance requirements to be used when complying with the fuel analysis options. Fuel analysis tests for total chloride, gross calorific value, mercury, metal analysis, sample collection, and sample preparation are included in the final rule.


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We have written the requirement to remove the need for conducting additional tests if you receive fuel from a new supplier. You are required to conduct another performance test, if you demonstrated compliance through performance testing, only when you burn a new fuel type or mixture and the results of recalculating the fuel pollutant content are higher than the level established during the initial performance test.

*H. Emissions Averaging*

We have included a compliance alternative in the final rule to allow emissions averaging between existing large solid fuel boilers. Compliance must be demonstrated on a 12-month rolling average basis, determined at the end of every month. If you elect to comply with the emissions averaging compliance alternative, you must use equations provided in the final rule to demonstrate that particulate matter or TSM, HCl, or mercury from all applicable units do not exceed the emission limits specified in the final rule. If you use this option, you must also develop and submit an implementation plan no later than 6 months before the date that the facility intends to demonstrate compliance.

*I. Opacity Limit*

At proposal, we required sources meeting the PM and mercury limits to determine site-specific opacity operating limits based on levels during the initial performance test. To demonstrate continuous compliance with the opacity limit, the opacity operating limits have been established to be 20 percent (based on 6-minute averages) except for one 6-minute period per hour of not more than 27 percent for existing sources and 10 percent (based on 1-hour block averages) for new sources.

*J. Operating Limit Determination*

The final rule defines maximum and minimum operating parameters that must be met. For sources complying with the alternative opacity requirement of establishing opacity limits during the initial performance test, the maximum opacity operating limit is 110 percent of the highest test-run average opacity measured according to the final rule during the most recent performance test demonstrating compliance with the applicable emission limit. For sources meeting the standards using scrubbers or ESP, the minimum pressure drop, scrubber effluent pH, scrubber flow rate, sorbent flow rate, voltage or amperage means 90 percent of the lowest test run average pressure drop, scrubber effluent pH, scrubber flow rate, sorbent flow rate, voltage or amperage measured according to the most recent performance test demonstrating compliance with the applicable emission limits.

The final rule clarifies that operation above the established maximum or below the established minimum operating parameters constitute a deviation of established operating parameters.

*K. Revision of Compliance Dates*

In § 63.7510, we have also written the date by which you have to complete a compliance demonstration to be 180 days after the compliance date instead of at the compliance date.

## IV. What Are the Responses to Significant Comments?

We received 218 public comment letters on the proposed rule. Complete summaries of all the comments and responses are found in the Response-to-Comments document (see **SUPPLEMENTARY INFORMATION** section).

*A. Applicability*

*Comment:* Many commenters requested that EPA exempt units that are not subject to emission limits or work practice requirements from monitoring, recordkeeping, and reporting requirements.

*Response:* Sources in subcategories that do not have any emission limitations and work practices are not required to keep records or reports other than the initial notification. This is appropriate because no reports other than the initial notification would apply to these units. The SSM plan is not necessary nor required for these units because § 63.6(e)(3) of subpart A of this part requires an affected source to develop an SSM plan for control equipment used to comply with the relevant standard. The proposed rule was not intended to require monitoring, recordkeeping, and reporting (including startup, shutdown, and malfunction plans), other than the initial notification for sources not subject to an emission limit. We have clarified this decision in the final rule. We have also determined that existing small units and new small gaseous fuel units, which are not subject to emission limits or work practices in this standard, and which are also not subject to such requirements in any other Federal regulation, should also not have to provide an initial notification. These small sources are generally gas-fired and since they have minimal emissions, they are usually considered as insignificant emission units by State permitting agencies.

*Comment:* Several commenters requested that EPA specifically exclude portable/transportable units from the final rule. The commenters stated that facilities periodically use these units to supply or supplement other site steam supplies when there is a mechanical problem that takes a unit out of service or during planned outages. The commenters added that because they are used on a limited basis, portable units are not fully integrated with site control systems and most portable/transportable units are owned by a rental company and may not be operated by the facility owner/operator.

*Response:* We agree with the commenters that temporary/portable units are used only on a limited basis and are not integrated into a facility's control system. These units are gas or oil fired units. Units in the existing gaseous or liquid subcategories are not subject to emission limits or work practice standards. Consequently, we have decided that temporary/portable units are not subject to the final rule. We have added a definition for temporary boiler to mean any gaseous or liquid fuel-fired boiler that is designed, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period. We chose the 180-day time frame because that is the length of time a new source has after startup to conduct the initial performance test.

*Comment:* Several commenters requested EPA provide a lower size cut-off for the small unit subcategory. Several commenters argued that the benefits from requiring smaller units to install controls would be minimal given the overall monitoring, recordkeeping, and reporting burden. Several commenters also requested lower size cutoffs to make the final rule similar to others established by EPA (*e.g.,* NSPS Nitrogen Oxide ($NO_X$) SIP Call). Several commenters noted several recent court decisions in which the court has decided that a *de minimis* exemption is appropriate since the regulation of small sources would yield a gain of trivial or no value yet would impose significant regulatory burden. A wide range of lower size cutoffs were suggested. However, one commenter said that EPA should not develop *de minimis* exemptions. The commenter noted that *de minimis* exemptions do not spare EPA's resources for use on other

purposes and are not justified by reductions in industry burden or inconvenience. The commenter noted that EPA did not establish any administrative record justifying the *de minimis* exemption.

*Response:* We have reviewed the commenters arguments and all the data provided in the comment letters. There is no justification for developing a lower size cut-off or *de minimis* level. We would also note the designation of large and small subcategories was not based solely on size of the unit. Large and small subcategories were developed because small units less than 10 MMBtu/hr heat input typically use a combustor design that is not common in larger units. Large boilers generally use the watertube combustor design. The design of the boiler or process heater will influence the completeness of the combustion process which will influence the formation of organic HAP emissions. Additionally, the vast majority of small units use natural gas as fuel. The EPA chose to develop large and small subcategories to account for these differences and their affect on the type of emissions. The cut-off between the large and small subcategories of 10 MMBtu/hr was based on typical sizes for fire tube units, and also when considering cut-offs in State and Federal rules. Lastly, we would like to note that the final rule does not impose any requirements for existing units in any of the small subcategories.

*Comment:* Many commenters asked EPA to clarify which sources are not covered by the final rule.

*Response:* We have included an extensive list of sources that are not subject to the final rule. The final rule clarifies that boilers and process heaters that are included as part of the affected source in any other NESHAP are not subject to the NESHAP for industrial boilers and process heaters. However, we do not exclude boilers and process heaters that are used as control devices unless they are specifically considered part of any other NESHAP's definition of affected source. Incinerators, thermal oxidizers, and flares do not generally fall under the definition of a boiler or process heater and would not be subject to the final rule. The final rule excludes waste heat boilers and waste heat boilers with supplemental firing, as long as the supplemental firing does not provide more than 50 percent of the waste heat boiler's heat input. If your waste heat boiler does receive 50 percent of its total heat input from supplemental firing, it would be subject to the NESHAP for industrial boilers unless it is subject to any other NESHAP. We specifically exclude comfort heaters from the final rule. However, this exclusion does not include boilers used to make steam or heated water for comfort heat. If your boiler meets the definition of a hot water heater, then it would not be subject to the final rule. However, if the temperature, pressure, or capacity specifications of your boiler exceed the criteria specified for hot water heaters, then your boiler would be subject to the final rule. We recognize the unique properties of blast furnace gas having high CO concentrations and none to almost no organic compounds. Consequently, we agree that for these sources CO is not a surrogate for organic HAP emissions since CO is the primary component of blast furnace gas and virtually no organic HAP are generated in its combustion. As a result, we exclude from the final rule units that receive 90 percent or more of their total heat input from blast furnace gas. In addition, research and development (R&D) operations are not subject to the final rule. However, units that only provide steam to a process or for heating at a research and development facility are still subject to the final rule. This should address the commenters' concern over overlapping applicability.

*Comment:* Several commenters suggested that EPA revise the proposed definition of affected source to be consistent with the definition of affected source in the General Provisions. The definition in the rule as proposed is much more narrow than that in the General Provisions, even though the General Provisions states that each standard will redefine affected source based on published justification as to why the definition would result in significant administration, practical or implementation problems. The commenters argued that EPA failed to provide justification for the proposed definition of affected source, which is narrower than the definition of affected source in the General Provisions.

*Response:* We agree with the commenters and in the final rule have incorporated the broader definition of affected source from the revised General Provisions. The General Provisions define the affected source as ''the collection of equipment, activities, or both within a single contiguous area and under common control that is included in a section 112(c) source category or subcategory * * *'' Therefore, the definition of existing affected source in the final rule is the collection of existing industrial, commercial, or institutional boilers and process heaters within a subcategory located at a major source of HAP emissions.

*B. Format*

*Comment:* Several commenters opposed using one or more surrogates for the HAP regulated. Some commenters stated that EPA must set emission standards for each HAP emitted by this category. One commenter explained that the use of surrogates is acceptable if: (1) The surrogates reflect the actual emissions of the represented pollutants, (2) the emission limit set for the surrogate is consistent with the emission limit calculated for the represented pollutants, and (3) the surrogates have substantially the same properties as the represented pollutants and is controlled by the same mechanism. Based on these criteria, the commenter argued that EPA's selection of surrogates is inadequate. One commenter specifically contended that CO is not an adequate surrogate for dioxin because dioxin emissions are affected by the temperature of the emissions, how quickly the temperature is lowered, and the levels of chlorine in the materials that are being combusted and control devices. Other commenters supported the use of surrogates to represent the HAP list.

*Response:* As discussed in the proposal preamble, the use of surrogates for the HAP regulated is appropriate. Because of the large number of HAP potentially present, the disparity in the quality and quantity of the emissions information available, particularly for different fuel types, we chose to group HAP into four categories: Mercury, non-mercury metallic HAP, inorganic HAP, and organic HAP. In general, the pollutants within each group have similar characteristics and can be controlled with the same techniques. We then chose compounds that could be used as surrogates for all the compounds in each pollutant category. We have used surrogates in previous NESHAP as a technique to reduce the performance testing costs, and thus the use of surrogates is appropriate in the final rule.

For inorganic HAP, we chose to use HCl as a surrogate. The emissions test information available to us indicated that the primary inorganic HAP emitted from boilers and process heaters is HCl. Much smaller amounts of hydrogen fluoride and chlorine are emitted. Control technologies that would reduce HCl would also control other inorganic HAP. Additionally, we had limited emissions information for other inorganic HAP. By focusing on HCl, we have achieved control of the largest emitted and most widely emitted HAP,

and control of HCl would also constitute control of other inorganic HAP.

For non-mercury metallic HAP, we chose to use PM as a surrogate. Most, if not all, non-mercury metallic HAP emitted from combustion sources will appear on the flue gas fly-ash. Therefore, the same control technology that would be used to control fly-ash PM will control non-mercury metallic HAP. A review of data in the emission database for PM control devices having both inlet and outlet emissions results shows control efficiencies for each non-mercury metallic HAP similar to PM. Particulate matter was also chosen instead of a specific metallic HAP because all fuels do not emit the same type and amount of metallic HAP, but most generally emit PM that includes some amount and combination of metallic HAP. We maintain that particulate matter reflects the emissions of non-mercury metallic HAP as these compounds usually comprise a percentage of the emitted particulate matter. Since the NESHAP program is technology-based, the technologies that have been developed and implemented to control particulate matter, also control non-mercury metallic HAP. Furthermore, since non-mercury metallic HAP is a component of particulate matter, we can use particulate matter as a surrogate for the purposes of the final rule.

While we did use PM as a surrogate for non-mercury metallic HAP, we also provided an alternative total selected metals emission limit based on the sum of the emissions of the eight most common and largest emitted metallic HAP compounds from boilers and process heaters. Again, a total selected metals number was used instead of limits for each individual metallic HAP because sufficient information was not available for each metallic HAP for every fuel type. However, a total metals number could be calculated for every fuel type.

We realize that mercury emissions can exist in different forms depending on combustion conditions and concentrations of other compounds. That is why we have mercury as a separate pollutant category in the final rule and do not provide for a surrogate.

For organic HAP, we chose to use CO as a surrogate to represent the variety of organic compounds emitted from the various fuels burned. Both organic HAP and CO emissions are the result of incomplete combustion of the fuel. Because CO is a good indicator of incomplete combustion, there is a direct correlation between CO emissions and minimizing organic HAP emissions. The extent to which CO and HAP emissions are related can also depend on site-specific operating conditions for each boiler or process heater. This site-specific nature may result in various degrees of correlation between CO and organic HAP emissions, but it is proven that reductions in CO emissions result in a reduction of organic HAP emissions. The control methods for both CO and organic HAP are the same, *i.e.*, complete combustion. This result would not have been different if MACT floor analyses were conducted for specific organic HAP or for a surrogate compound such as CO. For boilers and process heaters, we have determined that CO is a reasonable indicator of incomplete combustion. Also, we did not set emission limits for each specific organic HAP because we lacked sufficient information for many of the organic HAP for all the fuels combusted. We acknowledge that there are many factors that affect the formation of dioxin, but we also recognize that dioxin can be formed in both the combustion unit and downstream in the associated PM control device. Minimizing organic HAP emissions can limit the formation of dioxin in the combustion unit. We reviewed all the good combustion practice (GCP) information available in the boiler population database and determined that no floor level of control exists, except for limiting CO emissions, such that GCP could be incorporated into the standard. One control technique, controlling inlet temperature to the PM control device, that has demonstrated controlling downstream formation of dioxins in other source categories (*e.g.,* municipal waste combustors) was analyzed for industrial boilers. In all cases, no increase in dioxins emissions were indicated across the PM control device even at high inlet temperatures. However, we requested comment on controls that would achieve reductions of organic HAP, including any additional data that might be available. The EPA did not receive any additional supporting information or data. Additionally, more stringent options beyond the floor level of control were evaluated, but were determined to be too costly and emissions reductions associated with the options could not be evaluated because no information was available that indicated a relationship between the GCP and emission reduction of organics (including dioxin).

*C. Compliance Schedule*

*Comment:* Many commenters requested that EPA provide an additional year to comply with the final rule. Commenters explained that the time lines associated with permitting, capital appropriation, project bid, and construction activities are significant and that the 3-year deadline would not provide adequate time for the estimated 3,730 existing units at affected sources to be retrofitted as necessary to meet the new MACT standards. The commenters added that sources subject to the final rule would also be competing with sources that are subject to other combustion rules for the same vendors.

*Response:* The EPA disagrees with the commenters that the 3-year compliance deadline is too short considering the number of sources that will be competing for the resources and materials from engineering consultants, equipment vendors, construction contractors, financial institutions, and other critical suppliers. The EPA recognizes the possibility that these same consultants, vendors, etc., may also be used to comply with the utility MACT standard. However, we know that many sources will not need to install controls. As a result, since not everyone will need more than 3 years to actually install controls, the final rule does not allow an extra year for existing sources to comply with the final rule. Section 112(i)(3)(B) of the CAA allows EPA or the permit authority, on a case-by-case basis, to grant an extension permitting an existing source up to 1 additional year to comply with standards if such additional period is necessary for the installation of controls. This provision is sufficient for those sources where the 3-year deadline would not provide adequate time to retrofit as necessary to comply with the requirements of the standard. We anticipate that a number of units will seek and be granted the 1-year extension since construction of needed control devices could be constrained by the potential impacts on delays in obtaining funding and potential labor and equipment shortages.

*D. Subcategorization*

*Comment:* Two commenters said that EPA does not have the authority to develop subcategories for the purpose of reducing compliance costs or weakening the standard. The commenters also noted that costs should not be considered in subcategorizing and establishing the MACT floor. One commenter explained that EPA has failed to present a persuasive rationale for the establishment of new or different subcategories, such as a wood-fired unit subcategory and noted that EPA cannot subcategorize based on fuel type, cost, level of emissions reductions, control technology applicability or effectiveness, achievability of emissions reductions, or health risks. The

commenter argued that EPA cannot subcategorize to reduce cost because that would change CAA section 112 standards into a cost-benefit program and that is not legally defensible. The commenter noted that the DC Circuit court recently held that, when confronted with the cost argument, costs are not relevant when determining MACT floors.

*Response:* If the commenters are referring to the request for comment regarding further subcategorizations than what was proposed, the EPA agrees that there is no justification for any further subcategories. The final rule maintains the subcategories presented in the proposed rule. If the commenters are referring to subcategories presented in the proposed rule, section 112(d)(1) of the CAA states ''the Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory'' in establishing emission standards. Thus, we have discretion in determining appropriate subcategories based on classes, types, and sizes of sources. We used this discretion in developing subcategories for the industrial, commercial, and institutional boilers and process heaters source category. Through subcategorization, we are able to define subsets of similar emission sources within a source category if differences in emissions characteristics, processes, air pollution control device (APCD) viability, or opportunities for pollution prevention exist within the source category. We first subcategorized boilers and process heaters based on the physical state of the fuel (solid, liquid, or gaseous), which will affect the type of pollutants emitted and controls applicable, and the design and operation of the boiler, which influences the formation of organic HAP emissions. We then further subcategorized boilers and process heaters based on size. Our distinctions are based on technological differences in the equipment. For example, small units are package units typically having capacities less than 10 million Btu per hour heat input and use a combustor design which is not common in large units. A review of the information gathered on boilers also shows that a number of units operate as backup, emergency, or peaking units that operate infrequently. The boiler database indicates that these infrequently operated units typically operate 10 percent of the year or less. These limited use boilers, when called upon to operate, must respond without failure and without lengthy periods of startup. Since their use and operation are different compared to typical industrial, commercial, and institutional boilers, we decided that such limited use units should have their own subcategory.

Neither the subcategories or MACT floor analysis was conducted considering costs, either in the proposed rule or in the final rule.

*Comment:* Many commenters requested EPA to develop a separate subcategory for small municipal electric utilities. Reasons for creating a subcategory for small electrical utility steam generating units included: (1) EPA has authority to establish such a subcategory of sources to be regulated under CAA section 112 and is meant to address control costs and feasibility, (2) past EPA practice supports subcategorization in this instance, (3) differences between municipal utility boilers and non-utility boilers justify subcategorization, and (4) EPA cannot properly account for cost and energy concerns mandated in the MACT standard setting process without subcategorization for municipal utility boilers. The commenters added that the unique physical attributes of municipally-owned utilities, as well as their significant and direct impact on municipal tax base, support a separate subcategorization.

*Response:* The EPA sees no technical or legal justification for creating a separate subcategory for municipal utilities. Boilers at municipal utilities fire the same type of fuels, have the same type of combustor designs, and can use the same type of controls as other units in the large subcategory. Consequently, the subcategories that are in the final rule are the same as at proposal. We would also like to clarify that subcategories were developed based on combustor design and not on industrial sector. Also, had we gone beyond-the-floor, we would have considered cost in the final determination. Since we did not go beyond-the-floor level of control, cost did not play a role in the analysis.

*Comment:* Many commenters requested EPA add a subcategory for medium sized boilers and process heaters.

*Response:* The EPA does not see justification for creating a separate subcategory for medium sized units. The designation of large and small subcategories was not based

*Response:* The EPA does not see justification for creating a separate subcategory for medium sized units. The designation of large and small subcategories was not based solely on size of the unit. Large and small subcategories were developed because small units less than 10 MMBtu/hr heat input typically use a combustor design that is not common in larger units. Large boilers generally use the watertube combustor design. The design of the boiler or process heater will influence the completeness of the combustion process which will influence the formation of organic HAP emissions. The EPA developed large and small subcategories to account for these differences and their affect on the type of emissions. The proposed size break between the large and small subcategories of 10 MMBtu/hr was based on typical sizes for firetube and cast iron units and considering cut-offs in State and Federal permitting requirements and rules. The EPA does not view medium sized boilers as being different than larger boilers. Combustor designs, applicable air pollution control devices, fuels used, and operation are similar for large and medium. While actual pollution controls used and monitoring equipment may be different, the CAA does not allow EPA to subcategorize on these parameters.

Section 112(d)(1) of the CAA allows EPA to distinguish among classes, types, and size in establishing MACT standards. As indicated above, at proposal, the size break selected between large and small units of 10 MMBtu/hr was based on typical sizes for fire tube units and also considering cut-offs in State and Federal permitting requirements and emission rules. Based on comments, we have examined information in the docket regarding the population and characteristics of industrial, commercial, and institutional boilers. It is correct that boilers below 10 MMBtu/hr are generally not required to be permitted and are either firetube or cast iron boilers. Based on review of the thousands of responses received on an information collection request (ICR) conducted during the rulemaking process, it is obvious and appropriate that the distinction between small and large units needs to include size. It is apparent from the ICR responses that facilities know the size of their units but do not generally know the exact type of the units. Many responses indicated that the boiler was both firetube and watertube. Many more responses did not list the boiler type at all. Therefore, the inclusion of size in the definition of small and large subcategories is appropriate.

Based on review of the 1979 EPA document on boiler population and the ICR survey database, the appropriate size break between small and large type units is 10 MMBtu/hr. In the EPA document, 99 percent of the boilers listed as being below 10 MMbtu/hr are either firetube or cast iron. Since these trends are from a 25 year old report, we


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analyzed our ICR survey database which confirmed these findings.

*E. MACT Floor*

*Comment*: Several commenters supported EPA's finding that the MACT floor level for existing gas and liquid fuel-fired units is no emissions reductions. Other commenters contended that EPA has legal authority to set the MACT floor as ''no emissions control'' for particular HAP categories. A commenter noted that EPA has a clear statutory obligation to set emission standards for each listed HAP. One commenter specifically challenged EPA's determination that ''no control'' is the MACT floor for organic pollutants. The commenter noted that the U.S. Court of Appeals for the DC Circuit had squarely held, in the National Lime case, that EPA was not allowed to make a ''no control'' determination for a pollutant emitted by a listed category of sources.

*Response*: First, the MACT floor methodology we use is consistent with DC Circuit's holding in the National Lime case. The DC Circuit held that by focusing only on technology EPA ignored the directive in CAA section 112(d)(2) to consider pollution-reducing measures including process changes and substitution of materials.

The EPA has ample legal authority to set the MACT floor at ''no emissions reductions.'' This is because the statute requires EPA to set standards that are duplicable by others. In the National Lime case, the court threw out EPA's determination of a no control floor because it was based only on a control technology approach. The court stated that EPA must look at what the best performers achieve, regardless of how they achieve it. Therefore, our determination that the MACT floor for certain subcategories or HAP is ''no emissions reductions'' is lawful because we determined that the best-performing sources were not achieving emissions reductions through the use of an emission control system and there were no other appropriate methods by which boilers and process heaters could reduce HAP emissions. Furthermore, setting emissions standards on the basis of actual emissions data alone where facilities have no way of controlling their HAP emissions would contravene the plain statutory language as well as Congressional intent that affected sources not be forced to shut down.

The EPA agrees with the commenter that all factors which might control HAP emissions must be considered in making a floor determination for each subcategory. However, EPA disagrees that it must express the floor as a quantitative emission level in those instances where the source on which the floor determination is based has not adopted or implemented any measure that would reduce emissions.

A detailed discussion of the MACT floor methodology is presented in the memorandum ''MACT Floor Analysis for New and Existing Sources in the Industrial, Commercial, and Institutional Boilers and Process Heaters Source Categories'' in the docket. In summary, we considered several approaches to identifying MACT floor for existing industrial, commercial, and institutional boilers and process heaters. Based on recent court decisions, in most cases the most acceptable approach for determining the MACT floor is likely to involve primarily the consideration of available emissions test data. However, after review of the available HAP emission test data, we determined that it was inappropriate to use this MACT floor approach to establish emission limits for boilers and process heaters. The main problem with using only the HAP emissions data is that, based on the test data alone, uncontrolled units (or units with low efficiency add-on controls) were frequently identified as being among the best performing 12 percent of sources in a subcategory, while many units with high efficiency controls were not. However, these uncontrolled or poorly controlled units are not truly among the best controlled units in the category. Rather, the emissions from these units are relatively low because of particular characteristics of the fuel that they burn, that can not reasonably be replicated by other units in the category or subcategory. A review of fuel analyses indicate that the concentration of HAP (metals, HCl, mercury) vary greatly, not only between fuel types, but also within each fuel type. Therefore, a unit without any add-on controls, but burning a fuel containing lower amounts of HAP, can have emission levels that are lower than the emissions from a unit with the best available add-on controls. If only the available HAP emissions data are used, the resulting MACT floor levels would, in most cases, be unachievable for many, if not most, existing units, even those that employ the most effective available emission control technology. Another problem with using only emissions data is that there is very limited or no HAP emissions information available to the Agency for the subcategories. This is consistent with the fact that units in these source categories have not historically been required to test for HAP emissions.

We also considered using HAP emission limits contained in State regulations and permits as a surrogate for actual emission data in order to identify the emissions levels from the best performing units in the category for purposes of establishing MACT standards. However, we found no State regulations or State permits which specifically limit HAP emissions from these sources.

Consequently, we concluded that the most appropriate approach for determining MACT floors for boilers and process heaters is to look at the control options used by the units within each subcategory in order to identify the best performing units. Information was available regarding the emission control options employed by the population of boilers identified by the EPA. We considered several possible control techniques (*i.e.*, factors that influence emissions), including fuel substitution, process changes and work practices, and add-on control technologies.

We first considered whether fuel switching would be an appropriate control option for sources in each subcategory. We considered the feasibility of both fuel switching to other fuels used in the subcategory and to fuels from other subcategories. This consideration included determining whether switching fuels would achieve lower HAP emissions. A second consideration was whether fuel switching could be technically achieved by boilers and process heaters in the subcategory considering the existing design of boilers and process heaters. We also considered the availability of various types of fuel. After considering these factors, we determined that fuel switching was not an appropriate control technology for purposes of determining the MACT floor level of control for any subcategory. This decision was based on the overall effect of fuel switching on HAP emissions, technical and design considerations, and concerns about fuel availability.

We also concluded that process changes or work practices were not appropriate criteria for identifying the MACT floor level of control for units in the boilers and process heaters category. The HAP emissions from boilers and process heaters are either fuel dependent (*i.e.*, mercury, metals, and inorganic HAP) or combustion related (*i.e.*, organic HAP). Fuel dependent HAP are typically controlled by removing them from the flue gas after combustion. Therefore, they are not affected by the operation of the boiler or process heater. Consequently, process changes would be ineffective in reducing these fuel-related HAP emissions.

On the other hand, organic HAP can be formed from incomplete combustion


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of the fuel. Good combustion practice (GCP), in terms of boilers and process heaters, could be defined as the system design and work practices expected to minimize organic HAP emissions. While few sources in EPA's database specifically reported using good combustion practices, the data that we have suggests that boilers and process heaters within each subcategory might use any of a wide variety of different work practices, depending on the characteristics of the individual unit. The lack of information, and lack of a uniform approach to assuring combustion efficiency, is not surprising given the extreme diversity of boilers and process heaters, and given the fact that no applicable Federal standards, and most applicable State standards, do not include work practice requirements for boilers and process heaters. Even those States that do have such requirements do not require the same work practices. For example, CO emissions are generally a good indicator of incomplete combustion, and, therefore, low CO emissions might reflect good combustion practices. (As discussed in the proposal, CO is considered a surrogate for organic HAP emissions.) Therefore, we considered whether existing CO emission limits might be used to establish good combustion practice standards for boilers and process heaters. We reviewed State regulations applicable to boilers and process heaters, and then for each subcategory we matched the applicability of State CO emission limits with information on the locations and characteristics of the boilers and process heaters in the population database. Ultimately, we found that very few units (less than 6 percent) in any subcategory were subject to CO emission limits. We concluded that this information did not allow EPA to identify a level of performance that was representative of good combustion across the various units in any subcategory. Therefore, we did not establish a CO emission limit, as a surrogate for organic HAP emissions, as a part of the MACT floor for existing units. However, we have considered the appropriateness of such requirements in the context of evaluation possible beyond-the-floor options.

In general, boilers and process heaters are designed for good combustion. Facilities have an economic incentive to ensure that fuel is not wasted, and the combustion device operates properly and is appropriately maintained. In fact, existing boilers and process heaters are used typically as high efficiency control devices to control (reduce) emission streams containing organic HAP compounds from various process operations. Therefore, EPA's inability to establish a combustion practice requirement as part of the MACT floor for existing sources in this category should not reduce the incentive for owners and operators to run their boilers and process heaters at top efficiency.

As a result of the evaluation of the feasibility of establishing emission limits based on control techniques such as fuel switching and good combustion practices, we concluded that add-on control technology should be the primary factor for purposes of identifying the best controlled units within each subcategory of boilers and process heaters. We identified the types of air pollution control techniques currently used. We ranked those controls according to their effectiveness in removing the different HAP categories of pollutants; including metallic HAP and PM, inorganic HAP such as acid gases, mercury, and organic HAP. We then listed all the boilers and process heaters in the population database in order of decreasing control device effectiveness within each subcategory for each pollutant type. Then we identified the top 12 percent of units within each category based on this ranking, and determined what kind of emission control technology, or combination of technologies, the units in the top 12 percent employed. Finally, we looked at the emissions test data from boilers and process heaters that used the same control technology, or technologies, as the units in the top 12 percent to estimate the average emissions limitation achieved by these units.

This approach reasonably ensures that the emission limit selected as the MACT floor adequately represents the average level of control actually achieved by units in the top 12 percent. The analysis of the measured emissions from units representative of the top 12 percent is reasonably designed to provide a meaningful estimate of the average performance, or central tendency, of the best controlled 12 percent of units in a given subcategory. For existing subcategories where less than 12 percent of units in the subcategory use any type of control technology, we looked to see if we could estimate the central tendency of the best controlled units by looking at the unit occupying the median point in the top 12 percent (the unit at the 94th percentile). If the median unit of the top 12 percent is using some control technology, we might use the measured emission performance of that individual unit as the basis for estimating an appropriate average level of control of the top 12 percent. For subcategories where less than 6 percent of the units in a HAP grouping used controls or limited emissions, the median unit for that HAP grouping reflects no emissions reductions. Therefore, in these circumstances, EPA has appropriately established the MACT floor emission levels for these sources as no emission reduction.

*Comment:* Many commenters opposed EPA using emissions data from units in the large subcategory to develop emission limits for units in the small or limited use subcategories. Some commenters stated that it was not appropriate to assume that emissions rates achievable by large units are achievable by small units, even the best controlled units. Other commenters argued that the use of large unit data in MACT determinations for other subcategories would defeat the purpose of the subcategorization and violate the requirements of CAA section 112 because the use of this data does not represent sources in the relevant category or subcategory.

*Response:* The EPA disagrees with the commenters and maintains that it has conducted the MACT floor analysis appropriately. Section 112(d) of the CAA requires us to establish emission limits for new sources based on the performance of the best-controlled similar source. The CAA does not specify that the similar source must be within the same source category or subcategory. To the contrary, our interpretation of section 112(d) is that we are obligated to consider similar sources from other source categories or subcategories in determining the best-controlled similar source for establishing MACT for new sources.

For new limited use and small units, we concluded that the best-controlled similar sources are found in the large subcategory. First, EPA determined the control technology used by the best controlled sources in the subcategory. For example, only units in the population database less than 10 MMBtu/hr (and not in the limited use subcategory) were used to determine the MACT floor control technology for units in the small subcategories. Second, EPA used information in the emissions test database to establish the emission level associated with the MACT floor control technology. The emissions test database did not contain test data for limited use or small boilers and process heaters. Section 112(d) of the CAA requires EPA to use information from similar sources to set the MACT floor. Such sources may not be in the same subcategory. Although the units in the small and


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limited use subcategories are different enough to warrant their own subcategory (*i.e.*, different purposes and operation), emissions of the specific types of HAP for which limits are being proposed are expected to be related more to the type of fuel burned and the type of control used, than to unit operation. Consequently, EPA determined that emissions information from large fuel-fired units could be used to establish MACT floor levels for the small and limited use subcategories because the fuels and controls are similar. The proposal preamble requested additional information from commenters to refine/revise the approach if necessary. No commenters provided emissions information for limited use or small subcategory boilers or process heaters.

*Comment:* Several commenters requested that EPA account for variability in fuel composition as MACT floors are established and to provide adequate allowances for inherent fuel supply variability. Some commenters argued that there is no flexibility in the rule to account for this variability and noted that coal composition can vary by location and also within an individual seam.

*Response:* As described in the memorandum ''Revised MACT Floor Analysis for the Industrial, Commercial, and Institutional Boilers and Process Heater National Emission Standards for Hazardous Air Pollutants Based on Public Comments'' in the docket, the calculation of numerical emission limits was a two-step analysis. The first step involved calculating a numerical average of the appropriate subset of emission test data. The second step involved generating and applying an appropriate variability factor to account for unavoidable variations in emissions due to uncontrollable variations in fuel characteristics and ordinary operational variability. Accounting for variability is appropriate in order to generate a more accurate estimation of the actual, long term, performance of a source (*e.g.*, the source occupying the median point in the top 12 percent). An emission test provides a momentary snapshot, not an estimation of continuous performance. In order to translate the former into the latter, we must account for that ordinary and unavoidable variability that the source is likely to experience over time. This gives us a more reasonable estimate of the actual level of emissions control that the unit is achieving. The EPA contends that by considering the variability of emissions information, we have indirectly incorporated variability in fuel, operating conditions, and sampling and analytical conditions because these parameters vary from emission tests conducted from one unit to another, and even within each test set of three measurements at a single unit. The most elementary measure of variation is range. Range is defined as the difference between the largest and smallest values. This is the variability methodology used in the proposed rule. That is, for each unit with multiple emissions tests conducted over time, the variability was calculated by dividing the highest three-run test result by the lowest three-run test result. The overall variability was calculated by averaging all the individual unit variability factors. This overall variability factor was multiplied by the overall average emission level to derive a MACT floor limit representative of the average emission limitation achieved by the top 12 percent of units. This approach adequately accounts for inherent fuel supply variability. Based on comments, EPA did conduct a more robust statistical analysis (t-test) of the mercury emissions data used in the MACT floor analysis to identify the 97.5th percent confidence limit. This analysis provided similar results to the variability analysis conducted in the proposed rule. Consequently, EPA decided not to change its variability methodology. A detailed discussion of the statistical analysis conducted is provided in the memorandum ''Statistical Analysis of Mercury Test Data Variability in Response to Public Comments on Determination of the MACT Floor for Mercury Emissions'' in the docket.

*Comment:* Several commenters supported EPA's finding that the MACT floor level of control for existing gaseous and liquid fuel units is no control. Other commenters noted that EPA has a clear statutory obligation to set emission standards for each listed HAP (the commenter cited legal briefs). One commenter specifically challenged EPA's determination of the MACT floor for organic pollutants. The commenter explained that EPA should rank the units for which emissions data is available according to the best performing units, not based on the add-on control level of 6 percent of the total population. The commenter noted that the U.S. Court of Appeals for the DC Circuit had squarely held, in the National Lime case, that EPA was not allowed to make a ''no control'' determination for a pollutant emitted by a listed category of sources.

*Response:* The EPA agrees that all factors which might control HAP emissions must be considered in making a floor determination for each subcategory. However, EPA disagrees that it must express the floor as a quantitative emission level in those instances where the sources on which the floor determination is based has not adopted or implemented any measure that would reduce emissions. For several subcategories and certain HAP, EPA has not identified any adjustments or other operational modifications that would materially reduce emissions by these units, and EPA had determined that no add-on controls are presently in use. In these circumstances, EPA has established appropriately the MACT floors for these sources as no emission reduction.

*Comment:* One commenter pointed out that the variability factor used to make the calculated MACT floor less stringent is not allowed by section 112 of the CAA. The commenter mentioned that the variability factors are not consistent, as one factor considers the fuel variability and the other factor considers the test data variability.

*Response:* Section 112(d)(2) of the CAA requires that emissions standards promulgated shall require the maximum degree of reductions in emissions that the EPA Administrator, taking into consideration the costs of achieving such emission reduction, determines is achievable for new and existing sources in the subcategory to which such emission standards applies. Accounting for variability is appropriate in order to generate a more accurate estimation of the actual, long term, performance of a source (*e.g.*, the source occupying the median point in the top 12 percent). An emission test provides a momentary snapshot, not an estimation of continuous performance. In order to translate the former into the latter, we must account for that ordinary and unavoidable variability that the source is like to experience over time. This give us a more reasonable estimate of the actual level of emissions control that the unit is achieving. As such, due to variations in fuel burned, and ordinary operational variability any emission limit set from a point source measurement alone may not be indicative of normal emissions or operations of the unit. Attempting to base a standard (either a floor standard, or a beyond-the-floor standard) solely on point measurements would lead to unachievable standards for all sources. Limits set by EPA must be achieved at all times, and it is important that the MACT floor limit adequately account for the normal and unavoidable variability in the process and in the operation of the control device.

Variability was assessed two ways. For existing subcategories, variability in emissions information was used to develop variability factors for all


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subcategories where emissions information was available. Variability in fuel content was used only in situations regarding determining the achievable MACT floor level for new sources from the emission test result on the best controlled similar source. This approach is appropriate since the main uncertainty associated with the emission test result from the best controlled similar source is fuel variability. Corresponding fuel analysis results were not available for the emissions test results from the best controlled similar source. Whereas, the average emission level of the best 12 percent of the units has, besides fuel variability, the uncertainty associated with operational and design variability of the various control devices installed on units that represent the best 12 percent of the units. For example, available fuel analysis information shows that mercury content of coal varies by a factor of 12.54. Dividing the highest mercury emission test result by the lowest mercury test results from coal-fired units included in units that represent the best 12 percent results in a variability factor of 20. Therefore, we concluded that fuel availability was inherently considered in the MACT floor analysis approach used for existing subcategories.

*Comment:* Many commenters requested that EPA revise the MACT floor methodology for mercury emission limits. The commenters contended that the variability factor was calculated inappropriately. Other commenters stated that EPA should account for variability in fuel composition in the MACT floor analysis. Other commenters expressed concern that the floor level of control was based on fabric filters, which has not been proven at all sources to reduce mercury.

*Response:* As discussed in the proposal preamble, the MACT floor analysis for mercury was based on a two step process. First the percentage of units with control technologies that could achieve mercury emissions reductions was determined using the boiler population databases. If the control technology analysis indicated that at least 12 percent of sources in the subcategory used a control device that could achieve mercury emissions reductions, then the control technology present at the median (6th percentile) was identified as the MACT floor control technology. The MACT floor level of control for mercury was identified as a fabric filter. The control effectiveness of fabric filters was based on emissions information for utility boilers that indicated that mercury emissions reductions were being achieved with this technology. In this case, we could use control efficiency information from another similar source category to supplement the information available in this source category because of the similarity in fuel burned, combustor type, and control methodology and operation. We maintain that fabric filters are still the appropriate level of control for the MACT floor.

Second, the emission limit associated with the MACT floor control technology was calculated using emissions information for units in the subcategory, whenever possible. For most of the subcategories developed, emissions information was adequate. Only for the emission limit for new source liquids and the variability factor for new source solids was fuel pollutant content incorporated into the MACT floor analyses. The mercury fuel content of coal from the utility industry was used in developing the variability factors for new solid fired units. This was done because mercury emissions are dependent on the quantity of mercury in the fuel burned. Coal available to utilities and industrial boilers and process heaters is expected to be similar, and coal is the solid fuel that is routinely used in such units that has generally the greatest degree of HAP variability. We maintain that the utility database used at proposal to develop the variability factor for new sources was adequate in establishing the MACT floor emission limit.

The EPA recognizes that the mercury emissions database for industrial boilers is limited. However, EPA is directed by the CAA to develop standards for sources using whatever data is available. Prior to proposal and during the Industrial Combustion Coordinated Rulemaking (ICCR) process, EPA conducted a thorough search for HAP emission test reports. This search was supported by industry, trade groups, and States. For criteria pollutants, such as PM, substantial emission information was available and gathered. For mercury and other HAP, this was not the case. Industrial boilers have not generally been required to test for HAP emissions. In the proposed rule, EPA requested commenters to provide additional emissions information. However, only one source provided any additional mercury emissions data. This information (test results from three additional coal-fired industrial boilers) was used to revise the mercury emission limit for existing sources. We also reviewed the mercury emission database used to develop the MACT floor emission limit for existing sources. After review, we determined that a revision to the variability factor was appropriate. The additional data and the revised variability factor was used to re-calculate the mercury emission limit to be 0.000009 lb/MMBtu (from 0.000007 lb/MMBtu at proposal). A detailed discussion of the revised MACT floor analysis conducted is provided in the memorandum ''Revised MACT Floor Analysis for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants Based on Public Comments'' in the docket.

Variability of the emissions data were incorporated into the final emission limits. The EPA contends that by considering the variability of emissions information, we have indirectly incorporated variability in fuel, operating conditions, and sampling and analytical conditions because these parameters vary from emission tests conducted from one unit to another, and even within one unit. The EPA does not consider it appropriate or feasible to incorporate variability from a multitude of parameters because such information is not available and cannot be correlated to the emissions information in the emissions test database. For the final rule, EPA did conduct a statistical analysis of the data to identify the 97.5th percent confidence interval. This analysis provided similar results to the variability analysis conducted in the proposed rule. Consequently, EPA decided not to change its variability methodology. A detailed discussion of the statistical analysis conducted is provided in the memorandum ''Statistical Analysis of Mercury Test Data Variability in Response to Public Comments on Determination of the MACT Floor for Mercury Emissions'' in the docket.

*Comment:* Several commenters contended that the California standards which the CO requirements are based on do not require CO CEMS, but require initial compliance testing and periodic subsequent performance testing.

*Response:* The commenters are correct that the California CO regulations do not require CO CEMS. The regulations do provide sources with the option of conducting annual testing or installing CO CEMS to demonstrate compliance with the CO emission limit. Because the regulations that were the basis of the MACT floor do not provide specifics on which boilers should conduct annual testing and which should use CO CEMS, we reviewed the cost information provided by the commenters to make this determination. In considering the additional cost information and reviewing the cost information used in the proposed rule, the EPA decided that


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changes to the CO compliance requirements were warranted. The final rule requires that new units with heat input capacities less than 100 MMBtu/hr conduct initial and annual performance tests for CO emissions. New units with heat input capacities greater or equal to 100 MMBtu/hr are still required to install, operate, and maintain a CO CEMS.

Regardless of whether the California regulations do or do not require CO CEMS, we would have reviewed the need for continuous monitoring and operating limits in order to ensure the most accurate indication of proper operation of the control system. The purpose of all of the minimum operating parameter limits in the standard is to ensure continuous compliance by ensuring that the air pollution control equipment is operating as they were during the latest performance test demonstrating compliance with the emission limits. The operating parameters are established as ''minimum'' to provide enforceable boundaries in their operation. Operating outside the bounds of the minimum parameters may lead to increased air emissions.

The EPA would also like to clarify that operation above the CO limit constitutes a deviation of the work practice standard. However, the determination of what deviations constitute violations of the standard is up to the discretion of the entity responsible for enforcement of the standards.

*F. Beyond the MACT Floor*

*Comment:* Many commenters contended that carbon injection should have been required as a beyond-the-floor option. Other commenters supported EPA's decision to not require any controls beyond-the-floor.

*Response:* For the final rule, EPA maintains that options beyond the MACT floor are not appropriate for the standard. The EPA is required by the CAA to set the standard at a minimum on the best controlled 12 percent of sources (for existing units) or best controlled similar source (for new units). The CAA also requires EPA to consider costs and non-air quality impacts and energy requirements when considering more stringent requirements than the MACT floor. As documented in the memorandum ''Methodology for Estimating Costs and Emissions Impacts for Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants'' in the docket, EPA did consider the cost and emission impacts of a variety of regulatory options more stringent than the MACT floor for each subcategory. The EPA recognizes that for some subcategories, more stringent controls than the MACT floor can be applied and achieve additional emissions reductions. However, EPA also determined that the cost impacts of such controls were very high. Considering both the costs and emissions reductions, EPA determined that it would be infeasible to require any options more stringent than the floor level.

For the final rule, EPA maintains that carbon injection should not be required as an above the floor technology. As discussed in the proposal preamble, we identified one existing industrial boiler that was using carbon injection. The emissions data that we obtained from the boiler indicated that this carbon injection unit was not achieving mercury emissions reductions. This result led us to conclude that it was not the new source floor level of control. However, there may have been other reasons for the ineffectiveness of this system (*e.g.*, low inlet mercury levels, insufficient carbon injection rate, ESP instead of fabric filter for PM control). Therefore, we considered carbon injection as a beyond-the-floor option, but decided that while this control technique has been used in other source categories, there is no demonstrated evidence that it would work for industrial boilers and process heaters because the type of mercury emitted and properties of the emission streams are sufficiently different for boilers and process heaters and other source categories.

*G. Work Practice Requirements*

*Comment:* Many commenters requested EPA consider exceedences of the CO limit to be a trigger for corrective action rather than a violation.

*Response:* In the final rule, we have clarified that an exceedence of the CO limit constitutes a deviation of the work practice standard. An observed exceedence of a monitoring parameter is not an automatic violation. You are required to report any deviation from an applicable emission limitation (including operating limit). We will review the information in your report along with other available information to determine if the deviation constitutes a violation. The determination of what emission or operating limit deviation constitutes violations of the standard is up to the discretion of the entity responsible for enforcement of the standard.

*H. Compliance*

*Comment:* Many commenters requested that EPA simplify and write the fuel monitoring requirements to not require retesting of fuel for changes in fuel supplier.

*Response:* We agree that the fuel monitoring requirements in the proposal needed to be clarified and explained further. Therefore, we have clarified the fuel analysis options in the final rule. If you elect to demonstrate compliance with the HCl, mercury, or total selected metals limit by using fuel which has a statistically lower pollutant content than the emission limit, then your operating limit is the emission limit of the applicable pollutant. Under this option, you are not required to conduct performance tests (*i.e.* stack tests).

If you demonstrate compliance with the HCl, mercury, or total selected metals limit by using fuel with a statistically higher pollutant content than the applicable emission limit, but performance tests demonstrate that you can meet the emission limits, then your operating limits are the operating limits of the control device (if used) and the fuel pollutant content of the fuel type/mixture burned.

The final rule specifies the testing methodology and procedures and the initial and continuous compliance requirements to be used when complying with the fuel analysis options. Fuel analysis tests for total chloride, gross calorific value, mercury, metal analysis, sample collection, and sample preparation are included in the final rule.

If you elect to comply based on fuel analysis, you are required to statistically analyze, using the z-test, the data to determine the 90th percentile confidence level. It is the 90th percentile confidence level that is required to be used to determine compliance with the applicable emission limit. The statistical approach is required to assist in ensuring continuous compliance by statistically accounting for the inherent variability in the fuel type.

You are required to recalculate the fuel pollutant content only if you burn a new fuel type or fuel mixture. You are required to conduct another performance test if you demonstrate compliance through performance testing, you burn a new fuel type or mixture, and the results of recalculating the fuel pollutant content are higher than the level established during the initial performance test.

*Comment:* Many commenters requested EPA consider exceedences of

parametric limits to be a trigger for corrective action rather than a violation.

*Response:* In the final rule, we have clarified that an exceedence of the parametric limits constitute a deviation of the operating limits. An observed exceedence of a monitoring parameter is not an automatic violation. You are required to report any deviation from an applicable emission limitation (including operating limit). We will review the information in your report along with other available information to determine if the deviation constitutes a violation. The determination of what emission or operating limit deviation constitutes violations of the standard is up to the discretion of the entity responsible for enforcement of the standard.

*Comment:* Many commenters requested EPA revise the opacity requirements. Commenters objected to the provision in the proposed NESHAP that would establish an opacity ''operating limit'' based on the initial performance test. Some commenters contended that EPA has provided no data or references demonstrating a relationship between opacity and particulate, total metals, or mercury emissions. Other commenters argued that the proposed opacity limit approach for dry control devices is unworkable due to the inherent inability of continuous opacity monitors (COMS) to accurately measure opacity at levels less than 10 percent. Some commenters argued that the performance and opacity achieved during the initial test may not be representative of the unit's performance. Other commenters explained that equipment condition, fuel and operating variations, and other uncontrollable parameters may result in varying emissions and emissions control equipment efficiencies over time. Commenters suggested requiring the NSPS limits for opacity rather than setting opacity based on the initial compliance test.

*Response:* We have reviewed the information provided by the commenters, and agree that the opacity operating limit requirements in the proposed rule are not appropriate for this source category. Because of the variability in fuels burned, the combination of fuels burned, and the typical operation of boilers and process heaters, we have decided that an opacity limit set based on the initial performance test may not be representative of the units typical performance.

We have revised the opacity operating limit provision by requiring existing units to maintain opacity to less than or equal to 20 percent (based on 6-minute averages) except for one 6-minute period per hour of not more than 27 percent. This is the opacity limit contained in the current NSPS for industrial boilers, which has a similar PM emission limit as the final rule. Therefore, it was determined that it was appropriate to include a similar opacity level as the control device operating limit for existing units. New sources can maintain their opacity operating limit to less than or equal to 10 percent (based on 1-hour block averages). This level appears to be the lowest opacity level currently applicable to industrial boilers in State regulations.

*Comment:* Several commenters objected to the requirement to conduct performance testing at worst case conditions. The commenters found this requirement to be unrealistic because stack testing must be scheduled well in advance and worst-case conditions depend on fuel, load, and many other variables, making it impossible to assure that the testing will occur during worst-case conditions. Two commenters contended there can be no guarantee that mineral properties for a fuel source at the time of the baseline test can be guaranteed beyond the content identified during purchase contract negotiations with a fuel supplier. Two commenters suggested that EPA define what worst case conditions are because sources do not have the experience to determine worst-case representative process conditions.

*Response:* We agree that more direction and clarification is needed regarding testing at worst case conditions. We have modified fuel sampling requirements and performance testing fuel use requirements to simplify compliance. During performance testing, sources are required to burn the type of fuel or mixture of fuel types that have the highest concentration of regulated HAP. This, in combination with revised fuel sampling requirements (*e.g.*, based on fuel type and not on supplier, etc.), will simplify the determination of the fuel blend during the performance test. Sources are also required to conduct performance tests under representative full load operating conditions.

*Comment:* Several commenters objected to the requirement for annual performance tests because they felt that it is overly burdensome given the ongoing compliance demonstrations required by the NESHAP. Several commenters suggested that initial performance testing should be required with subsequent performance testing occurring every 3 to 5 years. Some commenters stated that 5-year test intervals are consistent with title V permits and have been allowed in other MACT standards (*e.g.* Hazardous Waste Combustors).

*Response:* We have worked to minimize the testing and monitoring requirements of the final rule while retaining the ability to ensure compliance with the emission limits and work practice requirements. We are providing an option for sources to conduct performance testing once every 3 years if they conduct successful performance testing for 3 consecutive years. We are also allowing sources to demonstrate compliance with the HCl, mercury, and total selected metals emission limits through fuel testing if they do not need emission control devices to achieve the standard.

*I. Emissions Averaging*

In the proposal preamble, we solicited comments on an emissions averaging or bubbling compliance alternative, as part of the EPA's general policy of encouraging the use of flexible compliance approaches where they can be properly monitored and enforced, and whether EPA should include emissions averaging in the final rule. Emissions averaging can provide sources the flexibility to comply in the least costly manner while still maintaining regulation that is workable and enforceable. We requested comment on an averaging approach for determining compliance with the non-mercury metallic HAP, HCl, mercury, and/or PM standards for existing sources. We indicated that averaging would allow owners and operators to submit non-mercury metals, mercury, HCl, and/or PM emissions limits to the EPA Administrator for approval for each existing boiler in the averaging group such that if these emission limits are met, the total emissions from all existing boilers in the averaging group are less than or equal to emission limits (for non-mercury metals, mercury, HCl, or PM) applicable to units in the particular subcategory. We indicated also that averaging would not be applicable to new sources and could only be used between boilers and process heaters in the same subcategory. Also, owners or operators of existing sources subject to the Industrial Boiler New Source Performance Standards NSPS (40 CFR part 60, subparts Db and Dc) would be required to continue to meet the PM emission standard of that NSPS regardless of whether or not they are averaging.

Emissions averaging has been incorporated into the final rule as an alternative means of complying with the final rule. Emissions averaging allows an individual affected unit emitting

above the allowable emission limit required by the final rule to comply with that emission limit by averaging its emissions with other affected units at the same facility emitting below the allowable emission limit required by the final rule.

*Comment:* Many commenters supported including averaging in the final rule. Commenters cited numerous reasons, including cost effectiveness, energy efficiency, greater flexibility in compliance, and greater environmental benefit. Commenters also cited 40 CFR part 63, subpart MM, Pulping Chemical Recovery Combustion MACT as a precedent for including emissions averaging in MACT standards. Two commenters disagreed with allowing emissions averaging, stating that it would complicate compliance determinations, does not fit within the CAA mandate, and is inconsistent with the purpose of CAA section 112. Many of those commenters who supported emissions averaging recommended additional flexibility, such as including new units, and bubbling across subcategories.

*Response:* The final rule includes an emissions averaging compliance alternative because emissions averaging represents an equivalent, more flexible, and less costly alternative to controlling certain emission points to MACT levels. We have concluded that a limited form of averaging could be implemented and not lessen the stringency of the standard. We agree with the commenters that some type of emissions averaging would provide flexibility in compliance, cost and energy savings to owners and operators. We also recognize that we must ensure that any emissions averaging option can be implemented and enforced, will be clear to sources, and most importantly, will achieve no less emissions reductions than unit by unit implementation of the MACT requirements.

The final rule is not the first NESHAP to include provisions permitting emission averaging. In general, EPA has concluded that it is permissible to establish within a NESHAP a unified compliance regimen that permits averaging across affected units subject to the standard under certain conditions. Averaging across affected units is permitted only if it can be demonstrated that the total quantity of any particular HAP that may be emitted by that portion of a contiguous major source that is subject to the NESHAP will not be greater under the averaging mechanism than it would be if each individual affected unit complied separately with the applicable standard. Under this rigorous test, the practical outcome of averaging is equivalent in every respect to compliance by the discrete units, and the statutory policy embodied in the MACT floor provisions is, therefore, fully effectuated.

The EPA has generally imposed certain limits on the scope and nature of emissions averaging programs. These limits include: (1) No averaging between different types of pollutants, (2) no averaging between sources that are not part of the same major source, (3) no averaging between sources within the same major source that are not subject to the same NESHAP, and (4) no averaging between existing sources and new sources.

The final rule fully satisfies each of these criteria. Accordingly, EPA has concluded that the averaging of emissions across affected units permitted by the final rule is consistent with the CAA. In addition, EPA notes that the provision in the final rule that requires each facility that intends to utilize emission averaging to submit an emission averaging plan provides additional assurance that the necessary criteria will be followed. In this emission averaging plan, the facility must include the identification of (1) all units in the averaging group, (2) the control technology installed, (3) the process parameter that will be monitored, (4) the specific control technology or pollution prevention measure to be used, (5) the test plan for the measurement of particulate matter (or selected total metals), hydrogen chloride, or mercury emissions, and (6) the operating parameters to be monitored for each control device. Upon receipt, the regulatory authority will not approve an emission averaging plan containing averaging between emissions of different types of pollutants or between sources in different subcategories.

The final rule excludes new affected sources from the emissions averaging provision. New sources have historically been held to a stricter standard than existing sources because it is most cost effective to integrate state-of-the-art controls into equipment design and to install the technology during construction of new sources. One reason we allow emissions averaging is to give existing sources flexibility to achieve compliance at diverse points with varying degrees of add-on control already in place in the most cost-effective and technically reasonable fashion. This concern does not apply to new sources which can be designed and constructed with compliance in mind.

Only existing large solid fuel units, as defined in the final rule, can be included in the emissions averaging compliance alternative. Of the nine subcategories established for existing sources, existing large solid fuel units is the only subcategory for which multiple HAP emissions limits apply. For the existing small solid fuel subcategory and the six existing gaseous and liquid fuel subcategories, no HAP emissions limits are included in the final rule and, thus, it would not be appropriate to allow these units to average emissions. As for the existing limited use solid fuel subcategory, since these units, as defined in the final rule, operated on a limited basis (capacity factor of less than 10 percent) and are subject only to a less stringent PM emissions limit (as a surrogate for non-mercury metals), it would be inappropriate to allow these units to average emissions.

With concern about the equivalency of emissions reductions from averaging and non-averaging in mind, the EPA Administrator is also imposing under the emission averaging provision caps on the current emissions from each of the sources in the averaging group. The emissions for each unit in the averaging group would be capped at the emission level being achieved on the effective date of the final rule. These caps would ensure that emissions do not increase above the emission levels that sources currently are designed, operated, and maintained to achieve. In the absence of performance tests, in documenting these caps, these sources will documented the type, design, and operating specification of control devices installed on the effective date of the final rule to ensure that existing controls are not removed or lessen. By including this provision in the final rule, the EPA Administrator has taken yet another step to assist in ensuring that emission averaging results in environmental benefits equivalent or better over what would have happened without emission averaging.

The inclusion of emissions averaging into rules and the decision on how to design an emission averaging approach for a particular source category must be evaluated for each source category.

*J. Risk-based Approach*

*Comment:* Multiple commenters supported EPA's incorporation of risk-based concepts into the MACT Program. One commenter stated that providing risk-based applicability criteria for sources whose HAP emissions do not pose a significant risk is appropriate. Several commenters stated that there is clear legal authority in the CAA to construct NESHAP based on risk, and such an approach is very appropriate in the case of the Industrial Boiler MACT. The commenter also noted that the regulatory framework exists within their

State to implement such an approach. Several commenters added that risk-based alternatives will function as indirect emission limits that must be maintained by the facilities to assure that the criteria are met, and, thus, such alternatives for low-risk facilities are supportable by EPA's authority under section 112(d)(4) and 112(c)(9) of the CAA and EPA's inherent *de minimis* authority. Another commenter asserted that there are ways to structure the rule to focus on facilities that pose significant risks and avoid imposition of high costs on facilities that pose little risk. An appropriate approach would be to allow individual facilities to conduct a risk assessment to show that they pose insignificant risks to the public. However, one commenter stated that it is not appropriate for State and local programs to determine which facilities should be exempted from MACT. Several commenters supported a risk-based compliance alternative for HCl.

*Response:* The EPA has determined that it can establish applicable health-based emission standards for HCl and manganese for affected sources in this category pursuant to its authority under section 112(d)(4) of the CAA. As a result, EPA has included such standards in the final rule as alternative compliance requirements. Under this approach, affected sources can choose to comply with either the MACT-based emission limits or the health-based emission limits. Sources which choose to comply with the health-based emission limit(s) will remain subject to those limits, but will need to comply with testing, monitoring and reporting requirements commensurate with the compliance option they have chosen. Such health-based standards are consistent with both the commenters' support for an approach that minimizes the impact on low-risk facilities and EPA's statutory mandate under section 112.

Section 112(d)(4) of the CAA authorizes EPA to consider established health thresholds, with an ample margin of safety, when promulgating emission standards under section 112. Hydrogen chloride and Mn are two pollutants for which health thresholds have been established. Issues concerning our legal authority to establish health-based emission standards under section 112(d)(4) are discussed in detail below.

We are not using CAA section 112(c)(9) for the final rule, and there is no delisting of categories or subcategories, as would be consistent with section 112(c)(9).

The criteria defining how affected sources demonstrate that they meet the threshold emissions levels for the health-based compliance alternative(s) is included in appendix A to the final rule. The criteria in appendix A to the final rule were developed for and apply only to the Boiler and process heater source category and are not applicable to other source categories. The final rule provides two ways that an affected source may demonstrate compliance with the health-based emission limits. The first option is through the use of lookup tables which allow facilities to determine, using a limited number of site-specific input parameters, whether emissions from boilers and process heaters might cause a hazard index (HI) limit for non-carcinogens to be exceeded. The second option is a modeling approach which allows those facilities that do not match the site-specific input parameters on which the lookup tables are based to demonstrate compliance with the health-based emission limits by modeling using site-specific information.

The affected source will have to demonstrate that it meets the criteria established by today's final rule and then assume Federally enforceable limitations, as described in appendix A of the final rule, that ensure their specified HAP emissions do not subsequently increase to exceed levels reflected in their demonstrations.

*Comment:* Multiple commenters are opposed to the risk-based exemptions. Some noted that the proposal to include risk-based exemptions is critically flawed and opposes adoption of the risk-based exemptions.

One commenter stated that the inclusion of case-by-case risk-based exemptions into the first phase of the MACT program will negate the legislative mandate and jeopardize the effectiveness of the national air toxics program to adequately protect public health and the environment and to establish a level playing field. The commenter was very concerned that EPA referenced a fundamentally flawed interpretation of CAA section 112(d)(4) written by an industry (AF&PA) subject to regulation. Of particular concern was AF&PA's unprecedented proposal to include ''*de minimis* exemptions'' and ''cost'' in the MACT standard process.

One commenter stated that the use of risk-based concepts to evade MACT applicability is contrary to the intent of the CAA and is based on a flawed interpretation of section 112(d)(4) of the CAA. The commenter added that the CAA requires a technology-based floor level of control and does not provide exclusions for risk or secondary impacts from applying the MACT floor.

One commenter stated that in separate rulemakings and lawsuits, EPA has adopted legal positions and policies that refute and contradict the very risk-based and cost-based approaches contained in the proposals. In these other arenas, the commenter contended that EPA has properly rejected risk assessment to alter the establishment of MACT standards. The EPA also has properly rejected cost in determining MACT floors and in denying a basis for avoiding the MACT floor.

Several commenters stated that the preamble discussion of the risk-based approaches is not sufficient to allow for complete public comment and, therefore, it would not be appropriate for EPA to go directly to a final rule (without reproposal) with any of the approaches outlined in the proposal.

*Response:* We are not identifying and deleting a subcategory of sources in this source category pursuant to the authority of CAA section 112(c)(9). Legal issues associated with the health-based provisions are addressed below and in the comment/response memorandum.

As discussed above, we are, however, including in the final rule alternative health-based emission standards for HCl and TSM based on our authority under CAA section 112(d)(4). Section 112(d)(4) authorizes EPA to consider health thresholds, with an ample margin of safety, in establishing emission standards. The analysis necessary to do this can generally be characterized as a risk analysis. Thus, we disagree with the commenter that we must wait for implementation of CAA section 112(f) before utilizing risk analysis.

*Comment:* Many commenters stated that the proposal to include risk-based exemptions is contrary to the 1990 CAA Amendments (CAAA) which calls for MACT standards based on technology rather than risk as a first step. They added that congress incorporated the residual risk program under CAA section 112(f) to follow the MACT standards (not to replace them). The commenters added that the need for the technology-based approach has been recently reinforced by the results of the National Air Toxics Assessment (NATA), which indicates that exposure to air toxics is very high throughout the country in urban and remote areas. Several commenters added that risk-based approaches will be used separately to augment and improve technology-based standards that do not adequately provide protection to the public. One commenter added that they have been unable to substantiate the basis for EPA's support of the regulatory relief sought by industry through risk-based exemptions and that, in fact, the use of risk assessment at this stage of the

MACT program is directly opposed to title III of the CAA.

*Response:* We disagree that inclusion of health-based compliance alternatives, in the form of emission standards based on the authority of section 112(d)(4) of the CAA, in the final rule is contrary to the 1990 CAAA. The final rule is a technology-based standard developed using the procedures dictated by section 112 of the CAA. The only difference between the final rule and other MACT is that we used our discretion under section 112(d)(4) to base appropriate parts of the final rule on established health thresholds, with an ample margin of safety. The final rule is particularly well-suited for a health-based compliance alternative, established pursuant to the criteria set forth in section 112(d)(4). In addition to the fact that there are established health thresholds for HCl and manganese, EPA has determined that many of the facilities in this source category do not emit these pollutants in amounts that pose a significant risk to the surrounding population. Those sources that can demonstrate that the emissions of acid gases and manganese meet the threshold emission levels will be in compliance with the MACT. The criteria are based on health-protective estimates of risk and the threshold emission levels will provide ample protection of human health and the environment.

Inclusion of health-based compliance alternatives in the final rule does not alter the MACT program. Rather, it merely represents EPA availing itself, in appropriate circumstances, of the authority Congress granted it in section 112(d)(4) of the CAA. We recognize that such provisions are only appropriate for certain HAP, and our decision-making process required source category-specific input from stakeholders.

Although the NATA modeling study may show measurable concentrations of toxic air pollution across the country, these data do not suggest that EPA should not establish health-based emission standards pursuant to its authority under CAA section 112(d)(4) when it determines that it is appropriate to do so. The alternative health-based emission standards included in the final rule will ensure that affected sources which choose to comply with those standards do not emit HCl and/or manganese at levels that are harmful to public health.

*Comment:* Many commenters stated that the proposal to allow risk-based exemptions would divert back to the time-consuming NESHAP development process that existed prior to the CAAA of 1990. The commenters asserted that under this process, which began with a risk assessment step, only eight NESHAP were promulgated during a 20-year period. The commenters continued that if the proposed approaches are inserted into upcoming standards, the commenters fear the MACT program (which is already far behind schedule) would be further delayed. One commenter supported EPA efforts to determine alternative MACT setting methodologies but strongly recommended that these be pursued separately from the final rule. The commenter contended that this will provide for timely issuance of final RICE and Boiler/Process Heater MACT rules relative to the settlement deadline. Two commenters stated that delays could be exacerbated by litigation following legal challenges to the rules, and such delays would trigger the MACT hammer, which would unnecessarily burden the State and local agencies and the industries. The commenters concluded that further delay is unacceptable. The commenters did not want to be in a position of implementing the CAA section 112(j) program and urged EPA to not delay the issuance of any MACT standard. The commenters noted that according to a recently proposed EPA rule regarding section 112(j), the regulated community and State and local agencies would have to proceed with part 2 permit applications, followed by case-by-case MACT, if EPA misses the newly agreed-upon MACT deadlines by as little as 2 months. This would be time consuming, costly, and burdensome for both regulators and the regulated community.

*Response:* We disagree that allowing health-based compliance alternatives in the final rule will alter the MACT program or affect the schedule for promulgation of the remaining MACT standards. We do not anticipate any further delays in completing the remaining MACT standards. The setting of alternative health-based emission standards in the final rule affects only the final rule.

The approach taken in the final rule is particularly well-suited to acid gases and manganese, which are the only pollutants included in the health-based compliance alternatives. For many facilities, these pollutants are currently emitted in amounts that do not expose anyone in surrounding population to concentrations above the established health thresholds. As a result, emissions of HCl and/or manganese at these facilities do not pose a significant risk to the surrounding population. Only those Boiler facilities that demonstrate that their emissions are below the health-based emission standard(s), are eligible for the compliance alternatives.

Including health-based compliance alternatives for boiler sources does not mean that EPA will automatically provide such alternatives for other industries. Rather, as has been the case throughout the MACT rule development process, EPA will undertake in each individual rule to determine whether it is appropriate to exercise its discretion to use its authority under CAA section 112(d)(4) in developing applicable emission standards. The Boilers NESHAP is being promulgated by the February 2004 court-ordered deadline.

*Comment:* Many commenters stated that the risk-based proposal removes the level-playing field that would result from the proper implementation of technology-based MACT standards. The commenters added that establishing a baseline level of control is essential to prevent industry from moving to areas of the country that have the least stringent air toxics programs, which was one of the primary goals of developing a uniform national air toxics program under section 112 of the 1990 CAA amendments. The risk-based approaches would jeopardize future reductions of HAP in a uniform and consistent manner across the nation.

*Response:* Providing health-based compliance alternatives for sources that can meet them in the final rule will assure the application of a uniform set of requirements across the nation. The final rule and its criteria for demonstrating eligibility for the health-based compliance alternatives apply uniformly to boilers across the nation in the large solid fuel-fired subcategories. The final rule establishes a two baseline levels of emission reduction for HCl and manganese, one based on a traditional MACT analysis and the other based on EPA's evaluation of the health threat posed by emissions of these two pollutants. All Boiler facilities must meet one of these baseline levels, and all facilities with boilers in the applicable subcategories have the same opportunity to demonstrate that they can meet the alternative health-based emission standards. The criteria for qualifying to comply with the alternative health-based emission standards are not dependent on local air toxics programs. Therefore, concerns regarding facilities moving to areas of the country with less-stringent air toxics programs should be alleviated.

*Comment:* Multiple commenters stated that section 112(d)(4) of the CAA provides EPA with authority to exclude sources that emit threshold pollutants from regulation. The commenters indicated that section 112(d)(4) allows for discretion in developing MACT standards for HAP with health


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thresholds. The commenters added that the use of section 112(d)(4) authority also is supported by CAA's legislative history, which emphasizes that Congress included section 112(d)(4) in the CAA to prevent unnecessary regulation of source categories.

One commenter pointed out that Congress does not differentiate between technology-based ''emission standards'' set under CAA section 112(d)(3) versus ''health threshold'' based ''emission standards'' set under CAA section 112(d)(4). Instead, the statute explicitly treats emission standards promulgated under section 112(d)(3) and 112(d)(4) as equivalent by not distinguishing between those emission standards under the residual risk provisions of CAA section 112(f). One commenter added that EPA is permitted to establish alternative standards as long as it ensures that ambient concentrations are less than the health thresholds plus a margin of safety and the emissions do not cause adverse environmental effects. Multiple commenters pointed out that EPA has exercised such authority and cited the NESHAP for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills. In addition, the commenters added that in that NESHAP, EPA identified circumstances in which they would decline to exercise 112(d)(4) authority-where significant or widespread environmental harm would occur as a result of emissions from the category and the estimated health thresholds are subject to substantial scientific uncertainty. The commenters concluded that EPA determined that these considerations were not relevant to emissions from the pulp and paper source category, and the commenters stated that the same is true for their source categories and that the same treatment is warranted for many facilities within the source categories. The commenters noted that facilities that cannot meet the risk criteria would remain subject to the MACT requirements.

One commenter added that the risk-based approaches are squarely in line with the plain meaning of section CAA 112(d)(4). The commenters cited the Senate report (Sen Rep. No. 228, 101st Congress, 1st Sess 175–6 (1990)) showed that Congress contemplated that sources within the same category or subcategory would be subject to varied regulatory requirements, depending on the risk they pose to public health. The commenters added that nothing in the statutory definition of ''emission standard'' suggests that the term is limited to a requirement for the installation of control technology. The commenters added that the risk-based compliance alternatives would meet this requirement because they would apply to an entire source category or subcategory. The EPA could create a subcategory for low-risk sources and tailor an emission standard to this subcategory, or apply to all sources in the category a NESHAP containing multiple compliance options, one or more being risk-based.

Multiple commenters stated that the plain meaning of CAA section 112(d)(4) does not allow EPA to make MACT standards for individual sources. Two commenters noted that section 112(d)(4) states that ''with respect to pollutants for which a health threshold has been established, the EPA Administrator may consider such threshold level, with ample margin of safety, when establishing emission standards under this subsection.''

Several commenters contended that EPA has misinterpreted the provision in CAA section 112(d)(4) in that section 112(d)(4) does not state that EPA can use applicability thresholds ''in lieu of'' the CAA section 112(d)(3) MACT floor requirements. The commenter interpreted section 112(d)(4) to state that health based thresholds can be considered when establishing the degree of the MACT floor requirements, but it should not be used to supplant the requirements established pursuant to section 112(d)(3).

Many commenters stated that the legislative history of CAA section 112(d)(4) clearly rejects EPA's proposed facility-by-facility MACT exemptions. The commenters noted that Congress considered and rejected the applicability cutoffs upon which EPA now solicits comment. The commenters noted that the House version of the 1990 Amendments allowed States to issue permits that exempted a source from compliance with MACT rules if the source presented sufficient evidence to demonstrate negligible risk, and the Senate version of the 1990 Amendments contained no such provision. In conference, Congress considered both the House and Senate versions and rejected the House bill's exemption for specific facilities in favor of the Senate bill's language.

*Response:* The EPA has properly exercised the authority granted to it pursuant to CAA section 112(d)(4) of the CAA in establishing health-based emission standards for HCl and manganese which are applicable to the large solid fuel-fired subcategory. Section 112(d)(4) authorizes it to by-pass the mandate in section 112(d)(3) in appropriate circumstances. Those circumstances are present in the large solid fuel-fired Boiler subcategories.

Section 112(d)(4) of the CAA provides EPA with authority, at its discretion, to develop health-based emission standards for HAP ''for which a health threshold has been established,'' provided that the standard reflects the health threshold ''with an ample margin of safety.'' (The full text of the section 112(d)(4): ''[with respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, within an ample margin of safety, when establishing emission standards under this subsection.'')

Both the plain language of CAA section 112(d)(4) and the legislative history cited above indicate that EPA has the discretion under section 112(d)(4) to develop health-based standards for some source categories emitting threshold pollutants, and that those standards may be less stringent than the corresponding ''floor''-based MACT standard would be. The EPA's use of such standards is not limited to situations where every source in the category or subcategory can comply with them. As is the case with technology-based standards, a particular source's ability to comply with a health-based standard will depend on its individual circumstances, as will what it must do to achieve compliance.

In developing health-based emission standards under CAA section 112(d)(4), EPA seeks to assure that those standards ensure that the concentration of the particular HAP to which an individual exposed at the upper end of the exposure distribution is exposed does not exceed the health threshold. The upper end of the exposure distribution is calculated using the ''high end exposure estimate,'' defined as ''a plausible estimate of individual exposure for those persons at the upper end of the exposure distribution, conceptually above the 90th percentile, but not higher than the individual in the population who has the highest exposure'' (EPA Exposure Assessment Guidelines, 57 FR 22888, May 29, 1992). Assuring protection to persons at the upper end of the exposure distribution is consistent with the ''ample margin of safety'' requirement in section 112(d)(4).

We agree that section 112(d)(4) is appropriate for establishing emission standards for HCl and manganese applicable to the large solid fuel-fired subcategories, and, therefore, we have established such standards as an alternate compliance requirement for affected sources in those subcategories. Affected sources in the large solid fuel-fired subcategories which believe that

they can demonstrate compliance with one or both of the health-based emission standards may choose to comply with those standards in lieu of the otherwise applicable MACT-based standard.

For purposes of the final rule, we are not considering background HAP emissions in developing the section CAA 112(d)(4) compliance alternatives. As we indicated in the Residual Risk Report to Congress, however, the Agency intends to consider facility-wide HAP emissions in future CAA section 112(f) residual risk actions.

*Comment:* Many commenters contended that the proposal will place a very intensive resource demand on State and local agencies to review source's risk assessments, and State/local agencies may not have expertise in risk assessment methodology or the resources needed to verify information (*e.g.*, emissions data and stack parameters) submitted with each risk assessment.

Other commenters stated that a risk-based program can be structured and implemented in a manner that does not adversely impact limited State resources. One commenter asserted that EPA should work closely with States and industry to implement the risk-based approach in a non-burdensome manner. Another commenter stated that the risk-based approaches, like other MACT standards, would simply be incorporated into each State's existing title V program. The commenter concluded that because the title V framework already exists, the addition of a risk-based MACT standard would not require States to overhaul existing permitting programs. Another commenter contended that the final MACT rule itself should set forth the applicability criteria—including the threshold levels of exposure—that sources must meet to qualify for a risk-based determination. Each source would have the burden of demonstrating that its exposures are below this limit and, therefore, the States would not be required to develop their own risk assessment guidance or to conduct source-specific risk assessments.

*Response:* The health-based emission limits for HCl and TSM which EPA has adopted in the final rule should not impose significant resource burdens on States. Further, the required compliance demonstration methodology is structured in such a way as to avoid the need for States to have significant expertise in risk assessment methodology. We have considered the commenters' concerns in developing the criteria defining eligibility for these compliance alternatives, and the approach that is included in the final rule provides clear, flexible requirements and enforceable compliance parameters. The final rule provides two ways that a facility may demonstrate eligibility for complying with the alternative health-based emission standard. First, look-up tables, which are included as Tables 2 (HCl) and 3 (manganese) in appendix A of the final rule, allow facilities to determine, using a limited number of site-specific input parameters, whether emissions from their sources might cause a hazard index limit (hazard quotient in the case of manganese) to be exceeded. If a facility cannot demonstrate eligibility using a look-up table, a modeling approach can be followed. Appendix A to the final rule presents the criteria for performing this modeling.

Regarding commenters' concerns with looking for a threshold level for carcinogens, the compliance alternatives only apply to HCl and manganese, which are not currently expected to be carcinogens. Also, the concern expressed by a commenter about exempting a facility based on limited emission data if EPA established a subcategory listing low-risk sources is not relevant here, because we have not used CAA section 112(c)(9) authority to establish a low-risk subcategory for the Industrial/Commercial/Institutional Boilers and Process Heaters source category. With respect to guidance for performing site-specific modeling, all of the procedures for performing such modeling are available in peer-reviewed scientific literature and, therefore, no additional guidance needs to be developed.

Only a portion of the major facilities in the large solid fuel-fired boilers and process heaters subcategory will submit eligibility demonstrations for the compliance alternatives. Of this portion of major sources, most will be able to demonstrate eligibility based on simple analyses (*e.g.*, using the look-up tables provided in appendix A of the final rule). However, it is likely that some facilities will require more detailed modeling. The criteria for demonstrating eligibility for the compliance alternatives are clearly spelled out in the final rule. Because these requirements are clearly spelled out and because any standards or requirements created under CAA section 112 are considered applicable requirements under 40 CFR part 70, the compliance alternatives would be incorporated into title V programs, and States would not have to overhaul existing permitting programs.

Finally, with respect to the burden associated with ongoing assurance that facilities which opt to do so continue to comply with the health-based compliance alternatives, the burden to States will be minimal. In accordance with the provisions of title V of the CAA and part 70 of 40 CFR (collectively ''title V''), the owner or operator of any affected source opting to comply with the health-based emission standards will be required to certify compliance with those standards on an annual basis. Additionally, before changing key parameters that may impact an affected source's ability to continue to meet one or both of the health-based emission standards, the affected source is required to evaluate its ability to continue to comply with the health-based emission standard(s) and submit documentation to the permitting authority supporting continued eligibility for the compliance alternative.

The promulgation of specific alternative health-based emission limits and a uniform methodology for demonstrating compliance with those alternatives alleviates any concern regarding the public process required in reviewing/approving the proposed approaches and making substantial changes to existing regulations. It also addresses concerns regarding the costs and resources associated with assuring adequate public participation in the process of reviewing site-specific risk analyses.

To ensure that affected sources which choose to comply with the alternative health-based emission standards continue to comply with those standards after the initial compliance demonstration, specified assessment parameters (*e.g.*, HCl and/or manganese emission rate, boiler heat output, etc.) must be included in their title V permit as enforceable requirements. Draft permits and permit applications must be made available to the public from the State or local agency responsible for issuing the permit, or in the case where EPA is issuing the permit, from the EPA regional office. Members of the public may request that the State or local agency include them on their public notice mailing list, thus providing the public the opportunity to review the appropriateness of these requirements. Every proposed title V permit has a 30-day public comment period and a 45-day EPA review period. If EPA does not object to the permit, any member of the public may petition EPA to object to the permit within 60 days of the end of the EPA review period.

*Comment:* A commenter contended that exempting HCl emissions from control is inappropriate, particularly since EPA proposed HCl as a surrogate measure for all the inorganic HAP


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emitted by this source category. Hence, an exemption that excluded HCl emission points from control requirements would also exclude emissions of all the other inorganic HAP that would likely include hydrogen cyanide and hydrogen fluoride.

*Response:* Facilities attempting to utilize the health-based compliance alternative for HCl will not be required to evaluate emissions of other inorganic HAP except for chlorine. We conducted an assessment of boiler emissions and determined that, of the acid gas HAP controlled by scrubbing technology, chlorine is responsible for the great majority of risk and HCl is responsible for the next largest portion of the total risk. The contributions of other HAP, including hydrogen fluoride, to the total risk were negligible. Therefore, facilities attempting to demonstrate eligibility for the health-based compliance alternative for HCl, either by conducting a lookup table analysis or by conducting a site-specific compliance demonstration, must include emission rates of chlorine and HCl from their boilers. We do not expect hydrogen cyanide emissions from boilers covered under the final rule.

*Comment:* Commenters stated that the proposal does not address ecological risk that may result from uncontrolled HAP emissions, especially in those areas with sensitive habitats but few people nearby to be exposed and that EPA provided inadequate discussion of how environmental risks will be evaluated.

*Response:* To identify HAP with potential to cause multimedia and/or environmental effects, the EPA has identified HAP with significant potential to persist in the environment and to bioaccumulate. This list does not include HCl or manganese which are the only HAP with health-based compliance alternatives in the final rule. Additionally, a screening level analysis conducted by the EPA indicates that acute impacts of these HAP from industrial boiler facilities are highly unlikely. For these reasons we do not believe that emissions of HCl or manganese from industrial boiler facilities will pose a significant risk to the environment and facilities attempting to comply with the health-based alternatives for these HAP are not required to perform an ecological assessment.

## V. Impacts of the Final Rule

### *A. What Are the Air Impacts?*

Nationwide emissions of selected HAP (*i.e.*, HCl, hydrogen fluoride, lead, and nickel) will be reduced by 58,500 tpy for existing units and 73 tpy for new units. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, the total HAP reduction for existing units could be 50,600 tpy. Emissions of HCl will be reduced by 42,000 tpy for existing units and 72 tpy for new units. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, the total HCl emissions reduction for existing units could be 36,400 tpy. Emissions of mercury will be reduced by 1.9 tpy for existing units and 0.006 tpy for new units. Emissions of PM will be reduced by 565,000 tpy for existing units and 480 tpy for new units. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, the total PM emissions reduction for existing units could be 547,000 tpy. Emissions of total selected nonmercury metals (*i.e.*, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium) will be reduced by 1,100 tpy for existing units and will be reduced by 1.4 tpy for new units. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, the total nonmercury metals emissions reduction for existing units could be 950 tpy. In addition, emissions of sulfur dioxide ($SO_2$) are established to be reduced by 113,000 tpy for existing sources and 110 tpy for new sources. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, the total $SO_2$ emissions reduction for existing units could be 49,000 tpy.

As noted above, use of the health-based compliance alternatives by eligible facilities will affect reductions in HAP, PM (and total non-mercury metals that are generally controlled along with PM), and $SO_2$. Nevertheless, our analysis indicates that the difference in emissions of HCl and manganese with and without the compliance alternatives will not affect health risks because the compliance alternative is available only to those facilities that demonstrate that their emissions pose little risks. Emissions of PM and $SO_2$ will still be reduced by the implementation of other provisions of the Clean Air Act, such as attainment of the health-based National Ambient Air Quality Standards, which include mechanisms to control such emissions.

A discussion of the methodology used to estimate emissions and emissions reductions is presented in ''Estimation of Baseline Emissions and Emissions Reductions for Industrial, Commercial, and Institutional Boilers and Process Heaters'' in the docket. To estimate the potential impacts of the health-based compliance alternatives, we performed a preliminary ''rough'' assessment of the large solid fuel subcategory to determine the extent to which facilities might become eligible for the health-based compliance alternatives. Based on the results of this rough assessment, 448 coal-fired boilers could potentially be eligible for the HCl compliance alternative and 386 biomass-fired boilers could be potentially eligible for the TSM compliance alternative.

### *B. What Are the Water and Solid Waste Impacts?*

The EPA estimates the additional water usage that would result from the MACT floor level of control to be 110 million gallons per year for existing sources and 0.6 million gallons per year for new sources. In addition to the increased water usage, an additional 3.7 million gallons per year of wastewater will be produced for existing sources and 0.6 million gallons per year for new sources. The costs of treating the additional wastewater are $18,000 for existing sources and $2,300 for new sources, in advance of any facility demonstrating eligibility for the health-based compliance alternatives. These costs are accounted for in the control costs estimates.

The EPA estimates the additional solid waste that would result from the MACT floor level of control to be 102,000 tpy for existing sources and 1 tpy for new sources. The estimated costs of handling the additional solid waste generated are $1.5 million for existing sources and $17,000 for new sources, in advance of any facility demonstrating eligibility for the health-based compliance alternatives. These costs are also accounted for in the control costs estimates.

A discussion of the methodology used to estimate impacts is presented in ''Estimation of Impacts for Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP'' in the docket.

### *C. What Are the Energy Impacts?*

The EPA expects an increase of approximately 1,130 million kilowatt hours (kWh) in national annual energy usage as a result of the final rule, in advance of any facility demonstrating eligibility for the health-based compliance alternatives. Of this amount, 1,120 million kWh is estimated from existing sources and 13 million kWh is estimated from new sources. The increase results from the electricity required to operate control devices

installed to meet the final rule, such as wet scrubbers and fabric filters.

*D. What Are the Control Costs?*

To estimate the national cost impacts of the final rule for existing sources, EPA developed several model boilers and process heaters and determined the cost of control equipment for these model boilers. The EPA assigned a model boiler or heater to each existing unit in the database based on the fuel, size, design, and current controls. The analysis considered all air pollution control equipment currently in operation at existing boilers and process heaters. Model costs were then assigned to all existing units that could not otherwise meet the proposed emission limits. The resulting total national cost impact of the final rule is $1,790 million in capital expenditures and $860 million per year in total annual costs. Depending on the number of facilities demonstrating eligibility for the health-based compliance alternatives, these costs could be $1,440 million in capital expenditures and $690 million per year in total annual costs. The total capital and annual costs include costs for testing, monitoring, and recordkeeping and reporting. Costs include testing and monitoring costs, but not recordkeeping and reporting costs.

Using Department of Energy projections on fuel expenditures, EPA estimated the number of additional boilers that could be potentially constructed. The resulting total national cost impact of the final rule in the 5th year is $58 million in capital expenditures and $18.6 million per year in total annual costs, in advance of any facility demonstrating eligibility for the health-based provisions. Costs are mainly for testing and monitoring.

A discussion of the methodology used to estimate cost impacts is presented in ''Methodology for Estimating Control Cost for the Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants'' in the docket.

*E. What Are the Economic Impacts?*

The economic impact analysis shows that the expected price increase for output in the 40 affected industries would be no more than 0.04 percent as a result of the final rule for industrial boilers and process heaters. The expected change in production of affected output is a reduction of only 0.03 percent or less in the same industries. In addition, impacts to affected energy markets show that prices of petroleum, natural gas, electricity and coal should increase by no more than 0.05 percent as a result of implementation of the final rule, and output of these types of energy should decrease by no more than 0.01 percent. These impacts are generated in advance of any facility demonstrating eligibility for the health-based compliance alternatives. Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, these impacts on product prices could fall to a 0.03 percent increase, and a decrease in output of the energy types mentioned previously of less than 0.01 percent. Therefore, it is likely that there is no adverse impact expected to occur for those industries that produce output affected by the final rule, such as lumber and wood products, chemical manufacturers, petroleum refining, and furniture manufacturing.

*F. What Are the Social Costs and Benefits of the Final Rule?*

Our assessment of costs and benefits of the final rule is detailed in the ''Regulatory Impact Analysis for the Final Industrial, Commercial, and Institutional Boilers and Process Heaters MACT.'' The Regulatory Impact Analysis (RIA) is located in the Docket.

It is estimated that 3 years after implementation of the final rule, HAP will be reduced by 58,500 tpy (53,200 megagrams per year (Mg/yr)) due to reductions in arsenic, beryllium, HCl, and several other HAP from existing affected emission sources. Of these reductions, 42,000 tpy (38,200 Mg/yr) are of HCl. In addition to these reductions, there are 73 tpy (66 Mg/yr) of HAP reductions expected from new sources. Of these reductions, virtually all of them are of HCl. The health effects associated with these HAP are discussed earlier in this preamble. While it is beneficial to society to reduce these HAP, we are unable to quantify and provide a monetized estimate of the benefits at this time.

Despite our inability to quantify and provide monetized benefit estimates from HAP reductions, it is possible to derive rough estimates for one of the more important benefit categories, *i.e.*, the potential number of cancer cases avoided and cancer risk reduced as a result of the imposition of the MACT level of control on this source category. Our analysis suggests that imposition of the MACT level of control would reduce cancer cases at worst case baseline assumptions by possibly tens of cases per year, on average, starting some years after implementation of the final rule. This risk reduction estimate is uncertain, is likely to overestimate benefits, and should be regarded as an extremely rough estimate. Furthermore, the estimate should be viewed in the context of the full spectrum of unquantified noncancer effects associated with the HAP reductions. Noncancer effects associated with the HAP are presented earlier in this preamble.

The control technologies used to reduce the level of HAP emitted from affected sources are also expected to reduce emissions of PM ($PM_{10}$, $PM_{2.5}$), and sulfur dioxide ($SO_2$). It is estimated that $PM_{10}$ emissions reductions total approximately 562,000 tpy (510,000 Mg/yr), $PM_{2.5}$ emissions reductions total approximately 159,000 tpy (145,000 Mg/yr), and $SO_2$ emissions reductions total approximately 113,000 tpy (102,670 Mg/yr). These estimated reductions occur from existing sources in operation 3 years after the implementation of the requirements of the final rule and are expected to continue throughout the life of the sources.

In general, exposure to high concentrations of PM may aggravate existing respiratory and cardiovascular disease including asthma, bronchitis and emphysema, especially in children and the elderly. $SO_2$ is also a contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. Exposure to $PM_{2.5}$ can lead to decreased lung function, and alterations in lung tissue and structure and in respiratory tract defense mechanisms which may then lead to, increased respiratory symptoms and disease, or in more severe cases, premature death or increased hospital admissions and emergency room visits. Children, the elderly, and people with cardiopulmonary disease, such as asthma, are most at risk from these health effects. Fine PM can also form a haze that reduces the visibility of scenic areas, can cause acidification of water bodies, and have other impacts on soil, plants, and materials. As $SO_2$ emissions transform into PM, they can lead to the same health and welfare effects listed above.

For $PM_{10}$ and $PM_{2.5}$ (including $SO_2$ contributions to ambient concentrations of $PM_{2.5}$), we provide a monetary estimate for the benefits associated with the reduction in emissions associated with the final rule. To do so, we conducted an air quality assessment to determine the change in ambient concentrations of $PM_{10}$ and $PM_{2.5}$ that result from reductions of PM and $SO_2$ at existing affected facilities. Unfortunately, our data are not able to define the exact location of the reductions for every affected boiler and process heater. Because of this

limitation, the benefits assessment is conducted in two phases. First, an air quality analysis was conducted for emissions reductions from those emissions sources that have an known link to a specific control device, which represents approximately 50 percent of the total emissions reductions mentioned above. Using this subset of information, we determined the air quality change nationwide. The results of the air quality assessment served as input to a model that estimates the total monetary value of benefits of the health effects listed above. Total benefits associated with this portion of the analysis (in phase one) are $8.2 billion in the year 2005 (presented in 1999 dollars).

In the second phase of our analysis, for those emissions reductions from affected sources that do not have a known link to a specific control device, the results of the air quality analysis in phase one serve as a reasonable approximation of air quality changes to transfer to the remaining emissions reductions of the final rule. Because there is not a reasonable way to apportion the total benefits of the combined impact of the PM and $SO_2$ reductions from the air quality and benefit analyses completed above, we performed two additional air quality analyses. One analysis was performed to evaluate the impact on air quality of the PM reductions alone (holding $SO_2$ unchanged), and one to evaluate the impact on air quality from the $SO_2$ reductions alone (holding PM unchanged). With independent PM and $SO_2$ air quality assessments, we can determine the total benefit associated with each component of total pollutant reductions. The total benefit associated with the PM and $SO_2$ reductions with unspecified location (in phase two) are $7.9 billion.

The benefit estimates derived from the air quality modeling in the first phase of our analysis uses an analytical structure and sequence similar to that used in the benefits analyses for the proposed Nonroad Diesel rule and proposed Integrated Air Quality Rule (IAQR) and in the ''section 812 studies'' analysis of the total benefits and costs of the Clean Air Act. We used many of the same models and assumptions used in the Nonroad Diesel and IAQR analyses as well as other Regulatory Impact Analyses (RIAs) prepared by the Office of Air and Radiation. By adopting the major design elements, models, and assumptions developed for the section 812 studies and other RIAs, we have largely relied on methods which have already received extensive review by the independent Science Advisory Board (SAB), the National Academies of Sciences, by the public, and by other federal agencies.

The benefits transfer method used in the second phase of the analysis is similar to that used to estimate benefits at the proposal of the rule, and in the proposed Reciprocating Internal Combustion Engines NESHAP. A similar method has also been used in recent benefits analyses for the proposed Nonroad Large Spark-Ignition Engines and Recreational Engines standards (67 FR 68241, November 8, 2002).

The sum of benefits from the two phases of analysis provide an estimate of the total benefits of the rule. Total benefits of the final rule are approximately $16.3 billion (1999$). This economic benefit is associated with approximately 2,270 avoided premature mortalities, 5,100 avoided cases of chronic bronchitis, thousands of avoided hospital and emergency room visits for respiratory and cardiovascular diseases, tens of thousands of avoided days with respiratory symptoms, and millions of avoided work loss and restricted activity days. This estimate is generated in advance of any facility demonstrating eligibility for the health-based compliance alternatives.

Every benefit-cost analysis examining the potential effects of a change in environmental protection requirements is limited, to some extent, by data gaps, limitations in model capabilities (such as geographic coverage), and uncertainties in the underlying scientific and economic studies used to configure the benefit and cost models. Deficiencies in the scientific literature often result in the inability to estimate changes in health and environmental effects. Deficiencies in the economics literature often result in the inability to assign economic values even to those health and environmental outcomes that can be quantified. While these general uncertainties in the underlying scientific and economics literatures are discussed in detail in the RIA and its supporting documents and references, the key uncertainties which have a bearing on the results of the benefit-cost analysis of today's action are the following:

1. The exclusion of potentially significant benefit categories (*e.g.*, health and ecological benefits of reduction in hazardous air pollutants emissions);
2. Errors in measurement and projection for variables such as population growth;
3. Uncertainties in the estimation of future year emissions inventories and air quality;
4. Uncertainties associated with the extrapolation of air quality monitoring data to some unmonitored areas required to better capture the effects of the standards on the affected population;
5. Variability in the estimated relationships of health and welfare effects to changes in pollutant concentrations; and
6. Uncertainties associated with the benefit transfer approach.
7. Uncertainties in the size of the effect estimates linking air pollution and health endpoints.
8. Uncertainties about relative toxicity of different components within the complex mixture.

Despite these uncertainties, we believe the benefit-cost analysis provides a reasonable indication of the expected economic benefits of the final rule under a given set of assumptions.

Based on estimated compliance costs (control + administrative costs associated with Paperwork Reduction Act requirements associated with the rule and predicted changes in the price and output of electricity), the estimated annualized social costs of the Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP are $863 million (1999$). Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, these annualized social costs could fall to $746 million. Social costs are different from compliance costs in that social costs take into account the interactions between affected producers and the consumers of affected products in response to the imposition of the compliance costs.

As explained above, we estimate $16.3 billion in benefits from the final rule, compared to $863 million in costs. It is important to put the results of this analysis in the proper context. The large benefit estimate is not attributable to reducing human and environmental exposure to the HAPs that are reduced by this rule. It arises from ancillary reductions in PM and $SO_2$ that result from controls aimed at complying with the NESHAP. Although consideration of ancillary benefits is reasonable, we note that these benefits are not uniquely attributable to the regulation. The Agency believes nonetheless that the key rationale for controlling arsenic, beryllium, HCl, and the other HAPs associated with this rule is to reduce public and environmental exposure to these HAPs, thereby reducing risk to public health and wildlife. Although the available science does not support quantification of these benefits at this time, the Agency believes the qualitative


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benefits are large enough to justify substantial investment in these emission reductions.

It should be recognized, however, that this analysis does not account for many of the potential benefits that may result from these actions. Thus, our estimate of total benefits also includes a ''B'' to represent those additional health and environmental benefits which could not be expressed in quantitative incidence and/or economic value terms. The net benefits would be greater if all the benefits of the other pollutant reductions could be quantified. Notable omissions to the net benefits include all benefits of HAP reductions, including reduced cancer incidences, toxic morbidity effects, and cardiovascular and CNS effects, and all welfare effects from reduction of ambient PM and $SO_2$. A full appreciation of the overall economic consequences of the industrial boiler and process heater standards requires consideration of all benefits and costs expected to result from the final rule, not just those benefits and costs that could be expressed here in dollar terms. A full listing of the benefit categories that could not be quantified or monetized in our base estimate are provided in Table 2 of this preamble.

TABLE 2.—UNQUANTIFIED BENEFIT CATEGORIES

| | Unquantified benefit categories associated with HAP eductions | Unquantified benefit categories associated with PM eductions |
|---|---|---|
| Health Categories | —Airway responsiveness<br>—Pulmonary inflammation<br>—Susceptibility to respiratory infection<br>—Acute inflammation and respiratory cell damage<br>—Chronic respiratory damage/Premature aging of lungs<br>—Emergency room visits for asthma | —Changes in pulmonary function.<br>—Morphological changes. Altered host defense mechanisms.<br>—Other chronic respiratory disease.<br>—Emergency room visits for asthma.<br>—Emergency visits for non-asthma respiratory and cardiovascular causes.<br>—Lower and upper respiratory systems.<br>—Acute bronchitis.<br>—Shortness of breath. |
| Welfare Categories | —Ecosystem and vegetation effects<br>—Damage to urban ornamentals (e.g., grass, flowers, shrubs, and trees in urban areas).<br>—Commercial field crops<br>—Fruit and vegetable crops<br>—Yields of tree seedlings, commercial and non-commercial forests.<br>—Damage to ecosystems<br>—Materials damage | —School absence rates.<br>—Materials damage.<br>—Damage to ecosystems (e.g., acid sulfate deposition).<br>—Nitrates in drinking water.<br>—Visibility in recreational and residential areas. |

Using the results of the benefit analysis, we can use benefit-cost comparison (or net benefits) as another tool to evaluate the reallocation of society's resources needed to address the pollution externality created by the operation of industrial boilers and process heaters. The additional costs of internalizing the pollution produced at major sources of emissions from industrial boilers and process heaters are compared to the improvement in society's well-being from a cleaner and healthier environment. Comparing benefits of the final rule to the costs imposed by alternative ways to control emissions optimally identifies a strategy that results in the highest net benefit to society. In the final rule, we include only one option, the minimal level of control mandated by the CAA, or the MACT floor. Other alternatives that lead to higher levels of control (or beyond-the-floor alternatives) lead to higher estimates of benefits net of costs, but also lead to additional economic impacts, including more substantial impacts to small entities. For more details, please refer to the RIA for the final rule.

Based on estimated compliance costs associated with the final rule and the predicted change in prices and production in the affected industries, the estimated annualized social costs of the final rule are $863 million (1999 dollars). This estimate of social cost is generated in advance of any facility demonstrating eligibility for the health-based compliance alternatives. Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, these annualized social costs could fall to $746 million. Social costs are different from compliance costs in that social costs take into account the interactions of consumers and producers of affected products in response to the imposition of the compliance costs. Therefore, the Agency's estimate of monetized benefits net of costs is $15.4 billion + B (1999 dollars) in 2005.

## VI. Statutory and Executive Order Reviews

### *A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether a regulatory action is ''significant'' and, therefore, subject to review by the OMB and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, the EPA has determined that the final rule is a ''significant regulatory action'' because it has an annual effect on the economy of over $100 million. As such, the final rule was submitted to OMB for review.


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*B. Paperwork Reduction Act*

The information collection requirements in the final rule have been submitted for approval to the Office of Management and Budget (OMB) under the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq*. The information collection requirements are not enforceable until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

The final rule requires maintenance inspections of the control devices, but does not require any notifications or reports beyond those required by the General Provisions. The recordkeeping requirements require only the specific information needed to determine compliance.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the final rule) is estimated to be $91 million. This includes 1.2 million labor hours per year at a total labor cost of $67 million per year, and total non-labor capital costs of $24 million per year. This estimate includes a one-time performance test, semiannual excess emission reports, maintenance inspections, notifications, and recordkeeping. The total burden for the Federal government (averaged over the first 3 years after the effective date of the final rule) is estimated to be 346,000 hours per year at a total labor cost of $14 million per year. Table 3 of this preamble shows the average annualized burden for monitoring, reporting, and recordkeeping for each subcategory.

TABLE 3.—SUMMARY OF THE AVERAGE REPORTING AND RECORDKEEPING COSTS

| Subcategory | Total labor costs ($) | Total capital costs ($) | Total costs ($) |
|---|---|---|---|
| Large Solid Fuel Units | 56,253,000 | 12,488,000 | 68,741,000 |
| Limited Use Solid Fuel Units | 2,565,000 | 2,267,000 | 4,832,000 |
| Small Solid Fuel Units | 627,000 | 111,000 | 738,000 |
| Large Liquid Fuel Units | 498,000 | 491,000 | 989,000 |
| Limited Use Liquid Fuel Units | 214,000 | 264,000 | 478,000 |
| Small Liquid Fuel Units | 442,000 | 0 | 442,000 |
| Large Gaseous Fuel Units | 3,673,000 | 6,615,000 | 10,288,000 |
| Limited Use Gaseous Fuel Units | 663,000 | 1,209,000 | 1,872,000 |
| Small Gaseous Fuel Units | 2,413,000 | 0 | 2,413,000 |

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number for the approved information collection requirements contained in this final rule.

The EPA requested comments on the need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques.

*C. Regulatory Flexibility Act*

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. We have also determined that the final rule will not have a significant impact on a substantial number of small entities.

For purposes of assessing the impacts of the final rule on small entities, small entity is defined as:

(1) A small business according to Small Business Administration size standards by the North American Industry Classification System (NAICS) category of the owning entity. The range of small business size standards for the 40 affected industries ranges from 500 to 1,000 employees, except for petroleum refining and electric utilities. In these latter two industries, the size standard is 1,500 employees and a mass throughput of 75,000 barrels/day or less, and 4 million kilowatt-hours of production or less, respectively;

(2) A small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and

(3) A small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

After considering the economic impact of the final rule on small entities, we have determined that the final rule will not have a significant economic impact on a substantial number of small entities. Based on SBA size definitions for the affected industries and reported sales and employment data, EPA identified 185 of the 576 entities, or 32 percent, owning affected facilities as small entities. Although small entities represent 32 percent of the entities within the source category, they are expected to incur only 4 percent of the total compliance costs of $862.7 million (1998 dollars). There are only ten small entities with compliance costs equal to or greater than 3 percent of their sales. In addition, there are only 24 small entities with cost-to-sales ratios between 1 and 3 percent.


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An economic impact analysis was performed to estimate the changes in product price and production quantities for the final rule. As mentioned in the summary of economic impacts earlier in this preamble, the estimated changes in prices and output for affected entities is no more than 0.05 percent. For more information, consult the docket for the final rule.

It should be noted that these small entity impacts are in advance of any facility demonstrating eligibility for the health-based compliance alternatives. Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, the estimated small entity impacts could fall to eight small entities with compliance costs equal to or greater than 3 percent of their sales, and 14 small entities with compliance costs between 1 and 3 percent of their sales.

The final rule will not have a significant economic impact on a substantial number of small entities as a result of several decisions EPA made regarding the development of the rule, which resulted in limiting the impact of the rule on small entities. First, as mentioned earlier in this preamble, EPA identified small units (heat input of 10 MMBtu/hr or less) and limited use boilers (operate less than 10 percent of the time) as separate subcategories different from large units. Many small and limited use units are located at small entities. As also discussed earlier, the results of the MACT floor analysis for these subcategories of existing sources was that no MACT floor could be identified except for the limited use solid fuel subcategory, which is less stringent than the MACT floor for large units. Furthermore, the results of the beyond-the-floor analysis for these subcategories indicated that the costs would be too high to consider them feasible options. Consequently, the final rule contains no emission limitations for any of the existing small and limited use subcategories except the existing limited use solid fuel subcategory. In addition, the alternative metals emission limit resulted in minimizing the impacts on small entities since some of the potential entities burning a fuel containing very little metals are small entities.

*D. Unfunded Mandates Reform Act of 1995*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, we generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Before promulgating a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the EPA Administrator publishes with the final rule an explanation why that alternative was not adopted. Before we establish any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, we must develop a small government agency plan under section 203 of the UMRA. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of regulatory promulgation with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We determined that the final rule contains a Federal mandate that may result in expenditures of $100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any 1 year. Accordingly, we have prepared a written statement (titled ''Unfunded Mandates Reform Act Analysis for the Industrial Boilers and Process Heaters NESHAP)'' under section 202 of the UMRA, which is summarized below.

Statutory Authority

As discussed in this preamble, the statutory authority for the final rulemaking is section 112 of the CAA. Title III of the CAA Amendments was enacted to reduce nationwide air toxic emissions. Section 112(b) of the CAA lists the 188 chemicals, compounds, or groups of chemicals deemed by Congress to be HAP. These toxic air pollutants are to be regulated by NESHAP.

Section 112(d) of the CAA directs us to develop NESHAP, which require existing and new major sources to control emissions of HAP using MACT based standards. The final rule applies to all industrial, commercial, and institutional boilers and process heaters located at major sources of HAP emissions.

In compliance with section 205(a) of the UMRA, we identified and considered a reasonable number of regulatory alternatives. Additional information on the costs and environmental impacts of these regulatory alternatives is presented in the docket.

The regulatory alternative upon which the final rule is based represents the MACT floor for industrial boilers and process heaters and, as a result, it is the least costly and least burdensome alternative.

Social Costs and Benefits

The regulatory impact analysis prepared for the final rule including the EPA's assessment of costs and benefits, is detailed in the ''Regulatory Impact Analysis for the Industrial Boilers and Process Heaters MACT'' in the docket. Based on estimated compliance costs associated with the final rule and the predicted change in prices and production in the affected industries, the estimated social costs of the final rule are $863 million (1999 dollars). Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, these annualized social costs could fall to $746 million.

It is estimated that 5 years after implementation of the final rule, HAP will be reduced by 58,500 tpy due to reductions in arsenic, beryllium, dioxin, hydrochloric acid, and several other HAP from industrial boilers and process heaters. Studies have determined a relationship between exposure to these HAP and the onset of cancer, however, there are some questions remaining on how cancers that may result from exposure to these HAP can be quantified in terms of dollars. Therefore, the EPA is unable to provide a monetized estimate of the benefits of the HAP reduced by the final rule at this time. However, there are significant reductions in PM and in $SO_2$ that occur. Reductions of 560,000 tons of PM with a diameter of less than or equal to 10 micrometers ($PM_{10}$), 159,000 tons of PM with a diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), and 112,000 tons of $SO_2$ are expected to occur. These reductions occur from existing sources in operation 5 years after the implementation of the regulation and are expected to continue throughout the life of the affected sources. The major health effect that results from these PM

and $SO_2$ emissions reductions is a reduction in premature mortality. Other health effects that occur are reductions in chronic bronchitis, asthma attacks, and work-lost days (*i.e.*, days when employees are unable to work).

While we are unable to monetize the benefits associated with the HAP emissions reductions, we are able to monetize the benefits associated with the PM and $SO_2$ emissions reductions. For $SO_2$ and PM, we estimated the benefits associated with health effects of PM, but were unable to quantify all categories of benefits (particularly those associated with ecosystem and environmental effects). Unquantified benefits are noted with ''B'' in the estimates presented below. Our primary estimate of the monetized benefits in 2005 associated with the implementation of the proposed alternative is $16.3 billion + B (1999 dollars). This estimate is about $15.3 billion + B (1999 dollars) higher than the estimated social costs shown earlier in this section. These benefit estimates are in advance of any facility demonstrating eligibility for the health-based compliance alternatives. Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, the benefit estimate presuming the health-based compliance alternatives is $14.5 billion + B, which is $1.7 billion lower than the estimate for the final rule. This estimate is $13.8 billion + B higher than the estimated social costs presuming the health-based compliance alternatives. The general approach to calculating monetized benefits is discussed in more detail earlier in this preamble. For more detailed information on the benefits estimated for the final rule, refer to the RIA in the docket.

Future and Disproportionate Costs

The Unfunded Mandates Act requires that we estimate, where accurate estimation is reasonably feasible, future compliance costs imposed by the rule and any disproportionate budgetary effects. Our estimates of the future compliance costs of the final rule are discussed previously in this preamble.

We do not feel that there will be any disproportionate budgetary effects of the final rule on any particular areas of the country, State or local governments, types of communities (*e.g.,* urban, rural), or particular industry segments. This is true for the 257 facilities owned by 54 different government bodies, and this is borne out by the results of the ''Economic Impact Analysis of the Industrial Boilers and Process Heaters NESHAP,'' the results of which are discussed previously in this preamble.

Effects on the National Economy

The Unfunded Mandates Act requires that we estimate the effect of the final rule on the national economy. To the extent feasible, we must estimate the effect on productivity, economic growth, full employment, creation of productive jobs, and international competitiveness of the U.S. goods and services, if we determine that accurate estimates are reasonably feasible and that such effect is relevant and material.

The nationwide economic impact of the final rule is presented in the ''Economic Impact Analysis for the Industrial Boilers and Process Heaters MACT'' in the docket. This analysis provides estimates of the effect of the final rule on some of the categories mentioned above. The results of the economic impact analysis are summarized previously in this preamble. The results show that there will be little impact on prices and output from the affected industries, and little impact on communities that may be affected by the final rule. In addition, there should be little impact on energy markets (in this case, coal, natural gas, petroleum products, and electricity). Hence, the potential impacts on the categories mentioned above should be minimal.

Consultation With Government Officials

The Unfunded Mandates Act requires that we describe the extent of the EPA's prior consultation with affected State, local, and tribal officials, summarize the officials' comments or concerns, and summarize our response to those comments or concerns. In addition, section 203 of the UMRA requires that we develop a plan for informing and advising small governments that may be significantly or uniquely impacted by a rule. Although the final rule does not significantly affect any State, local, or Tribal governments, we have consulted with State and local air pollution control officials. We also have held meetings on the final rule with many of the stakeholders from numerous individual companies, environmental groups, consultants and vendors, labor unions, and other interested parties. We have added materials to the docket to document these meetings.

In addition, we have determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. While some small governments may have some sources affected by the final rule, the impacts are not expected to be significant. Therefore, the final rule is not subject to the requirements of section 203 of the UMRA. However, EPA did complete a report containing analyses called for in the UMRA as a response to comments from many municipal utilities regarding the final rule and its potential impacts. This report, ''Unfunded Mandates Reform Act Analysis for the Industrial Boilers and Process Heaters NESHAP,'' is in the docket.

*E. Executive Order 13132: Federalism*

Executive Order 13132 requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' are defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132.

The agency is required by section 112 of the CAA, to establish the standards in the final rule. The final rule primarily affects private industry, and does not impose significant economic costs on State or local governments. The final rule does not include an express provision preempting State or local regulations. Thus, the requirements of section 6 of the Executive Order do not apply to the final rule.

Although section 6 of Executive Order 13132 does not apply to the final rule, we consulted with representatives of State and local governments to enable them to provide meaningful and timely input into the development of the final rule. This consultation took place during the ICCR Federal Advisory Committee Act (FACA) committee meetings where members representing State and local governments participated in developing recommendations for EPA's combustion-related rulemakings, including the final rule. The concerns raised by representatives of State and local governments were considered during the development of the final rule.

In the spirit of Executive Order 13132, and consistent with EPA policy to

promote communications between EPA and State and local governments, EPA specifically solicited comment on the final rule from State and local officials.

*F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' The final rule does not have tribal implications, as specified in Executive Order 13175.

The final rule does not significantly or uniquely affect the communities of Indian tribal governments. We do not know of any industrial-commercial-institutional boilers or process heaters owned or operated by Indian tribal governments. However, if there are any, the effect of these rules on communities of tribal governments would not be unique or disproportionate to the effect on other communities. Thus, Executive Order 13175 does not apply to the final rule. The EPA specifically solicited additional comment on the final rule from tribal officials, but received none.

*G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any regulation that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that we have reason to believe may have a disproportionate effect on children.

If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned regulation on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the EPA.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on technology performance and not on health or safety risks.

*H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use*

Executive Order 13211 (66 FR 28355, May 22, 2001) provides that agencies shall prepare and submit to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, a Statement of Energy Effects for certain actions identified as ''significant energy actions.'' Section 4(b) of Executive Order 13211 defines ''significant energy actions'' as ''any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of final rulemaking, and notices of final rulemaking: (1)(i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a ''significant energy action.'' The final rule is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The basis for the determination is as follows.

The reduction in petroleum product output, which includes reductions in fuel production, is estimated at only 0.001 percent, or about 68 barrels per day based on 2000 U.S. fuel production nationwide. That is a minimal reduction in nationwide petroleum product output. The reduction in coal production is estimated at only 0.014 percent, or about 3.5 million tpy (or less than 1,000 tons per day) based on 2000 U.S. coal production nationwide. The combination of the increase in electricity usage estimated with the effect of the increased price of affected output yields an increase in electricity output estimated at only 0.012 percent, or about 0.72 billion kilowatt-hours per year based on 2000 U.S. electricity production nationwide. All energy price changes estimated show no increase in price more than 0.05 percent nationwide, and a similar result occurs for energy distribution costs. We also expect that there will be no discernable impact on the import of foreign energy supplies, and no other adverse outcomes are expected to occur with regards to energy supplies. All of the results presented above account for the pass through of costs to consumers, as well as the cost impact to producers. For more information on the estimated energy effects, please refer to the economic impact analysis for the final rule. The analysis is available in the public docket. It should be noted that these energy impact estimates are in advance of any facility demonstrating eligibility for the health-based compliance alternatives.

Depending on the number of affected facilities demonstrating eligibility for the health-based compliance alternatives, the reduction in petroleum product output, which includes reductions in fuel production, could fall to 65 barrels per day, or only 0.001 percent. The reduction in coal production could fall to only 0.010 percent, or about 2.5 million tpy based on 2000 U.S. coal production nationwide. The combination of the increase in electricity usage estimated with the effect of the increased price of affected output could yield an increase in electricity output could fall to only 0.0067 percent, or about 0.40 billion kilowatt-hours per year based on 2000 U.S. electricity production nationwide. All energy price changes estimated could now fall to increases of no more than 0.04 percent nationwide, and a similar result occurs for energy distribution costs. There should be no discernable impact on import of foreign energy supplies, and no other adverse outcomes are expected to occur with regards to energy supplies. All of the results presented with presumption of the health-based compliance alternatives also account for the pass through of costs to consumers as well as the cost impact to producers.

Therefore, we conclude that the final rule when implemented is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

*I. National Technology Transfer and Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; 15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to the OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.


Attachment I
Attachment I

The final rule involves technical standards. The EPA cites the following standards in the final rule: EPA Methods 1, 2, 2F, 2G, 3A, 3B, 4, 5, 5D, 17, 19, 26, 26A, 29 of 40 CFR part 60. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 2F, 2G, 5D, and 19. The search and review results have been documented and are placed in the docket for the final rule.

The three voluntary consensus standards described below were identified as acceptable alternatives to EPA test methods for the purposes of the final rule.

The voluntary consensus standard ASME PTC 19–10–1981–Part 10, ''Flue and Exhaust Gas Analyses,'' is cited in the final rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19–10–1981–Part 10 is an acceptable alternative to Method 3B.

The voluntary consensus standard ASTM D6522–00, ''Standard Test Method for the Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers and Process Heaters Using Portable Analyzers'' is an acceptable alternative to EPA Methods 3A and 10 for identifying carbon monoxide and oxygen concentrations for the final rule when the fuel is natural gas.

The voluntary consensus standard ASTM Z65907, ''Standard Method for Both Speciated and Elemental Mercury Determination,'' is an acceptable alternative to EPA Method 29 (portion for mercury only) for the purpose of the final rule. This standard can be used in the final rule to determine the mercury concentration in stack gases for boilers with rated heat input capacities of greater than 250 MMBtu per hour.

In addition to the voluntary consensus standards EPA uses in the final rule, the search for emissions measurement procedures identified 15 other voluntary consensus standards. The EPA determined that 13 of these 15 standards identified for measuring emissions of the HAP or surrogates subject to the emission standards were impractical alternatives to EPA test methods for the purposes of the final rule. Therefore, EPA does not intend to adopt these standards for this purpose. (See Docket ID No. OAR–2002–0058 for further information on the methods.)

Two of the 15 voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of the final rule because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, ''Flow Measurement by Velocity Traverse,'' for EPA Method 2 (and possibly 1); and ASME/BSR MFC 12M, ''Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters,'' for EPA Method 2.

Section 63.7520 and Tables 4A through 4D of the final rule list the EPA testing methods. Under § 63.7(f) and § 63.8(f) of subpart A, 40 CFR part 63, of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any of the EPA testing methods, performance specifications, or procedures.

*J. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the United States Senate, the United States House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is a ''major rule'' as defined by 5 U.S.C. section 804(2). The rule will be effective on November 12, 2004.

**List of Subjects in 40 CFR Part 63**

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: February 26, 2004.

**Michael O. Leavitt,**

*Administrator.*

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

## PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

## Subpart A—[Amended]

■ 2. Section 63.14 is amended by revising paragraph (b)(27) and paragraph (i)(3) and adding paragraph (b)(35) and paragraphs (b)(39) through (53) to read as follows:

### § 63.14 Incorporations by reference.

* * * * *

(b) * * *

(27) ASTM D6522–00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers,[1] IBR approved for § 63.9307(c)(2), Table 4 of Subpart ZZZZ, and Table 5 to Subpart DDDDD of this part.

* * * * *

(35) ASTM D6784–02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method),[1] IBR approved for Table 5 to Subpart DDDDD of this part.

* * * * *

(39) ASTM Method D388–99,$^{\epsilon 1}$ Standard Classification of Coals by Rank,[1] IBR approved for § 63.7575.

(40) ASTM D396–02a, Standard Specification for Fuel Oils,[1] IBR approved for § 63.7575.

(41) ASTM D1835–03a, Standard Specification for Liquified Petroleum (LP) Gases,[1] IBR approved for § 63.7575.

(42) ASTM D2013–01, Standard Practice for Preparing Coal Samples for Analysis,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(43) ASTM D2234–00, $^{\epsilon 1}$ Standard Practice for Collection of a Gross Sample of Coal,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(44) ASTM D3173–02, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(45) ASTM D3683–94 (Reapproved 2000), Standard Test Method for Trace Elements in Coal and Coke Ash Absorption,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(46) ASTM D3684–01, Standard Test Method for Total Mercury in Coal by the Oxygen Bomb Combustion/Atomic Absorption Method,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(47) ASTM D5198–92 (Reapproved 2003), Standard Practice for Nitric Acid Digestion of Solid Waste,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(48) ASTM D5865–03a, Standard Test Method for Gross Calorific Value of Coal and Coke,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(49) ASTM D6323–98 (Reapproved 2003), Standard Guide for Laboratory Subsampling of Media Related to Waste Management Activities,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(50) ASTM E711–87 (Reapproved 1996), Standard Test Method for Gross Calorific Value of Refuse-Derived Fuel by the Bomb Calorimeter,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(51) ASTM E776–87 (Reapproved 1996), Standard Test Method for Forms of Chlorine in Refuse-Derived Fuel,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(52) ASTM E871–82 (Reapproved 1998), Standard Method of Moisture Analysis of Particulate Wood Fuels,[1] IBR approved for Table 6 to Subpart DDDDD of this part.

(53) ASTM E885–88 (Reapproved 1996), Standard Test Methods for Analyses of Metals in Refuse-Derived Fuel by Atomic Absorption Spectroscopy,[1] IBR approved for Table 6 to Subpart DDDDD of this part 63.

* * * * *

(i) * * *

(3) ANSI/ASME PTC 19.10–1981, ''Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus],'' IBR approved for §§ 63.865(b), 63.3166(a), 63.3360(e)(1)(iii), 63.3545(a)(3), 63.3555(a)(3), 63.4166(a)(3), 63.4362(a)(3), 63.4766(a)(3), 63.4965(a)(3), 63.5160(d)(1)(iii), 63.9307(c)(2), 63.9323(a)(3), and Table 5 to Subpart DDDDD of this part.

* * * * *

■ 3. Part 63 is amended by adding subpart DDDDD to read as follows:

## Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

Sec.

**What This Subpart Covers**

63.7480 What is the purpose of this subpart?
63.7485 Am I subject to this subpart?
63.7490 What is the affected source of this subpart?
63.7491 Are any boilers or process heaters not subject to this subpart?
63.7495 When do I have to comply with this subpart?

**Emission Limits and Work Practice Standards**

63.7499 What are the subcategories of boilers and process heaters?
63.7500 What emission limits, work practice standards, and operating limits must I meet?

**General Compliance Requirements**

63.7505 What are my general requirements for complying with this subpart?
63.7506 Do any boilers or process heaters have limited requirements?
63.7507 What are the health-based compliance alternatives for the hydrogen chloride (HCl) and total selected metals (TSM) standards?

**Testing, Fuel Analyses, and Initial Compliance Requirements**

63.7510 What are my initial compliance requirements and by what date must I conduct them?
63.7515 When must I conduct subsequent performance tests or fuel analyses?
63.7520 What performance tests and procedures must I use?
63.7521 What fuel analyses and procedures must I use?
63.7522 Can I use emission averaging to comply with this subpart?
63.7525 What are my monitoring, installation, operation, and maintenance requirements?
63.7530 How do I demonstrate initial compliance with the emission limits and work practice standards?

**Continuous Compliance Requirements**

63.7535 How do I monitor and collect data to demonstrate continuous compliance?
63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?
63.7541 How do I demonstrate continuous compliance under the emission averaging provision?

**Notifications, Reports, and Records**

63.7545 What notifications must I submit and when?
63.7550 What reports must I submit and when?
63.7555 What records must I keep?
63.7560 In what form and how long must I keep my records?

**Other Requirements and Information**

63.7565 What parts of the General Provisions apply to me?
63.7570 Who implements and enforces this subpart?
63.7575 What definitions apply to this subpart?

**Tables to Subpart DDDDD of Part 63**

Table 1 to Subpart DDDDD of Part 63—Emission Limits and Work Practice Standards
Table 2 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters With Particulate Matter Emission Limits
Table 3 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters With Mercury Emission Limits and Boilers and Process Heaters That Choose to Comply With the Alternative Total Selected Metals Emission Limits
Table 4 to Subpart DDDDD of Part 63—Operating Limits for Boilers and Process Heaters With Hydrogen Chloride Emission Limits
Table 5 to Subpart DDDDD of Part 63—Performance Testing Requirements
Table 6 to Subpart DDDDD of Part 63—Fuel Analysis Requirements
Table 7 to Subpart DDDDD of Part 63—Establishing Operating Limits
Table 8 to Subpart DDDDD of Part 63—Demonstrating Continuous Compliance
Table 9 to Subpart DDDDD of Part 63—Reporting Requirements
Table 10 to Subpart DDDDD of Part 63—Applicability of General Provisions to Subpart DDDDD

**Appendix**

Appendix A to Subpart DDDDD—Methodology and Criteria for Demonstrating Eligibility for the Health-Based Compliance Alternatives Specified for the Large Solid Fuel Subcategory

## Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

### What This Subpart Covers

#### § 63.7480 What is the purpose of this subpart?

This subpart establishes national emission limits and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits and work practice standards.

#### § 63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in § 63.7575 that is located at, or is part of, a major source of HAP as defined in § 63.2 or § 63.761 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in § 63.7491.

#### § 63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, or existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory located at a major source as defined in § 63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or

process heater located at a major source as defined in § 63.7575.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after January 13, 2003, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in § 63.2, you commence reconstruction after January 13, 2003, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

**§ 63.7491 Are any boilers or process heaters not subject to this subpart?**

The types of boilers and process heaters listed in paragraphs (a) through (o) of this section are not subject to this subpart.

(a) A municipal waste combustor covered by 40 CFR part 60, subpart AAAA, subpart BBBB, subpart Cb or subpart Eb.

(b) A hospital/medical/infectious waste incinerator covered by 40 CFR part 60, subpart Ce or subpart Ec.

(c) An electric utility steam generating unit that is a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity, and supplies more than one-third of its potential electric output capacity, and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit.

(d) A boiler or process heater required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by 40 CFR part 63, subpart EEE (*e.g.*, hazardous waste boilers).

(e) A commercial and industrial solid waste incineration unit covered by 40 CFR part 60, subpart CCCC or subpart DDDD.

(f) A recovery boiler or furnace covered by 40 CFR part 63, subpart MM.

(g) A boiler or process heater that is used specifically for research and development. This does not include units that only provide heat or steam to a process at a research and development facility.

(h) A hot water heater as defined in this subpart.

(i) A refining kettle covered by 40 CFR part 63, subpart X.

(j) An ethylene cracking furnace covered by 40 CFR part 63, subpart YY.

(k) Blast furnace stoves as described in the EPA document, entitled ''National Emission Standards for Hazardous Air Pollutants (NESHAP) for Integrated Iron and Steel Plants—Background Information for Proposed Standards,'' (EPA–453/R–01–005).

(l) Any boiler and process heater specifically listed as an affected source in another standard(s) under 40 CFR part 63.

(m) Any boiler and process heater specifically listed as an affected source in another standard(s) established under section 129 of the Clean Air Act (CAA).

(n) Temporary boilers as defined in this subpart.

(o) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

**§ 63.7495 When do I have to comply with this subpart?**

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by November 12, 2004 or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than September 13, 2007.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing facility must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing facility must be in compliance with this subpart within 3 years after the facility becomes a major source.

(d) You must meet the notification requirements in § 63.7545 according to the schedule in § 63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

## Emission Limits and Work Practice Standards

**§ 63.7499 What are the subcategories of boilers and process heaters?**

The subcategories of boilers and process heaters are large solid fuel, limited use solid fuel, small solid fuel, large liquid fuel, limited use liquid fuel, small liquid fuel, large gaseous fuel, limited use gaseous fuel, and small gaseous fuel. Each subcategory is defined in § 63.7575.

**§ 63.7500 What emission limits, work practice standards, and operating limits must I meet?**

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must meet each emission limit and work practice standard in Table 1 to this subpart that applies to your boiler or process heater, except as provided under § 63.7507.

(2) You must meet each operating limit in Tables 2 through 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Tables 2 through 4 to this subpart, or you wish to establish and monitor an alternative operating limit and alternative monitoring parameters, you must apply to the United States Environmental Protection Agency (EPA) Administrator for approval of alternative monitoring under § 63.8(f).

(b) As provided in § 63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

## General Compliance Requirements

**§ 63.7505 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limits (including operating limits) and the work practice standards in this subpart at all times, except during periods of startup, shutdown, and malfunction.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(c) You can demonstrate compliance with any applicable emission limit using fuel analysis if the emission rate calculated according to § 63.7530(d) is less than the applicable emission limit. Otherwise, you must demonstrate compliance using performance testing.

(d) If you demonstrate compliance with any applicable emission limit through performance testing, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under § 63.8(f).

(1) For each continuous monitoring system (CMS) required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan that addresses paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan at least 60 days

before your initial performance evaluation of your CMS.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit or work practice standard, you must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

### § 63.7506 Do any boilers or process heaters have limited requirements?

(a) New or reconstructed boilers and process heaters in the large liquid fuel subcategory or the limited use liquid fuel subcategory that burn only fossil fuels and other gases and do not burn any residual oil are subject to the emission limits and applicable work practice standards in Table 1 to this subpart. You are not required to conduct a performance test to demonstrate compliance with the emission limits. You are not required to set and maintain operating limits to demonstrate continuous compliance with the emission limits. However, you must meet the requirements in paragraphs (a)(1) and (2) of this section and meet the CO work practice standard in Table 1 to this subpart.

(1) To demonstrate initial compliance, you must include a signed statement in the Notification of Compliance Status report required in § 63.7545(e) that indicates you burn only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels.

(2) To demonstrate continuous compliance with the applicable emission limits, you must also keep records that demonstrate that you burn only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels. You must also include a signed statement in each semiannual compliance report required in § 63.7550 that indicates you burned only liquid fossil fuels other than residual oils, either alone or in combination with gaseous fuels, during the reporting period.

(b) The affected boilers and process heaters listed in paragraphs (b)(1) through (3) of this section are subject to only the initial notification requirements in § 63.9(b) (*i.e.*, they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSMP, site-specific monitoring plans, recordkeeping and reporting requirements of this subpart or any other requirements in subpart A of this part).

(1) Existing large and limited use gaseous fuel units.

(2) Existing large and limited use liquid fuel units.

(3) New or reconstructed small liquid fuel units that burn only gaseous fuels or distillate oil. New or reconstructed small liquid fuel boilers and process heaters that commence burning of any other type of liquid fuel must comply with all applicable requirements of this subpart and subpart A of this part upon startup of burning the other type of liquid fuel.

(c) The affected boilers and process heaters listed in paragraphs (c)(1) through (4) of this section are not subject to the initial notification requirements in § 63.9(b) and are not subject to any requirements in this subpart or in subpart A of this part (*i.e.*, they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSM plans, site-specific monitoring plans, recordkeeping and reporting requirements of this subpart, or any other requirements in subpart A of this part.

(1) Existing small solid fuel boilers and process heaters.

(2) Existing small liquid fuel boilers and process heaters.

(3) Existing small gaseous fuel boilers and process heaters.

(4) New or reconstructed small gaseous fuel units.

### § 63.7507 What are the health-based compliance alternatives for the hydrogen chloride (HCl) and total selected metals (TSM) standards?

(a) As an alternative to the requirement for large solid fuel boilers located at a single facility to demonstrate compliance with the HCl emission limit in Table 1 to this subpart, you may demonstrate eligibility for the health-based compliance alternative for HCl emissions under the procedures prescribed in appendix A to this subpart.

(b) In lieu of complying with the TSM emission standards in Table 1 to this subpart based on the sum of emissions for the eight selected metals, you may demonstrate eligibility for complying with the TSM emission standards in Table 1 based on the sum of emissions for seven selected metals (by excluding manganese emissions from the summation of TSM emissions) under the procedures prescribed in appendix A to this subpart.

## Testing, Fuel Analyses, and Initial Compliance Requirements

### § 63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For affected sources that elect to demonstrate compliance with any of the emission limits of this subpart through performance testing, your initial compliance requirements include conducting performance tests according to § 63.7520 and Table 5 to this subpart, conducting a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart, establishing operating limits according to § 63.7530 and Table 7 to this subpart, and conducting CMS performance evaluations according to § 63.7525.

(b) For affected sources that elect to demonstrate compliance with the emission limits for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to § 63.7521 and Table 6 to this subpart and establish operating limits according to § 63.7530 and Table 8 to this subpart.

(c) For affected sources that have an applicable work practice standard, your initial compliance requirements depend on the subcategory and rated capacity of your boiler or process heater. If your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, your initial compliance demonstration is conducting a performance test for carbon monoxide

according to Table 5 to this subpart. If your boiler or process heater is in any of the large subcategories and has a heat input capacity of 100 MMBtu per hour or greater, your initial compliance demonstration is conducting a performance evaluation of your continuous emission monitoring system for carbon monoxide according to § 63.7525(a).

(d) For existing affected sources, you must demonstrate initial compliance no later than 180 days after the compliance date that is specified for your source in § 63.7495 and according to the applicable provisions in § 63.7(a)(2) as cited in Table 10 to this subpart.

(e) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003 and November 12, 2004, you must demonstrate initial compliance with either the proposed emission limits and work practice standards or the promulgated emission limits and work practice standards no later than 180 days after November 12, 2004 or within 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(f) If your new or reconstructed affected source commenced construction or reconstruction between January 13, 2003, and November 12, 2004, and you chose to comply with the proposed emission limits and work practice standards when demonstrating initial compliance, you must conduct a second compliance demonstration for the promulgated emission limits and work practice standards within 3 years after November 12, 2004 or within 3 years after startup of the affected source, whichever is later.

(g) If your new or reconstructed affected source commences construction or reconstruction after November 12, 2004, you must demonstrate initial compliance with the promulgated emission limits and work practice standards no later than 180 days after startup of the source.

### § 63.7515 When must I conduct subsequent performance tests or fuel analyses?

(a) You must conduct all applicable performance tests according to § 63.7520 on an annual basis, unless you follow the requirements listed in paragraphs (b) through (d) of this section. Annual performance tests must be completed between 10 and 12 months after the previous performance test, unless you follow the requirements listed in paragraphs (b) through (d) of this section.

(b) You can conduct performance tests less often for a given pollutant if your performance tests for the pollutant (particulate matter, HCl, mercury, or TSM) for at least 3 consecutive years show that you comply with the emission limit. In this case, you do not have to conduct a performance test for that pollutant for the next 2 years. You must conduct a performance test during the third year and no more than 36 months after the previous performance test.

(c) If your boiler or process heater continues to meet the emission limit for particulate matter, HCl, mercury, or TSM, you may choose to conduct performance tests for these pollutants every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.

(d) If a performance test shows noncompliance with an emission limit for particulate matter, HCl, mercury, or TSM, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show compliance.

(e) If you have an applicable work practice standard for carbon monoxide and your boiler or process heater is in any of the limited use subcategories or has a heat input capacity less than 100 MMBtu per hour, you must conduct annual performance tests for carbon monoxide according to § 63.7520. Each annual performance test must be conducted between 10 and 12 months after the previous performance test.

(f) You must conduct a fuel analysis according to § 63.7521 for each type of fuel burned no later than 5 years after the previous fuel analysis for each fuel type. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in § 63.7540.

(g) You must report the results of performance tests and fuel analyses within 60 days after the completion of the performance tests or fuel analyses. This report should also verify that the operating limits for your affected source have not changed or provide documentation of revised operating parameters established according to § 63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests and fuel analyses should include all applicable information required in § 63.7550.

### § 63.7520 What performance tests and procedures must I use?

(a) You must conduct all performance tests according to § 63.7(c), (d), (f), and (h). You must also develop a site-specific test plan according to the requirements in § 63.7(c) if you elect to demonstrate compliance through performance testing.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) New or reconstructed boilers or process heaters in one of the liquid fuel subcategories that burn only fossil fuels and other gases and do not burn any residual oil must demonstrate compliance according to § 63.7506(a).

(d) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at the maximum normal operating load while burning the type of fuel or mixture of fuels that have the highest content of chlorine, mercury, and total selected metals, and you must demonstrate initial compliance and establish your operating limits based on these tests. These requirements could result in the need to conduct more than one performance test.

(e) You may not conduct performance tests during periods of startup, shutdown, or malfunction.

(f) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(g) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A to part 60 of this chapter to convert the measured particulate matter concentrations, the measured HCl concentrations, the measured TSM concentrations, and the measured mercury concentrations that result from the initial performance test to pounds per million Btu heat input emission rates using F-factors.

### § 63.7521 What fuel analyses and procedures must I use?

(a) You must conduct fuel analyses according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable.

(b) You must develop and submit a site-specific fuel analysis plan to the EPA Administrator for review and approval according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section.

(1) You must submit the fuel analysis plan no later than 60 days before the date that you intend to demonstrate compliance.

(2) You must include the information contained in paragraphs (b)(2)(i)

through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each fuel type, the analytical methods, with the expected minimum detection levels, to be used for the measurement of selected total metals, chlorine, or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that will be used.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. Collect all the material (fines and coarse) in the full cross-section. Transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal intervals during the testing period.

(2) If sampling from a fuel pile or truck, collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, dig into the pile to a depth of 18 inches. Insert a clean flat square shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling.

(iii) Transfer all samples to a clean plastic bag for further processing.

(d) Prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) Throughly mix and pour the entire composite sample over a clean plastic sheet.

(2) Break sample pieces larger than 3 inches into smaller sizes.

(3) Make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) Separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) Grind the sample in a mill.

(7) Use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) Determine the concentration of pollutants in the fuel (mercury, chlorine, and/or total selected metals) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart.

**§ 63.7522 Can I use emission averaging to comply with this subpart?**

(a) As an alternative to meeting the requirements of § 63.7500, if you have more than one existing large solid fuel boiler located at your facility, you may demonstrate compliance by emission averaging according to the procedures in this section in a State that does not choose to exclude emission averaging.

(b) For each existing large solid fuel boiler in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on November 12, 2004 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on November 12, 2004.

(c) You may average particulate matter or TSM, HCl, and mercury emissions from existing large solid fuel boilers to demonstrate compliance with the limits in Table 1 to this subpart if you satisfy the requirements in paragraphs (d), (e), and (f) of this section.

(d) The weighted average emissions from the existing large solid fuel boilers participating in the emissions averaging option must be in compliance with the limits in Table 1 to this subpart at all times following the compliance date specified in § 63.7495.

(e) You must demonstrate initial compliance according to paragraphs (e)(1) or (2) of this section.

(1) You must use Equation 1 of this section to demonstrate that the particulate matter or TSM, HCl, and mercury emissions from all existing large solid fuel boilers participating in the emissions averaging option do not exceed the emission limits in Table 1 to this subpart.

$$\text{AveWeighted Emissions} = \sum_{i=1}^{n}(\text{Er} \times \text{Hm}) \div \sum_{i=1}^{n}\text{Hm} \qquad \text{(Eq. 1)}$$

Where:

AveWeighted = Average weighted emissions for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in § 63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Hm = Maximum rated heat input capacity of boiler, i, in units of million Btu per hour.

n = Number of large solid fuel boilers participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input, you can use Equation 2 of this section as an alternative to using equation 1 of this section to demonstrate that the particulate matter or TSM, HCl, and mercury emissions from all existing large solid fuel boilers participating in the emissions averaging option do not exceed the emission limits in Table 1 to this subpart.

$$\text{AveWeighted Emissions} = \sum_{i=1}^{n}(\text{Er} \times \text{Sm} \times \text{Cf}) \div \sum_{i=1}^{n}\text{Sm} \times \text{Cf} \qquad \text{(Eq. 2)}$$

Where:

AveWeighted = Average weighted emission level for PM or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in § 63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Sm = Maximum steam generation by boiler, i, in units of pounds.

Cf = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated.

(f) You must demonstrate continuous compliance on a 12-month rolling average basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) and (2). The first 12-month rolling-average period begins on the compliance date specified in § 63.7495.

(1) For each calendar month, you must use Equation 3 of this section to calculate the 12-month rolling average weighted emission limit using the actual heat capacity for each existing large solid fuel boiler participating in the emissions averaging option.

$$\text{AveWeighted Emissions} = \sum_{i=1}^{n}(\text{Er} \times \text{Hb}) \div \sum_{i=1}^{n}\text{Hb} \qquad \text{(Eq. 3)}$$

Where:

AveWeighted Emissions = 12-month rolling average weighted emission level for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate, calculated during the most recent compliance test, (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in § 63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Hb = The average heat input for each calendar month of boiler, i, in units of million Btu.

n = Number of large solid fuel boilers participating in the emissions averaging option.

(2) If you are not capable of monitoring heat input, you can use Equation 4 of this section as an alternative to using Equation 3 of this section to calculate the 12-month rolling average weighted emission limit using the actual steam generation from the large solid fuel boilers participating in the emissions averaging option.

$$\text{AveWeighted Emissions} = \sum_{i=1}^{n}(\text{Er} \times \text{Sa} \times \text{Cf}) \div \sum_{i=1}^{n}\text{Sa} \times \text{Cf} \qquad \text{(Eq. 4)}$$

Where:

AveWeighted Emissions = 12-month rolling average weighted emission level for PM or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate, calculated during the most recent compliance test (as calculated according to Table 5 to this subpart) or fuel analysis (as calculated by the applicable equation in § 63.7530(d)) for boiler, i, for particulate matter or TSM, HCl, or mercury, in units of pounds per million Btu of heat input.

Sa = Actual steam generation for each calender month by boiler, i, in units of pounds.

Cf = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated.

(g) You must develop and submit an implementation plan for emission averaging to the applicable regulatory authority for review and approval according to the following procedures and requirements in paragraphs (g)(1) through (4).

(1) You must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing large solid fuel boilers in the averaging group, including for each either the applicable HAP emission level or the control technology installed on;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group of large solid fuel boilers;

(iii) The specific control technology or pollution prevention measure to be used for each emission source in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple sources, the owner or operator must identify each source;

(iv) The test plan for the measurement of particulate matter (or TSM), HCl, or mercury emissions in accordance with the requirements in § 63.7520;

(v) The operating parameters to be monitored for each control system or device and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to § 63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the applicable regulatory authority, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating conditions.

(3) Upon receipt, the regulatory authority shall review and approve or disapprove the plan according to the following criteria:

(i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and

(ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable regulatory authority shall not approve an emission averaging implementation plan containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources; or

(ii) The inclusion of any emission source other than an existing large solid fuel boiler.

**§ 63.7525 What are my monitoring, installation, operation, and maintenance requirements?**

(a) If you have an applicable work practice standard for carbon monoxide, and your boiler or process heater is in any of the large subcategories and has a heat input capacity of 100 MMBtu per hour or greater, you must install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide according to the procedures in paragraphs (a)(1) through (6) of this section by the compliance date specified in § 63.7495.

(1) Each CEMS must be installed, operated, and maintained according to Performance Specification (PS) 4A of 40 CFR part 60, appendix B, and according to the site-specific monitoring plan developed according to § 63.7505(d).

(2) You must conduct a performance evaluation of each CEMS according to the requirements in § 63.8 and according to PS 4A of 40 CFR part 60, appendix B.

(3) Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2).

(5) You must calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.

(6) For purposes of calculating data averages, you must not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when your boiler or process heater is operating at less than 50 percent of its rated capacity. You must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out of control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(b) If you have an applicable opacity operating limit, you must install, operate, certify and maintain each continuous opacity monitoring system (COMS) according to the procedures in paragraphs (b)(1) through (7) of this section by the compliance date specified in § 63.7495.

(1) Each COMS must be installed, operated, and maintained according to PS 1 of 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8 and according to PS 1 of 40 CFR part 60, appendix B.

(3) As specified in § 63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in § 63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in § 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of § 63.8(e). Identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit.

(7) You must determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected for periods during which the COMS is not out of control.

(c) If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in paragraphs (c)(1) through (5) of this section by the compliance date specified in § 63.7495.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) Except for monitoring malfunctions, associated repairs, and required quality assurance or control

activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(3) For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(4) Determine the 3-hour block average of all recorded readings, except as provided in paragraph (c)(3) of this section.

(5) Record the results of each inspection, calibration, and validation check.

(d) If you have an operating limit that requires the use of a flow measurement device, you must meet the requirements in paragraphs (c) and (d)(1) through (4) of this section.

(1) Locate the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate.

(3) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow sensor calibration check at least semiannually.

(e) If you have an operating limit that requires the use of a pressure measurement device, you must meet the requirements in paragraphs (c) and (e)(1) through (6) of this section.

(1) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure.

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(f) If you have an operating limit that requires the use of a pH measurement device, you must meet the requirements in paragraphs (c) and (f)(1) through (3) of this section.

(1) Locate the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Check the pH meter's calibration on at least two points every 8 hours of process operation.

(g) If you have an operating limit that requires the use of equipment to monitor voltage and secondary current (or total power input) of an electrostatic precipitator (ESP), you must use voltage and secondary current monitoring equipment to measure voltage and secondary current to the ESP.

(h) If you have an operating limit that requires the use of equipment to monitor sorbent injection rate (*e.g.*, weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (c) and (h)(1) through (3) of this section.

(1) Locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Install and calibrate the device in accordance with manufacturer's procedures and specifications.

(3) At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.

(i) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (i)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with the guidance provided in EPA–454/R–98–015, September 1997.

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(7) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

(8) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

**§ 63.7530 How do I demonstrate initial compliance with the emission limits and work practice standards?**

(a) You must demonstrate initial compliance with each emission limit and work practice standard that applies to you by either conducting initial performance tests and establishing operating limits, as applicable, according to § 63.7520, paragraph (c) of this section, and Tables 5 and 7 to this subpart OR conducting initial fuel analyses to determine emission rates and establishing operating limits, as applicable, according to § 63.7521, paragraph (d) of this section, and Tables 6 and 8 to this subpart.

(b) New or reconstructed boilers or process heaters in one of the liquid fuel subcategories that burn only fossil fuels and other gases and do not burn any residual oil must demonstrate compliance according to § 63.7506(a).

(c) If you demonstrate compliance through performance testing, you must establish each site-specific operating limit in Tables 2 through 4 to this subpart that applies to you according to the requirements in § 63.7520, Table 7 to this subpart, and paragraph (c)(4) of this section, as applicable. You must also conduct fuel analyses according to § 63.7521 and establish maximum fuel pollutant input levels according to paragraphs (c)(1) through (3) of this section, as applicable.

(1) You must establish the maximum chlorine fuel input ($C_{input}$) during the initial performance testing according to the procedures in paragraphs (c)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in

your boiler or process heater that has the highest content of chlorine.

(ii) During the performance testing for HCl, you must determine the fraction of the total heat input for each fuel type burned ($Q_i$) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned ($C_i$).

(iii) You must establish a maximum chlorine input level using Equation 5 of this section.

$$Cl_{input} = \sum_{i=1}^{n}\left[(C_i)(Q_i)\right] \qquad \text{(Eq. 5)}$$

Where:

$Cl_{input}$ = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

$C_i$ = Arithmetic average concentration of chlorine in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

$Q_i$ = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) If you choose to comply with the alternative TSM emission limit instead of the particulate matter emission limit, you must establish the maximum TSM fuel input level ($TSM_{input}$) during the initial performance testing according to the procedures in paragraphs (c)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the performance testing for TSM, you must determine the fraction of total heat input from each fuel burned ($Q_i$) based on the fuel mixture that has the highest content of total selected metals, and the average TSM concentration of each fuel type burned ($M_i$).

(iii) You must establish a baseline TSM input level using Equation 6 of this section.

$$TSM_{input} = \sum_{i=1}^{n}\left[(M_i)(Q_i)\right] \qquad \text{(Eq. 6)}$$

Where:

$TSM_{input}$ = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

$M_i$ = Arithmetic average concentration of TSM in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

$Q_i$ = Fraction of total heat input from based fuel type, i, based on the fuel mixture that has the highest content of TSM. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(3) You must establish the maximum mercury fuel input level ($Mercury_{input}$) during the initial performance testing using the procedures in paragraphs (c)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned ($Q_i$) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned ($HG_i$).

(iii) You must establish a maximum mercury input level using Equation 7 of this section.

$$Mercury_{input} = \sum_{i=1}^{n}\left[(HG_i)(Q_i)\right] \qquad \text{(Eq. 7)}$$

Where:

$Mercury_{input}$ = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

$HG_i$ = Arithmetic average concentration of mercury in fuel type, i, analyzed according to § 63.7521, in units of pounds per million Btu.

$Q_i$ = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(4) You must establish parameter operating limits according to paragraphs (c)(4)(i) through (iv) of this section.

(i) For a wet scrubber, you must establish the minimum scrubber effluent pH, liquid flowrate, and pressure drop as defined in § 63.7575, as your operating limits during the three-run performance test. If you use a wet scrubber and you conduct separate performance tests for particulate matter, HCl, and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flowrate, and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flowrate and pressure drop operating limits at the highest minimum values established during the performance tests.

(ii) For an electrostatic precipitator, you must establish the minimum voltage and secondary current (or total power input), as defined in § 63.7575, as your operating limits during the three-run performance test.

(iii) For a dry scrubber, you must establish the minimum sorbent injection rate, as defined in § 63.7575, as your operating limit during the three-run performance test.

(iv) The operating limit for boilers or process heaters with fabric filters that choose to demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in § 63.7525, and that each fabric filter must be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

(d) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to § 63.7521 and follow the procedures in paragraphs (d)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided z-statistic test described in Equation 8 of this section.

$$P_{90} = \text{mean} + (SD \times t) \qquad \text{(Eq. 8)}$$

Where:

$P_{90}$ = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

SD = Standard deviation of the pollutant concentration in the fuel samples analyzed according to § 63.7521, in units of pounds per million Btu.

t = t distribution critical value for 90th percentile (0.1) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 9 of this section must be less than the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^{n}\left[\left(C_{i90}\right)\left(Q_i\right)\left(1.028\right)\right] \qquad \text{(Eq. 9)}$$

Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

$C_{i90}$ = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 8 of this section.

$Q_i$ = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for TSM, the TSM emission rate that you calculate for your boiler or process heater using Equation 10 of this section must be less than the applicable emission limit for TSM.

$$TSM = \sum_{i=1}^{n}\left[\left(M_{i90}\right)\left(Q_i\right)\right] \qquad \text{(Eq. 10)}$$

Where:

TSM = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

$M_{i90}$ = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 8 of this section.

$Q_i$ = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of total selected metals. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(5) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 11 of this section must be less than the applicable emission limit for mercury.

$$Mercury = \sum_{i=1}^{n}\left[\left(HG_{i90}\right)\left(Q_i\right)\right] \qquad \text{(Eq. 11)}$$

Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

$HG_{i90}$ = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 8 of this section.

$Q_i$ = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of ''1'' for $Q_i$.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(e) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.7545(e).

## Continuous Compliance Requirements

### § 63.7535 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by § 63.7505(d).

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. Boilers and process heaters that have an applicable carbon monoxide work practice standard and are required to install and operate a CEMS, may not use data recorded during periods when the boiler or process heater is operating at less than 50 percent of its rated capacity.

### § 63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (10) of this section.

(1) Following the date on which the initial performance test is completed or is required to be completed under §§ 63.7 and 63.7510, whichever date comes first, you must not operate above any of the applicable maximum operating limits or below any of the applicable minimum operating limits listed in Tables 2 through 4 to this subpart at all times except during periods of startup, shutdown and malfunction. Operating limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits.

(2) You must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would either result in lower emissions of TSM, HCl, and mercury, than the applicable emission limit for each pollutant (if you demonstrate compliance through fuel analysis), or result in lower fuel input of TSM, chlorine, and mercury than the maximum values calculated during the last performance tests (if you demonstrate compliance through performance testing).

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis and you plan to burn a new type of fuel, you must recalculate the HCl emission rate using Equation 9 of § 63.7530 according to paragraphs (a)(3)(i) through (iii) of this section.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 9 of § 63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel type or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 5 of § 63.7530. If the results of recalculating the maximum chlorine input using Equation 5 of § 63.7530 are higher than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(c).

(5) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 10 of § 63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 10 of § 63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 6 of § 63.7530. If the results of recalculating the maximum total selected metals input using Equation 6 of § 63.7530 are higher than the maximum TSM input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(c).

(7) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 11 of § 63.7530 according to the procedures specified in paragraphs (a)(7)(i) through (iii) of this section.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to § 63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 11 of § 63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(8) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 7 of § 63.7530. If the results of recalculating the maximum mercury input using Equation 7 of § 63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in § 63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in § 63.7530(c).

(9) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alarm and complete corrective actions according to your SSMP, and operate and maintain the fabric filter system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the alarm sounds. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken to initiate corrective action.

(10) If you have an applicable work practice standard for carbon monoxide, and you are required to install a CEMS according to § 63.7525(a), then you must meet the requirements in paragraphs (a)(10)(i) through (iii) of this section.

(i) You must continuously monitor carbon monoxide according to §§ 63.7525(a) and 63.7535.

(ii) Maintain a carbon monoxide emission level below your applicable carbon monoxide work practice standard in Table 1 to this subpart at all times except during periods of startup, shutdown, malfunction, and when your boiler or process heater is operating at less than 50 percent of rated capacity.

(iii) Keep records of carbon monoxide levels according to § 63.7555(b).

(b) You must report each instance in which you did not meet each emission limit, operating limit, and work practice standard in Tables 1 through 4 to this subpart that apply to you. You must also report each instance during a startup, shutdown, or malfunction when you did not meet each applicable emission limit, operating limit, and work practice standard. These instances are deviations from the emission limits and work practice standards in this subpart. These deviations must be reported according to the requirements in § 63.7550.

(c) During periods of startup, shutdown, and malfunction, you must operate in accordance with the SSMP as required in § 63.7505(e).

(d) Consistent with §§ 63.6(e)and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with your SSMP. The EPA Administrator will determine whether

deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

### § 63.7541 How do I demonstrate continuous compliance under the emission averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (4) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing large solid fuel boilers participating in the emissions averaging option as determined in § 63.7522(f) and (g);

(2) For each existing solid fuel boiler participating in the emissions averaging option that is equipped with a dry control system, maintain opacity at or below the applicable limit;

(3) For each existing solid fuel boiler participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 3-hour average parameter values at or below the operating limits established during the most recent performance test; and

(4) For each existing solid fuel boiler participating in the emissions averaging option that has an approved alternative operating plan, maintain the 3-hour average parameter values at or below the operating limits established in the most recent performance test.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (4) of this section, except during periods of startup, shutdown, and malfunction, is a deviation.

## Notification, Reports, and Records

### § 63.7545 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you startup your affected source before November 12, 2004, you must submit an Initial Notification not later than 120 days after November 12, 2004. The Initial Notification must include the information required in paragraphs (b)(1) and (2) of this section, as applicable.

(1) If your affected source has an annual capacity factor of greater than 10 percent, your Initial Notification must include the information required by § 63.9(b)(2).

(2) If your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent such that the unit is in one of the limited use subcategories (the limited use solid fuel subcategory, the limited use liquid fuel subcategory, or the limited use gaseous fuel subcategory), your Initial Notification must include the information required by § 63.9(b)(2) and also a signed statement indicating your affected source has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent.

(c) As specified in § 63.9(b)(4) and (b)(5), if you startup your new or reconstructed affected source on or after November 12, 2004, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in § 63.7530(a), you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). For each initial compliance demonstration, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to § 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (9), as applicable.

(1) A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.

(2) Summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits.

(3) Identification of whether you are complying with the particulate matter emission limit or the alternative total selected metals emission limit.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging.

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) A summary of the carbon monoxide emissions monitoring data and the maximum carbon monoxide emission levels recorded during the performance test to show that you have met any applicable work practice standard in Table 1 to this subpart.

(8) If your new or reconstructed boiler or process heater is in one of the liquid fuel subcategories and burns only liquid fossil fuels other than residual oil either alone or in combination with gaseous fuels, you must submit a signed statement certifying this in your Notification of Compliance Status report.

(9) If you had a deviation from any emission limit or work practice standard, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

### § 63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in § 63.7495.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.7495.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered

no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information required in paragraphs (c)(1) through (11) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure.

(5) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable.

(6) A signed statement indicating that you burned no new types of fuel. Or, if you did burn a new type of fuel, you must submit the calculation of chlorine input, using Equation 5 of § 63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 9 of § 63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of TSM input, using Equation 6 of § 63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate using Equation 10 of § 63.7530 that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel, you must submit the calculation of mercury input, using Equation 7 of § 63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 11 of § 63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(7) If you wish to burn a new type of fuel and you can not demonstrate compliance with the maximum chlorine input operating limit using Equation 5 of § 63.7530, the maximum TSM input operating limit using Equation 6 of § 63.7530, or the maximum mercury input operating limit using Equation 7 of § 63.7530, you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(8) The hours of operation for each boiler and process heater that is subject to an emission limit for each calendar month within the semiannual reporting period. This requirement applies only to limited use boilers and process heaters.

(9) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).

(10) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, and there are no deviations from the requirements for work practice standards in this subpart, a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(11) If there were no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out of control during the reporting period.

(d) For each deviation from an emission limit or operating limit in this subpart and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a CMSs to comply with that emission limit, operating limit, or work practice standard, the compliance report must contain the information in paragraphs (c)(1) through (10) of this section and the information required in paragraphs (d)(1) through (4) of this section. This includes periods of startup, shutdown, and malfunction.

(1) The total operating time of each affected source during the reporting period.

(2) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(3) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(4) A copy of the test report if the annual performance test showed a deviation from the emission limit for particulate matter or the alternative TSM limit, a deviation from the HCl emission limit, or a deviation from the mercury emission limit.

(e) For each deviation from an emission limitation and operating limit or work practice standard in this subpart occurring at an affected source where you are using a CMS to comply with that emission limit, operating limit, or work practice standard, you must include the information in paragraphs (c) (1) through (10) of this section and the information required in paragraphs (e) (1) through (12) of this section. This includes periods of startup, shutdown, and malfunction and any deviations from your site-specific monitoring plan as required in § 63.7505(d).

(1) The date and time that each malfunction started and stopped and description of the nature of the deviation (*i.e.*, what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems,

process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMSs downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) An identification of each parameter that was monitored at the affected source for which there was a deviation, including opacity, carbon monoxide, and operating parameters for wet scrubbers and other control devices.

(9) A brief description of the source for which there was a deviation.

(10) A brief description of each CMS for which there was a deviation.

(11) The date of the latest CMS certification or audit for the system for which there was a deviation.

(12) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you operate a new gaseous fuel unit that is subject to the work practice standard specified in Table 1 to this subpart, and you intend to use a fuel other than natural gas or equivalent to fire the affected unit, you must submit a notification of alternative fuel use within 48 hours of the declaration of a period of natural gas curtailment or supply interruption, as defined in § 63.7575. The notification must include the information specified in paragraphs (g)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

**§ 63.7555 What records must I keep?**

(a) You must keep records according to paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in § 63.10(b)(2)(viii).

(b) For each CEMS, CPMS, and COMS, you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in § 63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits such as opacity, pressure drop, carbon monoxide, and pH to show continuous compliance with each emission limit, operating limit, and work practice standard that applies to you.

(d) For each boiler or process heater subject to an emission limit, you must also keep the records in paragraphs (d)(1) through (5) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) You must keep records of monthly hours of operation by each boiler or process heater. This requirement applies only to limited-use boilers and process heaters.

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 5 of § 63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 9 of § 63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 6 of § 63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 10 of § 63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(5) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 7 of § 63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 11 of § 63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should

include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(e) If your boiler or process heater is subject to an emission limit or work practice standard in Table 1 to this subpart and has a federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent such that the unit is in one of the limited use subcategories, you must keep the records in paragraphs (e)(1) and (2) of this section.

(1) A copy of the federally enforceable permit that limits the annual capacity factor of the source to less than or equal to 10 percent.

(2) Fuel use records for the days the boiler or process heater was operating.

### § 63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off site for the remaining 3 years.

## Other Requirements and Information

### § 63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

### § 63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (5) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency, however, the U.S. EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.7500(a) and (b) under § 63.6(g).

(2) Approval of alternative opacity emission limits in § 63.7500(a) under § 63.6(h)(9).

(3) Approval of major change to test methods in Table 5 to this subpart under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(4) Approval of major change to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major change to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

### § 63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in § 63.2 (the General Provisions), and in this section as follows:

*Annual capacity factor* means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year, and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

*Bag leak detection system* means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

*Biomass fuel* means unadulterated wood as defined in this subpart, wood residue, and wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sanderdust, chips, scraps, slabs, millings, and shavings); animal litter; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds.

*Blast furnace gas fuel-fired boiler or process heater* means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total heat input (based on an annual average) from blast furnace gas.

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Waste heat boilers are excluded from this definition.

*Coal* means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by the American Society for Testing and Materials in ASTM D388–991 $^{\epsilon 1}$, ''Standard Specification for Classification of Coals by Rank $^{1}$'' (incorporated by reference, see § 63.14(b)), coal refuse, and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures, for the purposes of this subpart. Coal derived gases are excluded from this definition.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

*Commercial/institutional boiler* means a boiler used in commercial establishments or institutional establishments such as medical centers, research centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water.

*Construction/demolition material* means waste building material that result from the construction or demolition operations on houses and commercial and industrial buildings.

*Deviation.* (1) Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(iii) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless or whether or not such failure is permitted by this subpart.

(2) A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the

standard is up to the discretion of the entity responsible for enforcement of the standards.

*Distillate oil* means fuel oils, including recycled oils, that comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D396–02a, ''Standard Specifications for Fuel Oils [1]'' (incorporated by reference, see § 63.14(b)).

*Dry scrubber* means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition.

*Electric utility steam generating unit* means a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit.

*Electrostatic precipitator* means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper.

*Fabric filter* means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

*Federally enforceable* means all limitations and conditions that are enforceable by the EPA Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Firetube boiler* means a boiler in which hot gases of combustion pass through the tubes and water contacts the outside surfaces of the tubes.

*Fossil fuel* means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials.

*Fuel type* means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, subbituminous coal, lignite, anthracite, biomass, construction/demolition material, salt water laden wood, creosote treated wood, tires, residual oil. Individual fuel types received from different suppliers are not considered new fuel types except for construction/demolition material.

*Gaseous fuel* includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas is exempted from this definition.

*Heat input* means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

*Hot water heater* means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous or liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210°F (99°C).

*Industrial boiler* means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

*Large gaseous fuel subcategory* includes any watertube boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.

*Large liquid fuel subcategory* includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent. Large gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.

*Large solid fuel subcategory* includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has an annual capacity factor of greater than 10 percent.

*Limited use gaseous fuel subcategory* includes any watertube boiler or process heater that burns gaseous fuels not combined with any liquid or solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.

*Limited use liquid fuel subcategory* includes any watertube boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent. Limited use gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.

*Limited use solid fuel subcategory* includes any watertube boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, has a rated capacity of greater than 10 MMBtu per hour heat input, and has a federally enforceable annual average capacity factor of equal to or less than 10 percent.

*Liquid fossil fuel* means petroleum, distillate oil, residual oil and any form of liquid fuel derived from such material.

*Liquid fuel* includes, but is not limited to, distillate oil, residual oil, waste oil, and process liquids.

*Minimum pressure drop* means 90 percent of the lowest test-run average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum scrubber effluent pH* means 90 percent of the lowest test-run average effluent pH measured at the outlet of the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

*Minimum scrubber flow rate* means 90 percent of the lowest test-run average flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

*Minimum sorbent flow rate* means 90 percent of the lowest test-run average sorbent (or activated carbon) flow rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.


Attachment I
Attachment I

*Minimum voltage or amperage* means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

*Natural gas* means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquid petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835–03a, ''Standard Specification for Liquid Petroleum Gases'' (incorporated by reference, see § 63.14(b)).

*Opacity* means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

*Particulate matter* means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an alternative method.

*Period of natural gas curtailment or supply interruption* means a period of time during which the supply of natural gas to an affected facility is halted for reasons beyond the control of the facility. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or supply interruption.

*Process heater* means an enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves.

*Residual oil* means crude oil, and all fuel oil numbers 4, 5 and 6, as defined by the American Society for Testing and Materials in ASTM D396–02a, ''Standard Specifications for Fuel Oils [1]'' (incorporated by reference, see § 63.14(b)).

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Small gaseous fuel subcategory* includes any firetube boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and any boiler or process heater that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment or gas supply emergencies, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.

*Small liquid fuel subcategory* includes any firetube boiler that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and any boiler or process heater that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels, and has a rated capacity of less than or equal to 10 MMBtu per hour heat input. Small gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply emergencies are not included in this definition.

*Small solid fuel subcategory* includes any firetube boiler that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels, and any other boiler or process heater that burns any amount of solid fuel either alone or in combination with liquid or gaseous fuels and has a rated capacity of less than or equal to 10 MMBtu per hour heat input.

*Solid fuel* includes, but is not limited to, coal, wood, biomass, tires, plastics, and other nonfossil solid materials.

*Temporary boiler* means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another. A temporary boiler that remains at a location for more than 180 consecutive days is no longer considered to be a temporary boiler. Any temporary boiler that replaces a temporary boiler at a location and is intended to perform the same or similar function will be included in calculating the consecutive time period.

*Total selected metals* means the combination of the following metallic HAP: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

*Unadulterated wood* means wood or wood products that have not been painted, pigment-stained, or pressure treated with compounds such as chromate copper arsenate, pentachlorophenol, and creosote. Plywood, particle board, oriented strand board, and other types of wood products bound by glues and resins are included in this definition.

*Waste heat boiler* means a device that recovers normally unused energy and converts it to usable heat. Waste heat boilers incorporating duct or supplemental burners that are designed to supply 50 percent or more of the total rated heat input capacity of the waste heat boiler are not considered waste heat boilers, but are considered boilers. Waste heat boilers are also referred to as heat recovery steam generators.

*Watertube boiler* means a boiler in which water passes through the tubes and hot gases of combustion pass over the outside surfaces of the tubes.

*Wet scrubber* means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler or process heater to control emissions of particulate matter and/or to absorb and neutralize acid gases, such as hydrogen chloride.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

**Tables to Subpart DDDDD of Part 63**

TABLE 1 TO SUBPART DDDDD OF PART 63.—EMISSION LIMITS AND WORK PRACTICE STANDARDS

As stated in § 63.7500, you must comply with the following applicable emission limits and work practice standards:

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | You must meet the following emission limits and work practice standards . . . |
|---|---|---|
| 1. New or reconstructed large solid fuel ..... | a. Particulate Matter (or Total Selected Metals). | 0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu of heat input). |
| | b. Hydrogen Chloride ..... | 0.02 lb per MMBtu of heat input. |
| | c. Mercury ..... | 0.000003 lb per MMBtu of heat input. |
| | d. Carbon Monoxide ..... | 400 ppm by volume on a dry basis corrected to 7 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr). |

TABLE 1 TO SUBPART DDDDD OF PART 63.—EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

As stated in § 63.7500, you must comply with the following applicable emission limits and work practice standards:

| If your boiler or process heater is in this subcategory . . . | For the following pollutants . . . | You must meet the following emission limits and work practice standards . . . |
|---|---|---|
| 2. New or reconstructed limited use solid fuel ... | a. Particulate Matter (or Total Selected Metals). | 0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu of heat input). |
| | b. Hydrogen Chloride | 0.02 lb per MMBtu of heat input. |
| | c. Mercury | 0.000003 lb per MMBtu of heat input. |
| | d. Carbon Monoxide | 400 ppm by volume on a dry basis corrected to 7 percent oxygen (3-run average). |
| 3. New or reconstructed small solid fuel | a. Particulate Matter (or Total Selected Metals). | 0.025 lb per MMBtu of heat input; or (0.0003 lb per MMBtu of heat input). |
| | b. Hydrogen Chloride | 0.02 lb per MMBtu of heat input. |
| | c. Mercury | 0.000003 lb per MMBtu of heat input. |
| 4. New reconstructed large liquid fuel | a. Particulate Matter | 0.03 lb per MMBtu of heat input. |
| | b. Hydrogen Chloride | 0.0005 lb per MMBtu of heat input. |
| | c. Carbon Monoxide | 400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr). |
| 5. New or reconstructed limited use liquid fuel .. | a. Particulate Matter | 0.03 lb per MMBtu of heat input. |
| | b. Hydrogen Chloride | 0.0009 lb per MMBtu of heat input. |
| | c. Carbon Monoxide | 400 ppm by volume on a dry basis liquid corrected to 3 percent oxygen (3-run average). |
| 6. New or reconstructed small liquid fuel | a. Particulate Matter | 0.03 lb per MMBtu of heat input. |
| | b. Hydrogen Chloride | 0.0009 lb per MMBtu of heat input. |
| 7. New reconstructed large gaseous fuel | Carbon Monoxide | 400 ppm by volume on a dry basis corrected to 3 percent oxygen (30-day rolling average for units 100 MMBtu/hr or greater, 3-run average for units less than 100 MMBtu/hr). |
| 8. New or reconstructed limited use gaseous fuel. | Carbon Monoxide | 400 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average). |
| 9. Existing large solid fuel | a. Particulate Matter (or Total Selected Metals). | 0.07 lb per MMBtu of heat input; or (0.001 lb per MMBtu of heat input). |
| | b. Hydrogen Chloride | 0.09 lb per MMBtu of heat input. |
| | c. Mercury | 0.000009 lb per MMBtu of heat input. |
| 10. Existing limited use solid fuel | Particulate Matter (or Total Selected Metals) .. | 0.21 lb per MMBtu of heat input; or (0.004 lb per MMBtu of heat input). |

TABLE 2 TO SUBPART DDDDD OF PART 63.—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH PARTICULATE MATTER EMISSION LIMITS

As stated in § 63.7500, you must comply with the applicable operating limits:

| If you demonstrate compliance with applicable particulate matter emission limits using . . . | You must meet these operating limits . . . |
|---|---|
| 1. Wet scrubber control | a. Maintain the minimum pressure drop and liquid flow-rate at or above the operating levels established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for particulate matter. |
| 2. Fabric filter control | a. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during each 6-month period; or |
| | b. This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average). |
| 3. Electrostatic precipitator control | a. This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average); or |

TABLE 2 TO SUBPART DDDDD OF PART 63.—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH PARTICULATE MATTER EMISSION LIMITS—Continued

As stated in § 63.7500, you must comply with the applicable operating limits:

| If you demonstrate compliance with applicable particulate matter emission limits using . . . | You must meet these operating limits . . . |
|---|---|
| | b. This option is only for boilers and process heaters that operate additional wet control systems. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for particulate matter. |
| 4. Any other control type | This option is for boilers and process heaters that operate dry control systems. Existing boilers and process heaters must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity (1-hour block average). |

TABLE 3 TO SUBPART DDDDD OF PART 63.—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH MERCURY EMISSION LIMITS AND BOILERS AND PROCESS HEATERS THAT CHOOSE TO COMPLY WITH THE ALTERNATIVE TOTAL SELECTED METALS EMISSION LIMITS

As stated in § 63.7500, you must comply with the applicable operating limits:

| If you demonstrate compliance with applicable mercury and/or total selected metals emission limits using . . . | You must meet these operating limits . . . |
|---|---|
| 1. Wet scrubber control | Maintain the minimum pressure drop and liquid flow-rate at or above the operating levels established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limits for mercury and/or total selected metals. |
| 2. Fabric filter control | a. Install and operate a bag leak detection system according to § 63.7525 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period; or |
| | b. This option is for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average). |
| 3. Electrostatic precipitator control | a. This option is for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average); or |
| | b. This option is only for boilers and process heaters that operate additional wet control systems. Maintain the minimum voltage and secondary current or total power input of the electrostatic precipitator at or above the operating limits established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limits for mercury and/or total selected metals. |
| 4. Dry scrubber or carbon injection control | Maintain the minimum sorbent or carbon injection rate at or above the operating levels established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for mercury. |
| 5. Any other control type | This option is only for boilers and process heaters that operate dry control systems. Existing sources must maintain opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent. New sources must maintain opacity to less than or equal to 10 percent opacity (1-hour block average). |
| 6. Fuel analysis | Maintain the fuel type or fuel mixture such that the mercury and/or total selected metals emission rates calculated according to § 63.7530(d)(4) and/or (5) is less than the applicable emission limits for mercury and/or total selected metals. |

TABLE 4 TO SUBPART DDDDD OF PART 63.—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH HYDROGEN CHLORIDE EMISSION LIMITS

As stated in § 63.7500, you must comply with the following applicable operating limits:

| If you demonstrate compliance with applicable hydrogen chloride emission limits using . . . | You must meet these operating limits . . . |
|---|---|
| 1. Wet scrubber control | Maintain the minimum scrubber effluent pH, pressure drop, and liquid flow-rate at or above the operating levels established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for hydrogen chloride. |
| 2. Dry scrubber control | Maintain the minimum sorbent injection rate at or above the operating levels established during the performance test according to § 63.7530(c) and Table 7 to this subpart that demonstrated compliance with the applicable emission limit for hydrogen chloride. |
| 3. Fuel analysis | Maintain the fuel type or fuel mixture such that the hydrogen chloride emission rate calculated according to § 63.7530(d)(3) is less than the applicable emission limit for hydrogen chloride. |

TABLE 5 TO SUBPART DDDDD OF PART 63.—PERFORMANCE TESTING REQUIREMENTS

As stated in § 63.7520, you must comply with the following requirements for performance test for existing, new or reconstructed affected sources:

| To conduct a performance test for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| 1. Particulate Matter | a. Select sampling ports location and the number of traverse points. | Method 1 in appendix A to part 60 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas. | Method 2, 2F, or 2G in appendix A to part 60 of this chapter. |
| | c. Determine oxygen and carbon dioxide concentrations of the stack gas. | Method 3A or 3B in appendix A to part 60 of this chapter, or ASME PTC 19, Part 10 (1981) (IBR, see § 63.14(i)). |
| | d. Measure the moisture content of the stack gas. | Method 4 in appendix A to part 60 of this chapter. |
| | e. Measure the particulate matter emission concentration. | Method 5 or 17 (positive pressure fabric filters must use Method 5D) in appendix A to part 60 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates. | Method 19 F-factor methodology in appendix A to part 60 of this chapter. |
| 2. Total selected metals | a. Select sampling ports location and the number of traverse points. | Method 1 in appendix A to part 60 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas. | Method 2, 2F, or 2G in appendix A to part 60 of this chapter. |
| | c. Determine oxygen and carbon dioxide concentrations of the stack gas. | Method 3A or 3B in appendix A to part 60 of this chapter, or ASME PTC 19, Part 10 (1981) (IBR, see § 63.14(i)). |
| | d. Measure the moisture content of the stack gas. | Method 4 in appendix A to part 60 of this chapter. |
| | e. Measure the total selected metals emission concentration. | Method 29 in appendix A to part 60 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates. | Method 19 F-factor methodology in appendix A to part 60 of this chapter. |
| 3. Hydrogen chloride | a. Select sampling ports location and the number of traverse points. | Method 1 in appendix A to part 60 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas. | Method 2, 2F, or 2G in appendix A to part 60 of this chapter. |
| | c. Determine oxygen and carbon dioxide concentrations of the stack gas. | Method 3A or 3B in appendix A to part 60 of this chapter, or ASME PTC 19, Part 10 (1981) (IBR, see § 63.14(i)). |
| | d. Measure the moisture content of the stack gas. | Method 4 in appendix A to part 60 of this chapter. |
| | e. Measure the hydrogen chloride emission concentration. | Method 26 or 26A in appendix A to part 60 of this chapter. |
| | f. Convert emissions concentration to lb per MMBtu emission rates. | Method 19 F-factor methodology in appendix A to part 60 of this chapter. |
| 4. Mercury | a. Select sampling ports location and the number of traverse points. | Method 1 in appendix A to part 60 of this chapter. |
| | b. Determine velocity and volumetric flow-rate of the stack gas. | Method 2, 2F, or 2G in appendix A to part 60 of this chapter. |
| | c. Determine oxygen and carbon dioxide concentrations of the stack gas. | Method 3A or 3B in appendix A to part 60 of this chapter, or ASME PTC 19, Part 10 (1981) (IBR, see § 62.14(i)). |

TABLE 5 TO SUBPART DDDDD OF PART 63.—PERFORMANCE TESTING REQUIREMENTS—Continued

As stated in § 63.7520, you must comply with the following requirements for performance test for existing, new or reconstructed affected sources:

| To conduct a performance test for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| | d. Measure the moisture content of the stack gas. | Method 4 in appendix A to part 60 of this chapter. |
| | e. Measure the mercury emission concentration. | Method 29 in appendix A to part 60 of this chapter or Method 101A in appendix B to part 61 of this chapter or ASTM Method D6784–02 (IBR, see § 63.14(b)). |
| | f. Convert emissions concentration to lb per MMBtu emission rates. | Method 19 F-factor methodology in appendix A to part 60 of this chapter. |
| 5. Carbon Monoxide | a. Select the sampling ports location and the number of traverse points. | Method 1 in appendix A to part 60 of this chapter. |
| | b. Determine oxygen and carbon dioxide concentrations of the stack gas. | Method 3A or 3B in appendix A to part 60 of this chapter, or ASTM D6522–00 (IBR, see § 63.14(b)), or ASME PTC 19, Part 10 (1981) (IBR, see § 63.14(i)). |
| | c. Measure the moisture content of the stack gas. | Method 4 in appendix A to part 60 of this chapter. |
| | d. Measure the carbon monoxide emission concentration. | Method 10, 10A, or 10B in appendix A to part 60 of this chapter, or ASTM D6522–00 (IBR, see § 63.14(b)) when the fuel is natural gas. |

TABLE 6 TO SUBPART DDDDD OF PART 63.—FUEL ANALYSIS REQUIREMENTS

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources:

| To conduct a fuel analysis for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| 1. Mercury | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D2234–00 ∈1 (for coal)(IBR, see § 63.14(b)) or ASTM D6323–98 (2003)(for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | SW–846–3050B (for solid samples) or SW–846–3020A (for liquid samples) or ASTM D2013–01 (for coal) (IBR, see § 63.14(b)) or ASTM D5198–92 (2003) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865–03a (for coal)(IBR, see § 63.14(b)) or ASTM E711–87 (1996) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173–02 (IBR, see § 63.14(b)) or ASTM E871–82 (1998)(IBR, see § 63.14(b)) or equivalent. |
| | f. Measure mercury concentration in fuel sample. | ASTM D3684–01 (for coal)(IBR, see § 63.14(b)) or SW–846–7471A (for solid samples) or SW–846 7470A (for liquid samples). |
| | g. Convert concentrations into units of pounds of pollutant per MMBtu of heat content. | |
| 2. Total selected metals | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D2234–00 ∈1 (for coal)(IBR, see § 63.14(b)) or ASTM D6323–98 (2003) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | SW–846–3050B (for solid samples) or SW–846–3020A (for liquid samples) or ASTM D2013–01 (for coal)(IBR, see § 63.14(b)) or ASTM D5198–92 (2003)(for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865–03a (for coal)(IBR, see § 63.14(b)) or ASTM E 711–87 (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173–02 (IBR, see § 63.14(b)) or ASTM E871 (IBR, see § 63.14(b)) or equivalent. |

TABLE 6 TO SUBPART DDDDD OF PART 63.—FUEL ANALYSIS REQUIREMENTS—Continued

As stated in § 63.7521, you must comply with the following requirements for fuel analysis testing for existing, new or reconstructed affected sources:

| To conduct a fuel analysis for the following pollutant . . . | You must . . . | Using . . . |
|---|---|---|
| | f. Measure total selected metals concentration in fuel sample. | SW–846–6010B or ASTM D3683–94 (2000) (for coal) (IBR, see § 63.14(b)) or ASTM E885–88 (1996) (for biomass)(IBR, see § 63.14(b)). |
| | g. Convert concentrations into units of pounds of pollutant per MMBtu of heat content. | |
| 3. Hydrogen chloride | a. Collect fuel samples | Procedure in § 63.7521(c) or ASTM D2234∈1 (for coal)(IBR, see § 63.14(b)) or ASTM D6323–98 (2003) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | b. Composite fuel samples | Procedure in § 63.7521(d) or equivalent. |
| | c. Prepare composited fuel samples | SW–846–3050B (for solid samples) or SW–846–3020A (for liquid samples) or ASTM D2013–01 (for coal)(IBR, see § 63.14(b)) or ASTM D5198–92 (2003) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | d. Determine heat content of the fuel type | ASTM D5865–03a (for coal)(IBR, see § 63.14(b)) or ASTM E711–87 (1996) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | e. Determine moisture content of the fuel type | ASTM D3173–02 (IBR, see § 63.14(b)) or ASTM E871–82 (1998)(IBR, see § 63.14(b)) or equivalent. |
| | f. Measure chlorine concentration in fuel sample. | SW–846–9250 or ASTM E776–87 (1996) (for biomass)(IBR, see § 63.14(b)) or equivalent. |
| | g. Convert concentrations into units of pounds of pollutant per MMBtu of heat content. | |

TABLE 7 TO SUBPART DDDDD OF PART 63.—ESTABLISHING OPERATING LIMITS

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| 1. Particulate matter, mercury, or total selected metals. | a. Wet scrubber operating parameters. | i. Establish a site-specific minimum pressure drop and minimum flow rate operating limit according to § 63.7530(c). | (1) Data from the pressure drop and liquid flow rate monitors and the particulate matter, mercury, or total selected metals performance test. | (a) You must collect pressure drop and liquid flow-rate data every 15 minutes during the entire period of the performance tests;<br>(b) Determine the average pressure drop and liquid flow-rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run. |
| | b. Electrostatic precipitator operating parameters (option only for units with additional wet scrubber control). | i. Establish a site-specific minimum voltage and secondary current or total power input according to § 63.7530(c). | (1) Data from the pressure drop and liquid flow rate monitors and the particulate matter, mercury, or total selected metals performance test. | (a) You must collect voltage and secondary current or total power input data every 15 minutes during the entire period of the performance tests;<br>(b) Determine the average voltage and secondary current or total power input for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run. |

TABLE 7 TO SUBPART DDDDD OF PART 63.—ESTABLISHING OPERATING LIMITS—Continued

As stated in § 63.7520, you must comply with the following requirements for establishing operating limits:

| If you have an applicable emission limit for . . . | And your operating limits are based on . . . | You must . . . | Using . . . | According to the following requirements |
|---|---|---|---|---|
| 2. Hydrogen Chloride ... | a. Wet scrubber operating parameters. | i. Establish a site-specific minimum pressure drop and minimum flow rate operating limit according to § 63.7530(c). | (1) Data from the pH, pressure drop, and liquid flow-rate monitors and the hydrogen chloride performance test. | (a) You must collect pH, pressure drop, and liquid flow-rate data every 15 minutes during the entire period of the performance tests;<br>(b) Determine the average pH, pressure drop, and liquid flow-rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run. |
| | b. Dry scrubber operating parameters. | i. Establish a site-specific minimum sorbent injection rate operating limit according to § 63.7530(c). | (1) Data from the sorbent injection rate monitors and hydrogen chloride performance test. | (a) You must collect sorbent injection rate data every 15 minutes during the entire period of the performance tests;<br>(b) Determine the average sorbent injection rate for each individual test run in the three-run performance test by computing the average of all the 15-minute readings taken during each test run. |

TABLE 8 TO SUBPART DDDDD OF PART 63.—DEMONSTRATING CONTINUOUS COMPLIANCE

As stated in § 63.7540, you must show continuous compliance with the emission limitations for affected sources according to the following:

| If you must meet the following operating limits or work practice standards . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| 1. Opacity | a. Collecting the opacity monitoring system data according to §§ 63.7525(b) and 63.7535; and<br>b. Reducing the opacity monitoring data to 6-minute averages; and<br>c. Maintaining opacity to less than or equal to 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27 percent for existing sources; or maintaining opacity to less than or equal to 10 percent (1-hour block average) for new sources. |
| 2. Fabric Filter Bag Leak Detection Operation | Installing and operating a bag leak detection system according to § 63.7525 and operating the fabric filter such that the requirements in § 63.7540(a)(9) are met. |
| 3. Wet Scrubber Pressure Drop and Liquid Flow-rate | a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.7525 and 63.7535; and<br>b. Reducing the data to 3-hour block averages; and<br>c. Maintaining the 3-hour average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.7530(c). |
| 4. Wet Scrubber pH | a. Collecting the pH monitoring system data according to §§ 63.7525 and 63.7535; and<br>b. Reducing the data to 3-hour block averages; and<br>c. Maintaining the 3-hour average pH at or above the operating limit established during the performance test according to § 63.7530(c). |
| 5. Dry Scrubber Sorbent or Carbon Injection Rate | a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.7525 and 63.7535; and<br>b. Reducing the data to 3-hour block averages; and<br>c. Maintaining the 3-hour average sorbent or carbon injection rate at or above the operating limit established during the performance test according to §§ 63.7530(c). |
| 6. Electrostatic Precipitator Secondary Current and Voltage or Total Power Input. | a. Collecting the secondary current and voltage or total power input monitoring system data for the electrostatic precipitator according to §§ 63.7525 and 63.7535; and<br>b. Reducing the data to 3-hour block averages; and |

TABLE 8 TO SUBPART DDDDD OF PART 63.—DEMONSTRATING CONTINUOUS COMPLIANCE—Continued

As stated in § 63.7540, you must show continuous compliance with the emission limitations for affected sources according to the following:

| If you must meet the following operating limits or work practice standards . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| 7. Fuel Pollutant Content | c. Maintaining the 3-hour average secondary current and voltage or total power input at or above the operating limits established during the performance test according to §§ 63.7530(c).<br>a. Only burning the fuel types and fuel mixtures used to demonstrate compliance with the applicable emission limit according to § 63.7530(c) or (d) as applicable; and<br>b. Keeping monthly records of fuel use according to § 63.7540(a). |

TABLE 9 TO SUBPART DDDDD OF PART 63.—REPORTING REQUIREMENTS

As stated in § 63.7550, you must comply with the following requirements for reports:

| You must submit a(n) | The report must contain . . . | You must submit the report . . . |
|---|---|---|
| 1. Compliance report | a. Information required in § 63.7550(c)(1) through (11); and<br>b. If there are no deviations from any emission limitation (emission limit and operating limit) that applies to you and there are no deviations from the requirements for work practice standards in Table 8 to this subpart that apply to you, a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMSs were out-of-control during the reporting period; and<br>c. If you have a deviation from any emission limitation (emission limit and operating limit) or work practice standard during the reporting period, the report must contain the information in § 63.7550(d). If there were periods during which the CMSs, including continuous emissions monitoring system, continuous opacity monitoring system, and operating parameter monitoring systems, were out-of-control, as specified in § 63.8(c)(7), the report must contain the information in § 63.7550(e); and<br>d. If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i) | Semiannually according to the requirements in § 63.7550(b). |
| 2. An immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard. | a. Actions taken for the event; and | i. By fax or telephone within 2 working days after starting actions inconsistent with the plan; and |
| | b. The information in § 63.10(d)(5)(ii) | ii. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.1 | Applicability | Initial Applicability Determination; Applicability After Standard Established; Permit Requirements; Extensions, Notifications. | Yes. |
| § 63.2 | Definitions | Definitions for part 63 standards | Yes. |
| § 63.3 | Units and Abbreviations | Units and abbreviations for part 63 standards. | Yes. |
| § 63.4 | Prohibited Activities | Prohibited Activities; Compliance date; Circumvention, Severability. | Yes. |
| § 63.5 | Construction/Reconstruction | Applicability; applications; approvals | Yes. |
| § 63.6(a) | Applicability | GP apply unless compliance extension; and GP apply to area sources that become major. | Yes. |
| § 63.6(b)(1)–(4) | Compliance Dates for New and Reconstructed sources. | Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for 112(f). | Yes. |
| § 63.6(b)(5) | Notification | Must notify if commenced construction or reconstruction after proposal. | Yes. |
| § 63.6(b)(6) | [Reserved]. | | |
| § 63.6(b)(7) | Compliance Dates for New and Reconstructed Area Sources That Become Major. | Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source. | Yes. |
| § 63.6(c)(1)–(2) | Compliance Dates for Existing Sources | Comply according to date in subpart, which must be no later than 3 years after effective date; and for 112(f) standards, comply within 90 days of effective date unless compliance extension. | Yes. |
| § 63.6(c)(3)–(4) | [Reserved]. | | |
| § 63.6(c)(5) | Compliance Dates for Existing Area Sources That Become Major. | Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (for example, 3 years). | Yes. |
| § 63.6(d) | [Reserved]. | | |
| § 63.6(e)(1)–(2) | Operation & Maintenance | Operate to minimize emissions at all times; and Correct malfunctions as soon as practicable; and Operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met. | Yes. |
| § 63.6(e)(3) | Startup, Shutdown, and Malfunction Plan (SSMP). | Requirement for SSM and startup, shutdown, malfunction plan; and content of SSMP. | Yes. |
| § 63.6(f)(1) | Compliance Except During SSM | Comply with emission standards at all times except during SSM. | Yes. |
| § 63.6(f)(2)–(3) | Methods for Determining Compliance | Compliance based on performance test, operation and maintenance plans, records, inspection. | Yes. |
| § 63.6(g)(1)–(3) | Alternative Standard | Procedures for getting an alternative standard. | Yes. |
| § 63.6(h)(1) | Compliance with Opacity/VE Standards | Comply with opacity/VE emission limitations at all times except during SSM. | Yes. |
| § 63.6(h)(2)(i) | Determining Compliance with Opacity/Visible Emission (VE) Standards. | If standard does not state test method, use Method 9 for opacity and Method 22 for VE. | No. |
| § 63.6(h)(2)(ii) | [Reserved]. | | |
| § 63.6(h)(2)(iii) | Using Previous Tests to Demonstrate Compliance with Opacity/VE Standards | Criteria for when previous opacity/VE testing can be used to show compliance with this subpart. | Yes. |
| § 63.6(h)(3) | [Reserved]. | | |
| § 63.6(h)(4) | Notification of Opacity/VE Observation Date. | Notify Administrator of anticipated date of observation. | No. |
| § 63.6(h)(5)(i),(iii)–(v) | Conducting Opacity/VE Observations | Dates and Schedule for conducting opacity/VE observations. | No. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD—Continued

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.6(h)(5)(ii) | Opacity Test Duration and Averaging Times. | Must have at least 3 hours of observation with thirty, 6-minute averages. | No. |
| § 63.6(h)(6) | Records of Conditions During Opacity/VE observations. | Keep records available and allow Administrator to inspect. | No. |
| § 63.6(h)(7)(i) | Report continuous opacity monitoring system Monitoring Data from Performance Test. | Submit continuous opacity monitoring system data with other performance test data. | Yes. |
| § 63.6(h)(7)(ii) | Using continuous opacity monitoring system instead of Method 9. | Can submit continuous opacity monitoring system data instead of Method 9 results even if subpart requires Method 9, but must notify Administrator before performance test. | No. |
| § 63.6(h)(7)(iii) | Averaging time for continuous opacity monitoring system during performance test. | To determine compliance, must reduce continuous opacity monitoring system data to 6-minute averages. | Yes. |
| § 63.6(h)(7)(iv) | Continuous opacity monitoring system requirements. | Demonstrate that continuous opacity monitoring system performance evaluations are conducted according to §§ 63.8(e), continuous opacity monitoring systems are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d). | Yes. |
| § 63.6(h)(7)(v) | Determining Compliance with Opacity/VE Standards. | Continuous opacity monitoring system is probative but not conclusive evidence of compliance with opacity standard, even if Method 9 observation shows otherwise. Requirements for continuous opacity monitoring system to be probative evidence-proper maintenance, meeting PS 1, and data have not been altered. | Yes. |
| § 63.6(h)(8) | Determining Compliance with Opacity/VE Standards. | Administrator will use all continuous opacity monitoring system, Method 9, and Method 22 results, as well as information about operation and maintenance to determine compliance. | Yes. |
| § 63.6(h)(9) | Adjusted Opacity Standard | Procedures for Administrator to adjust an opacity standard. | Yes. |
| § 63.6(i)(1)–(14) | Compliance Extension | Procedures and criteria for Administrator to grant compliance extension. | Yes. |
| § 63.6(j) | Presidential Compliance Exemption | President may exempt source category from requirement to comply with rule. | Yes. |
| § 63.7(a)(1) | Performance Test Dates | Dates for Conducting Initial Performance Testing and Other Compliance Demonstrations. | Yes. |
| § 63.7(a)(2) | Performance Test Dates | New source with initial startup date before effective date has 180 days after effective date to demonstrate compliance | Yes. |
| § 63.7(a)(2)(ii–viii) | [Reserved]. | | |
| § 63.7(a)(2)(ix) | Performance Test Dates | 1. New source that commenced construction between proposal and promulgation dates, when promulgated standard is more stringent than proposed standard, has 180 days after effective date or 180 days after startup of source, whichever is later, to demonstrate compliance; and. | Yes. |
| | | 2. If source initially demonstrates compliance with less stringent proposed standard, it has 3 years and 180 days after the effective date of the standard or 180 days after startup of source, whichever is later, to demonstrate compliance with promulgated standard. | No. |
| § 63.7(a)(3) | Section 114 Authority | Administrator may require a performance test under CAA Section 114 at any time. | Yes. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD—Continued

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.7(b)(1) | Notification of Performance Test | Must notify Administrator 60 days before the test. | No. |
| § 63.7(b)(2) | Notification of Rescheduling | If rescheduling a performance test is necessary, must notify Administrator 5 days before scheduled date of rescheduled date. | Yes. |
| § 63.7(c) | Quality Assurance/Test Plan | Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with: test plan approval procedures; and performance audit requirements; and internal and external QA procedures for testing. | Yes. |
| § 63.7(d) | Testing Facilities | Requirements for testing facilities | Yes. |
| § 63.7(e)(1) | Conditions for Conducting Performance Tests. | 1. Performance tests must be conducted under representative conditions; and | No. |
| | | 2. Cannot conduct performance tests during SSM; and | Yes. |
| | | 3. Not a deviation to exceed standard during SSM; and | Yes. |
| | | 4. Upon request of Administrator, make available records necessary to determine conditions of performance tests. | Yes. |
| § 63.7(e)(2) | Conditions for Conducting Performance Tests. | Must conduct according to rule and EPA test methods unless Administrator approves alternative. | Yes. |
| § 63.7(e)(3) | Test Run Duration | Must have three separate test runs; and Compliance is based on arithmetic mean of three runs; and conditions when data from an additional test run can be used. | Yes. |
| § 63.7(e)(4) | Interaction with other sections of the Act | Nothing in § 63.7(e)(1) through (4) can abrogate the Administrator's authority to require testing under Section 114 of the Act. | Yes. |
| § 63.7(f) | Alternative Test Method | Procedures by which Administrator can grant approval to use an alternative test method. | Yes. |
| § 63.7(g) | Performance Test Data Analysis | Must include raw data in performance test report; and must submit performance test data 60 days after end of test with the Notification of Compliance Status; and keep data for 5 years. | Yes. |
| § 63.7(h) | Waiver of Tests | Procedures for Administrator to waive performance test. | Yes. |
| § 63.8(a)(1) | Applicability of Monitoring Requirements | Subject to all monitoring requirements in standard. | Yes. |
| § 63.8(a)(2) | Performance Specifications | Performance Specifications in appendix B of part 60 apply. | Yes. |
| § 63.8(a)(3) | [Reserved]. | | |
| § 63.8(a)(4) | Monitoring with Flares | Unless your rule says otherwise, the requirements for flares in § 63.11 apply. | No. |
| §63.8(b)(1)(i)–(ii) | Monitoring | Must conduct monitoring according to standard unless Administrator approves alternative. | Yes. |
| § 63.8(b)(1)(iii) | Monitoring | Flares not subject to this section unless otherwise specified in relevant standard. | No. |
| § 63.8(b)(2)–(3) | Multiple Effluents and Multiple Monitoring Systems. | Specific requirements for installing monitoring systems; and must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; and if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup. | Yes. |
| § 63.8(c)(1) | Monitoring System Operation and Maintenance. | Maintain monitoring system in a manner consistent with good air pollution control practices. | Yes. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD—Continued

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.8(c)(1)(i) | Routine and Predictable SSM | Maintain and operate CMS according to § 63.6(e)(1). | Yes. |
| § 63.8(c)(1)(ii) | SSM not in SSMP | Must keep necessary parts available for routine repairs of CMSs. | Yes. |
| § 63.8(c)(1)(iii) | Compliance with Operation and Maintenance Requirements. | Must develop and implement an SSMP for CMSs. | Yes. |
| § 63.8(c)(2)–(3) | Monitoring System Installation | Must install to get representative emission and parameter measurements; and must verify operational status before or at performance test. | Yes. |
| § 63.8(c)(4) | Continuous Monitoring System (CMS) Requirements. | CMSs must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts. | No. |
| § 63.8(c)(4)(i) | Continuous Monitoring System (CMS) Requirements. | Continuous opacity monitoring system must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period. | Yes. |
| § 63.8(c)(4)(ii) | Continuous Monitoring System (CMS) Requirements. | Continuous emissions monitoring system must have a minimum of one cycle of operation for each successive 15-minute period. | No. |
| § 63.8(c)(5) | Continuous Opacity Monitoring system (COMS) Requirements. | Must do daily zero and high level calibrations. | Yes. |
| § 63.8(c)(6) | Continuous Monitoring System (CMS) Requirements. | Must do daily zero and high level calibrations. | No. |
| § 63.8(c)(7)–(8) | Continuous Monitoring Systems Requirements. | Out-of-control periods, including reporting | Yes. |
| § 63.8(d) | Continuous Monitoring Systems Quality Control. | Requirements for continuous monitoring systems quality control, including calibration, etc.; and must keep quality control plan on record for the life of the affected source. Keep old versions for 5 years after revisions. | Yes. |
| § 63.8(e) | Continuous monitoring systems Performance Evaluation. | Notification, performance evaluation test plan, reports. | Yes. |
| § 63.8(f)(1)–(5) | Alternative Monitoring Method | Procedures for Administrator to approve alternative monitoring. | Yes. |
| § 63.8(f)(6) | Alternative to Relative Accuracy Test | Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system. | No. |
| § 63.8(g)(1)–(4) | Data Reduction | Continuous opacity monitoring system 6-minute averages calculated over at least 36 evenly spaced data points; and continuous emissions monitoring system 1-hour averages computed over at least 4 equally spaced data points. | Yes. |
| § 63.8(g)(5) | Data Reduction | Data that cannot be used in computing averages for continuous emissions monitoring system and continuous opacity monitoring system. | No. |
| § 63.9(a) | Notification Requirements | Applicability and State Delegation | Yes. |
| § 63.9(b)(1)–(5) | Initial Notifications | Submit notification 120 days after effective date; and Notification of intent to construct/reconstruct; and Notification of commencement of construct/reconstruct; Notification of startup; and Contents of each. | Yes. |
| § 63.9(c) | Request for Compliance Extension | Can request if cannot comply by date or if installed BACT/LAER. | Yes. |
| § 63.9(d) | Notification of Special Compliance Requirements for New Source. | For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date. | Yes. |
| § 63.9(e) | Notification of Performance Test | Notify Administrator 60 days prior | No. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD—Continued

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.9(f) | Notification of VE/Opacity Test | Notify Administrator 30 days prior | No. |
| § 63.9(g) | Additional Notifications When Using Continuous Monitoring Systems. | Notification of performance evaluation; and notification using continuous opacity monitoring system data; and notification that exceeded criterion for relative accuracy. | Yes. |
| § 63.9(h)(1)–(6) | Notification of Compliance Status | Contents; and due 60 days after end of performance test or other compliance demonstration, and when to submit to Federal vs. State authority. | Yes. |
| § 63.9(i) | Adjustment of Submittal Deadlines | Procedures for Administrator to approve change in when notifications must be submitted. | Yes. |
| § 63.9(j) | Change in Previous Information | Must submit within 15 days after the change. | Yes. |
| § 63.10(a) | Recordkeeping/Reporting | Applies to all, unless compliance extension; and when to submit to Federal vs. State authority; and procedures for owners of more than 1 source. | Yes. |
| § 63.10(b)(1) | Recordkeeping/Reporting | General Requirements; and keep all records readily available and keep for 5 years. | Yes. |
| § 63.10(b)(2)(i)–(v) | Records related to Startup, Shutdown, and Malfunction. | Occurrence of each of operation (process, equipment); and occurrence of each malfunction of air pollution equipment; and maintenance of air pollution control equipment; and actions during startup, shutdown, and malfunction. | Yes. |
| § 63.10(b)(2)(vi) and (x–xi) | Continuous monitoring systems Records | Malfunctions, inoperative, out-of-control; and calibration checks; and adjustments, maintenance. | Yes. |
| § 63.10(b)(2)(vii)–(ix) | Records | Measurements to demonstrate compliance with emission limitations; and performance test, performance evaluation, and visible emission observation results; and measurements to determine conditions of performance tests and performance evaluations. | Yes. |
| § 63.10(b)(2)(xii) | Records | Records when under waiver | Yes. |
| § 63.10(b)(2)(xiii) | Records | Records when using alternative to relative accuracy test. | No. |
| § 63.10(b)(2)(xiv) | Records | All documentation supporting Initial Notification and Notification of Compliance Status. | Yes. |
| § 63.10(b)(3) | Records | Applicability Determinations | Yes. |
| § 63.10(c)(1),(5)–(8),(10)–(15) | Records | Additional Records for continuous monitoring systems. | Yes. |
| § 63.10(c)(7)–(8) | Records | Records of excess emissions and parameter monitoring exceedances for continuous monitoring systems. | No. |
| § 63.10(d)(1) | General Reporting Requirements | Requirement to report | Yes. |
| § 63.10(d)(2) | Report of Performance Test Results | When to submit to Federal or State authority. | Yes. |
| § 63.10(d)(3) | Reporting Opacity or VE Observations | What to report and when | Yes. |
| § 63.10(d)(4) | Progress Reports | Must submit progress reports on schedule if under compliance extension. | Yes. |
| § 63.10(d)(5) | Startup, Shutdown, and Malfunction Reports. | Contents and submission | Yes. |
| § 63.10(e)(1)(2) | Additional continuous monitoring systems Reports. | Must report results for each CEM on a unit; and written copy of performance evaluation; and 3 copies of continuous opacity monitoring system performance evaluation. | Yes. |
| § 63.10(e)(3) | Reports | Excess Emission Reports | No. |
| § 63.10(e)(3)(i–iii) | Reports | Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations). | No. |

TABLE 10 TO SUBPART DDDDD OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD—Continued

As stated in § 63.7565, you must comply with the applicable General Provisions according to the following:

| Citation | Subject | Brief description | Applicable |
|---|---|---|---|
| § 63.10(e)(3)(iv–v) | Excess Emissions Reports | Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedance (now defined as deviations); and provision to request semiannual reporting after compliance for one year; and submit report by 30th day following end of quarter or calendar half; and if there has not been an exceedance or excess emission (now defined as deviations), report contents is a statement that there have been no deviations. | No. |
| § 63.10(e)(3)(iv–v) | Excess Emissions Reports | Must submit report containing all of the information in § 63.10(c)(5–13), § 63.8(c)(7–8). | No. |
| § 63.10(e)(3)(vi–viii) | Excess Emissions Report and Summary Report. | Requirements for reporting excess emissions for continuous monitoring systems (now called deviations); Requires all of the information in § 63.10(c)(5–13), § 63.8(c)(7–8). | No. |
| § 63.10(e)(4) | Reporting continuous opacity monitoring system data. | Must submit continuous opacity monitoring system data with performance test data. | Yes. |
| § 63.10(f) | Waiver for Recordkeeping/Reporting | Procedures for Administrator to waive | Yes. |
| § 63.11 | Flares | Requirements for flares | No. |
| § 63.12 | Delegation | State authority to enforce standards | Yes. |
| § 63.13 | Addresses | Addresses where reports, notifications, and requests are sent. | Yes. |
| § 63.14 | Incorporation by Reference | Test methods incorporated by reference | Yes. |
| § 63.15 | Availability of Information | Public and confidential Information | Yes. |

## Appendix A to Subpart DDDDD—Methodology and Criteria for Demonstrating Eligibility for the Health-Based Compliance Alternatives Specified for the Large Solid Fuel Subcategory

### 1. Purpose/Introduction

This appendix provides the methodology and criteria for demonstrating that your affected source is eligible for the compliance alternative for the HCl emission limit and/or the total selected metals (TSM) emission limit. This appendix specifies emissions testing methods that you must use to determine HCl, chlorine, and manganese emissions from the affected units and what parts of the affected source facility must be included in the eligibility demonstration. You must demonstrate that your affected source is eligible for the health-based compliance alternatives using either a look-up table analysis (based on the look-up tables included in this appendix) or a site-specific compliance demonstration performed according to the criteria specified in this appendix. This appendix also specifies how and when you file any eligibility demonstrations for your affected source and how to show that your affected source remains eligible for the health-based compliance alternatives in the future.

### 2. Who Is Eligible To Demonstrate That They Qualify for the Health-Based Compliance Alternatives?

Each new, reconstructed, or existing affected source may demonstrate that they are eligible for the health-based compliance alternatives. Section 63.7490 of subpart DDDDD defines the affected source and explains which affected sources are new, existing, or reconstructed.

### 3. What Parts of My Facility Have To Be Included in the Health-Based Eligibility Demonstration?

If you are attempting to determine your eligibility for the compliance alternative for HCl, you must include every emission point subject to subpart DDDDD that emits either HCl or $Cl_2$ in the eligibility demonstration.

If you are attempting to determine your eligibility for the compliance alternative for TSM, you must include every emission point subject to subpart DDDDD that emits manganese in the eligibility demonstration.

### 4. How Do I Determine HAP Emissions From My Affected Source?

(a) You must conduct HAP emissions tests or fuel analysis for every emission point covered under subpart DDDDD within the affected source facility according to the requirements in paragraphs (b) through (f) of this section and the methods specified in Table 1 of this appendix.

(1) If you are attempting to determine your eligibility for the compliance alternative for HCl, you must test the subpart DDDDD units at your facility for both HCl and $Cl_2$. When conducting fuel analysis, you must assume any chlorine detected will be emitted as $Cl_2$.

(2) If you are attempting to determine your eligibility for the compliance alternative for TSM, you must test the subpart DDDDD units at your facility for manganese.

(b) *Periods when emissions tests must be conducted.*

(1) You must not conduct emissions tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(2) You must test under worst-case operating conditions as defined in this appendix. You must describe your worst-case operating conditions in your performance test report for the process and control systems (if applicable) and explain why the conditions are worst-case.

(c) *Number of test runs.* You must conduct three separate test runs for each test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(d) *Sampling locations.* Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.

(e) *Collection of monitoring data for HAP control devices.* During the emissions test, you must collect operating parameter monitoring system data at least every 15 minutes during the entire emissions test and establish the site-specific operating requirements in Tables 3 or 4, as appropriate, of subpart DDDDD using data from the monitoring system and the procedures specified in § 63.7530 of subpart DDDDD.

(f) *Nondetect data.* You may treat emissions of an individual HAP as zero if all of the test runs result in a nondetect measurement and the condition in paragraph (f)(1) of this section is met for the manganese test method. Otherwise, nondetect data for individual HAP must be treated as one-half of the method detection limit.

(1) For manganese measured using Method 29 in appendix A to 40 CFR part 60, you analyze samples using atomic absorption spectroscopy (AAS).

(g) You must determine the maximum hourly emission rate for each appropriate emission point according to Equation 1 of this appendix.

$$\text{Max Hourly Emissions} = \sum_{i=1}^{n} (\text{Er} \times \text{Hm}) \qquad \text{(Eq. 1)}$$

Where:

Max Hourly Emissions = Maximum hourly emissions for hydrogen chloride, chlorine, or manganese, in units of pounds per hour.

Er = Emission rate (the 3-run average as determined according to Table 1 of this appendix or the pollutant concentration in the fuel samples analyzed according to § 63.7521) for hydrogen chloride, chlorine, or manganese, in units of pounds per million Btu of heat input.

Hm = Maximum rated heat input capacity of appropriate emission point, in units of million Btu per hour.

**5. What Are the Criteria for Determining If My Facility Is Eligible for the Health-Based Compliance Alternatives?**

(a) Determine the HAP emissions from each appropriate emission point within the affected source facility using the procedures specified in section 4 of this appendix.

(b) Demonstrate that your facility is eligible for either of the health-based compliance alternatives using either the methods described in section 6 of this appendix (look-up table analysis) or section 7 of this appendix (site-specific compliance demonstration).

(c) Your facility is eligible for the health-based compliance alternative for HCl if one of the following two statements is true:

(1) The calculated HCl-equivalent emission rate is below the appropriate value in the look-up table;

(2) Your site-specific compliance demonstration indicates that your maximum HI for HCl and $C1_2$ at a location where people live is less than or equal to 1.0;

(d) Your facility is eligible for the health-based compliance alternative for TSM if one of the following two statements is true:

(1) The manganese emission rate for all your subpart DDDDD sources is below the appropriate value in the look-up table;

(2) Your site-specific compliance demonstration indicates that your maximum HQ for manganese at a location where people live is less than or equal to 1.0.

**6. How Do I Conduct a Look-Up Table Analysis?**

You may use look-up tables to demonstrate that your facility is eligible for either the compliance alternative for the HCl emission limit or the compliance alternative for TSM emission limit.

(a) *HCl health-based compliance alternative.* (1) To calculate the total toxicity-weighted HCl-equivalent emission rate for your facility, first calculate the total affected source emission rate of HCl by summing the maximum hourly HCl emission rates from all your subpart DDDDD sources. Then, similarly, calculate the total affected source emission rate for $Cl_2$. Finally, calculate the toxicity-weighted emission rate (expressed in HCl equivalents) according to Equation 2 of this appendix.

$$\text{ER}_{tw} = \sum \left( \text{ER}_i \times \left( \text{RfC}_{HCl} / \text{RfC}_i \right) \right) \qquad \text{(Eq. 2)}$$

Where:

$ER_{tw}$ is the HCl-equivalent emission rate, lb/hr.

$ER_i$ is the emission rate of HAP i in lbs/hr

$RfC_i$ is the reference concentration of HAP i

$RfC_{HCl}$ is the reference concentration of HCl (RfCs for HCl and $Cl_2$ can be found at *http://www.epa.gov/ttn/atw/toxsource/summary.html).*

(2) The calculated HCl-equivalent emission rate will then be compared to the appropriate allowable emission rate in Table 2 of this appendix. To determine the correct value from the table, an average value for the appropriate subpart DDDDD emission points should be used for stack height and the minimum distance between any appropriate subpart DDDDD stack at the facility and the property boundary should be used for property boundary distance. Appropriate emission points and stacks are those that emit HCl and/or $Cl_2$. If one or both of these values does not match the exact values in the lookup tables, then use the next lowest table value. (**Note:** If your average stack height is less than 5 meters, you must use the 5 meter row.) Your facility is eligible to comply with the health-based alternative HCl emission limit if your toxicity-weighted HCl equivalent emission rate, determined using the methods specified in this appendix, does not exceed the appropriate value in Table 2 of this appendix.

(b) *TSM Compliance Alternative.* To calculate the total manganese emission rate for your affected source, sum the maximum hourly manganese emission rates for all your subpart DDDDD sources. The calculated manganese emission rate will then be compared to the allowable emission rate in the Table 3 of this appendix. To determine the correct value from the table, an average value for the appropriate subpart DDDDD emission points should be used for stack height and the minimum distance between any appropriate subpart DDDDD stack at the facility and the property boundary should be used for property boundary distance. Appropriate emission points and stacks are those that emit manganese. If one or both of these values does not match the exact values in the lookup tables, then use the next lowest table value. (**Note:** If your average stack height is less than 5 meters, you must use the 5 meter row.) Your facility may exclude manganese when demonstrating compliance with the TSM emission limit if your manganese emission rate, determined using the methods specified in this appendix, does not exceed the appropriate value specified in Table 3 of this appendix.

**7. How Do I Conduct a Site-Specific Compliance Demonstration?**

If you fail to demonstrate that your facility is able to comply with one or both of the alternative health-based emission standards using the look-up table approach, you may choose to perform a site-specific compliance demonstration for your facility. You may use any scientifically-accepted peer-reviewed risk assessment methodology for your site-specific compliance demonstration. An example of one approach for performing a site-specific compliance demonstration for air toxics can be found in the EPA's ''Air Toxics Risk Assessment Reference Library, Volume 2, Site-Specific Risk Assessment Technical Resource Document'', which may be obtained through the EPA's Air Toxics Web site at *http://www.epa.gov/ttn/fera/risk_atoxic.html.*

(a) Your facility is eligible for the HCl alternative compliance option if your site-specific compliance demonstration shows that the maximum HI for HCl and $Cl_2$ from your subpart DDDDD sources is less than or equal to 1.0.

(b) Your facility is eligible for the TSM alternative compliance option if your site-specific compliance demonstration shows that the maximum HQ for manganese from your subpart DDDDD sources is less than or equal to 1.0.

(c) At a minimum, your site-specific compliance demonstration must:

(1) Estimate long-term inhalation exposures through the estimation of annual

or multi-year average ambient concentrations;

(2) Estimate the inhalation exposure for the individual most exposed to the facility's emissions;

(3) Use site-specific, quality-assured data wherever possible;

(4) Use health-protective default assumptions wherever site-specific data are not available, and;

(5) Contain adequate documentation of the data and methods used for the assessment so that it is transparent and can be reproduced by an experienced risk assessor and emissions measurement expert.

(d) Your site-specific compliance demonstration need not:

(1) Assume any attenuation of exposure concentrations due to the penetration of outdoor pollutants into indoor exposure areas;

(2) Assume any reaction or deposition of the emitted pollutants during transport from the emission point to the point of exposure.

**8. What Must My Health-Based Eligibility Demonstration Contain?**

(a) Your health-based eligibility demonstration must contain, at a minimum, the information specified in paragraphs (a)(1) through (6) of this section.

(1) Identification of each appropriate emission point at the affected source facility, including the maximum rated capacity of each appropriate emission point.

(2) Stack parameters for each appropriate emission point including, but not limited to, the parameters listed in paragraphs (a)(2)(i) through (iv) below:

(i) Emission release type.

(ii) Stack height, stack area, stack gas temperature, and stack gas exit velocity.

(iii) Plot plan showing all emission points, nearby residences, and fenceline.

(iv) Identification of any control devices used to reduce emissions from each appropriate emission point.

(3) Emission test reports for each pollutant and appropriate emission point which has been tested using the test methods specified in Table 1 of this appendix, including a description of the process parameters identified as being worst case. Fuel analyses for each fuel and emission point which has been conducted including collection and analytical methods used.

(4) Identification of the RfC values used in your look-up table analysis or site-specific compliance demonstration.

(5) Calculations used to determine the HCl-equivalent or manganese emission rates according to sections 6(a) or (b) of this appendix.

(6) Identification of the controlling process factors (including, but not limited to, fuel type, heat input rate, type of control devices, process parameters reflecting the emissions rates used for your eligibility demonstration) that will become Federally enforceable permit conditions used to show that your facility remains eligible for the health-based compliance alternatives.

(b) If you use the look-up table analysis in section 6 of this appendix to demonstrate that your facility is eligible for either health-based compliance alternative, your eligibility demonstration must contain, at a minimum, the information in paragraphs (a) and (b)(1) through (3) of this section.

(1) Calculations used to determine the average stack height of the subpart DDDDD emission points that emit either manganese or HCl and $Cl_2$.

(2) Identification of the subpart DDDDD emission point, that emits either manganese or HCl and $Cl_2$, with the minimum distance to the property boundary of the facility.

(3) Comparison of the values in the look-up tables (Tables 2 and 3 of this appendix) to your maximum HCl-equivalent or manganese emission rates.

(c) If you use a site-specific compliance demonstration as described in section 7 of this appendix to demonstrate that your facility is eligible, your eligibility demonstration must contain, at a minimum, the information in paragraphs (a) and (c)(1) through (7) of this section:

(1) Identification of the risk assessment methodology used.

(2) Documentation of the fate and transport model used.

(3) Documentation of the fate and transport model inputs, including the information described in paragraphs (a)(1) through (5) of this section converted to the dimensions required for the model and all of the following that apply: meteorological data; building, land use, and terrain data; receptor locations and population data; and other facility-specific parameters input into the model.

(4) Documentation of the fate and transport model outputs.

(5) Documentation of any exposure assessment and risk characterization calculations.

(6) Comparison of the HQ HI to the limit of 1.0.

**9. When Do I Have to Complete and Submit My Health-Based Eligibility Demonstration?**

(a) If you have an existing affected source, you must complete and submit your eligibility demonstration to your permitting authority, along with a signed certification that the demonstration is an accurate depiction of your facility, no later than the date one year prior to the compliance date of subpart DDDDD. A separate copy of the eligibility demonstration must be submitted to: U.S. EPA, Risk and Exposure Assessment Group, Emission Standards Division (C404–01), Attn: Group Leader, Research Triangle Park, North Carolina 27711, electronic mail address *REAG@epa.gov*.

(b) If you have a new or reconstructed affected source that starts up before the effective date of subpart DDDDD, or an affected source that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP before the effective date of subpart DDDDD, then you must comply with the requirements of subpart DDDDD until your eligibility demonstration is completed and submitted to your permitting authority.

(c) If you have a new or reconstructed affected source that starts up after the effective date of subpart DDDDD, or an affected source that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP after the effective date for subpart DDDDD, then you must follow the schedule in paragraphs (c)(1) and (2) of this section.

(1) You must complete and submit a preliminary eligibility demonstration based on the information (*e.g.*, equipment types, estimated emission rates, etc.) used to obtain your title V permit. You must base your preliminary eligibility demonstration on the maximum emissions allowed under your title V permit. If the preliminary eligibility demonstration indicates that your affected source facility is eligible for either compliance alternative, then you may start up your new affected source and your new affected source will be considered in compliance with the alternative HCl standard and subject to the compliance requirements in this appendix or, in the case of manganese, your compliance demonstration with the TSM emission limit is based on 7 metals (excluding manganese).

(2) You must conduct the emission tests or fuel analysis specified in section 4 of this appendix upon initial startup and use the results of these emissions tests to complete and submit your eligibility demonstration within 180 days following your initial startup date. To be eligible, you must meet the criteria in section 11 of this appendix within 18 months following initial startup of your affected source.

**10. When Do I Become Eligible for the Health-Based Compliance Alternatives?**

To be eligible for either health-based compliance alternative, the parameters that defined your affected source as eligible for the health-based compliance alternatives (including, but not limited to, fuel type, fuel mix (annual average), type of control devices, process parameters reflecting the emissions rates used for your eligibility demonstration) must be submitted for incorporation as Federally enforceable limits into your title V permit. If you do not meet these criteria, then your affected source is subject to the applicable emission limits, operating limits, and work practice standards in Subpart DDDDD.

**11. How Do I Ensure That My Facility Remains Eligible for the Health-Based Compliance Alternatives?**

(a) You must update your eligibility demonstration and resubmit it each time you have a process change, such that any of the parameters that defined your affected source changes in a way that could result in increased HAP emissions (including, but not limited to, fuel type, fuel mix (annual average), change in type of control device, changes in process parameters documented as worst-case conditions during the emissions testing used for your approved eligibility demonstration).

(b) If you are updating your eligibility demonstration to account for an action in paragraph (a) of this section, then you must perform emission testing or fuel analysis according to section 4 of this appendix for the subpart DDDDD emission points that may have increased HAP emissions beyond the levels reflected in your previously approved eligibility demonstration due to the process


Attachment I
Attachment I

change. You must submit your revised eligibility demonstration to the permitting authority prior to revising your permit to incorporate the process change. If your updated eligibility demonstration indicates that your affected source is no longer eligible for the health-based compliance alternatives, then you must comply with the applicable emission limits, operating limits, and compliance requirements in Subpart DDDDD prior to making the process change and revising your permit.

**12. What Records Must I Keep?**

You must keep records of the information used in developing the eligibility demonstration for your affected source, including all of the information specified in section 8 of this appendix.

**13. Definitions**

The definitions in § 63.7575 of subpart DDDDD apply to this appendix. Additional definitions applicable for this appendix are as follows:

*Hazard Index (HI)* means the sum of more than one hazard quotient for multiple substances and/or multiple exposure pathways.

*Hazard Quotient (HQ)* means the ratio of the predicted media concentration of a pollutant to the media concentration at which no adverse effects are expected. For inhalation exposures, the HQ is calculated as the air concentration divided by the RfC.

*Look-up table analysis* means a risk screening analysis based on comparing the HAP or HAP-equivalent emission rate from the affected source to the appropriate maximum allowable HAP or HAP-equivalent emission rates specified in Tables 2 and 3 of this appendix.

*Reference Concentration (RfC)* means an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

*Worst-case operating conditions* means operation of an affected unit during emissions testing under the conditions that result in the highest HAP emissions or that result in the emissions stream composition (including HAP and non-HAP) that is most challenging for the control device if a control device is used. For example, worst-case conditions could include operation of an affected unit firing solid fuel likely to produce the most HAP.

TABLE 1 TO APPENDIX B OF SUBPART DDDDD—EMISSION TEST METHODS

| For . . . | You must . . . | Using . . . |
|---|---|---|
| (1) Each subpart DDDDD emission point for which you choose to use a compliance alternative. | Select sampling ports' location and the number of traverse points. | Method 1 of 40 CFR part 60, appendix A. |
| (2) Each subpart DDDDD emission point for which you choose to use a compliance alternative. | Determine velocity and volumetric flow rate; ... | Method 2, 2F, or 2G in appendix A to 40 CFR part 60. |
| (3) Each subpart DDDDD emission point for which you choose to use a compliance alternative. | Conduct gas molecular weight analysis ..... | Method 3A or 3B in appendix A to 40 CFR part 60. |
| (4) Each subpart DDDDD emission point for which you choose to use a compliance alternative. | Measure moisture content of the stack gas .... | Method 4 in appendix A to 40 CFR part 60. |
| (5) Each subpart DDDDD emission point for which you choose to use the HCl compliance alternative. | Measure the hydrogen chloride and chlorine emission concentrations. | Method 26 or 26A in appendix A to 40 CFR part 60. |
| (6) Each subpart DDDDD emission point for which you choose to use the TSM compliance alternative. | Measure the manganese emission concentration. | Method 29 in appendix A to 40 CFR part 60. |
| (7) Each subpart DDDDD emission point for which you choose to use a compliance alternative. | Convert emissions concentration to lb per MMBtu emission rates. | Method 19 F-factor methodology in appendix A to part 60 of this chapter. |

TABLE 2 TO APPENDIX A OF SUBPART DDDDD—ALLOWABLE TOXICITY-WEIGHTED EMISSION RATE EXPRESSED IN HCl EQUIVALENTS (lbs/hr)

| Stack ht. (m) | Distance to property boundary (m) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 50 | 100 | 150 | 200 | 250 | 500 | 1000 | 1500 | 2000 | 3000 | 5000 |
| 5 | 114.9 | 114.9 | 114.9 | 114.9 | 114.9 | 114.9 | 144.3 | 287.3 | 373.0 | 373.0 | 373.0 | 373.0 |
| 10 | 188.5 | 188.5 | 188.5 | 188.5 | 188.5 | 188.5 | 195.3 | 328.0 | 432.5 | 432.5 | 432.5 | 432.5 |
| 20 | 386.1 | 386.1 | 386.1 | 386.1 | 386.1 | 386.1 | 386.1 | 425.4 | 580.0 | 602.7 | 602.7 | 602.7 |
| 30 | 396.1 | 396.1 | 396.1 | 396.1 | 396.1 | 396.1 | 396.1 | 436.3 | 596.2 | 690.6 | 807.8 | 816.5 |
| 40 | 408.1 | 408.1 | 408.1 | 408.1 | 408.1 | 408.1 | 408.1 | 448.2 | 613.3 | 715.5 | 832.2 | 966.0 |
| 50 | 421.4 | 421.4 | 421.4 | 421.4 | 421.4 | 421.4 | 421.4 | 460.6 | 631.0 | 746.3 | 858.2 | 1002.8 |
| 60 | 435.5 | 435.5 | 435.5 | 435.5 | 435.5 | 435.5 | 435.5 | 473.4 | 649.0 | 778.6 | 885.0 | 1043.4 |
| 70 | 450.2 | 450.2 | 450.2 | 450.2 | 450.2 | 450.2 | 450.2 | 486.6 | 667.4 | 813.8 | 912.4 | 1087.4 |
| 80 | 465.5 | 465.5 | 465.5 | 465.5 | 465.5 | 465.5 | 465.5 | 500.0 | 685.9 | 849.8 | 940.9 | 1134.8 |
| 100 | 497.5 | 497.5 | 497.5 | 497.5 | 497.5 | 497.5 | 497.5 | 527.4 | 723.6 | 917.1 | 1001.2 | 1241.3 |
| 200 | 677.3 | 677.3 | 677.3 | 677.3 | 677.3 | 677.3 | 677.3 | 682.3 | 919.8 | 1167.1 | 1390.4 | 1924.6 |

TABLE 3 TO APPENDIX A OF SUBPART DDDDD—ALLOWABLE MANGANESE EMISSION RATE (lbs/hr)

| Stack ht. (m) | Distance to property boundary (m) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 50 | 100 | 150 | 200 | 250 | 500 | 1000 | 1500 | 2000 | 3000 | 5000 |
| 5 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.36 | 0.72 | 0.93 | 0.93 | 0.93 | 0.94 |
| 10 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.49 | 0.82 | 1.08 | 1.08 | 1.08 | 1.08 |
| 20 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 1.06 | 1.45 | 1.51 | 1.51 | 1.51 |
| 30 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 1.09 | 1.49 | 1.72 | 2.02 | 2.04 |
| 40 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.12 | 1.53 | 1.79 | 2.08 | 2.42 |
| 50 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.15 | 1.58 | 1.87 | 2.15 | 2.51 |
| 60 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.18 | 1.62 | 1.95 | 2.21 | 2.61 |
| 70 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.13 | 1.22 | 1.67 | 2.03 | 2.28 | 2.72 |
| 80 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.25 | 1.71 | 2.12 | 2.35 | 2.84 |
| 100 | 1.24 | 1.24 | 1.24 | 1.24 | 1.24 | 1.24 | 1.24 | 1.32 | 1.81 | 2.29 | 2.50 | 3.10 |
| 200 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.69 | 1.71 | 2.30 | 2.92 | 3.48 | 4.81 |

[FR Doc. 04–11221 Filed 9–10–04; 8:45 am]

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Federal Register

Monday,
April 14, 2003

# Part III

# Environmental Protection Agency

## 40 CFR Part 63

## National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks; Final Rule

# Corrections

Federal Register

Vol. 68, No. 77

Tuesday, April 22, 2003

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 63

**[Docket ID No. OAR–2002–0085; FRL–7462–3]**

**RIN 2060–AH55**

### National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

*Correction*

In rule document 03–5625 beginning on page 18008 in the issue of Monday, April 14, 2003 make the following corrections:

1. On page 18012, in the third column, the fourth line from the bottom, after ''April 14, 2003'', add the words, ''must comply by April 14, 2003.''.

**§ 63.7283 [Corrected]**

2. On page 18026, in the second column, under § 63.7283, in paragraph (b), in the eigth line, ''2006'' should read ''2003''.

[FR Doc. C3–5625 Filed 4–21–03; 8:45 am]

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## FEDERAL RESERVE SYSTEM

### Agency Information Collection Activities: Proposed Collection; Comment Request

*Correction*

In notice document 03–9264 beginning on page 18653 in the issue of Wednesday, April 16, 2003, make the following correction:

On page 18653, in the second column, under the heading **DATES**, in the second and third lines, ''[insert date 60 days from publication in the Federal Register]'' should read ''June 16, 2003''.

[FR Doc. C3–9264 Filed 4–21–03; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### 14 CFR Part 71

**[Docket No. FAA–2003–14843; Airspace Docket No. 03–ACE–28]**

### Modification of Class E Airspace; Rock Rapids, IA

*Correction*

In rule document 03–9179 beginning on page 18115 in the issue of Tuesday, April 15, 2003, make the following corrections:

1. On page 18116, in the first column, under the **ADDRESSES** heading, in the eighth line, ''03–ACD–28'' should read ''03–ACE–28''.

**§71.1 [Corrected]**

2. On the same page, in the third column, in §71.1, under the heading **ACE IA E5 Rock Rapids, IA**, in the fourth line, ''6.2'' should read ''6.3''.

[FR Doc. C3–9179 Filed 4–21–03; 8:45 am]

BILLING CODE 1505–01–D

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### 14 CFR Part 71

**[Docket No. FAA–2003–14844; Airspace Docket No. 03–ACE–29]**

### Modification of Class E Airspace; New Madrid, MO

*Correction*

In rule document 03–9178 beginning on page 18117 in the issue of Tuesday, April 15, 2003, make the following corrections:

1. On page 18117, in the first column, under the **SUMMARY** heading, in the second paragraph, in the first line ''is not'' should read ''is''.

2. On the same page, in the same column, under the **ADDRESSES** heading, in the eigth line, ''03–AC–29'' should read ''03–ACE–29''.

**§ 71.1 [Corrected]**

3. On page 18118, in the first column, in §71.1, under the heading **ACE MO E5 New Madrid, MO**, in the fourth line, ''(Lat. 36°33′17″ N.,'' should read ''(Lat. 36°33′18″ N.,''.

[FR Doc. C3–9178 Filed 4–21–03; 8:45 am]

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

**[Docket ID No. OAR–2002–0085; FRL–7462–3]**

**RIN 2060–AH55**

## National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This action promulgates national emission standards for hazardous air pollutants (NESHAP) for coke ovens. The final standards establish emission limitations and work practice requirements for control of hazardous air pollutants (HAP) from pushing, quenching, and battery stacks at new and existing coke oven batteries. The HAP emitted from pushing, quenching, and battery stacks include coke oven emissions, as well as polycyclic organic matter (POM) and volatile organic compounds (VOC) such as benzene and toluene. Exposure to these substances has been demonstrated to cause chronic and acute health effects. These final standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting application of the maximum achievable control technology (MACT). The EPA previously promulgated emission standards addressing emissions from coke oven charging, topside leaks, and door leaks.

**EFFECTIVE DATE:** April 14, 2003.

**ADDRESSES:** *Docket.* The official public docket is the collection of materials used in developing the final rule and is available for public viewing at the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Lula Melton, Metals Group (C439–02), Emission Standards Division, U.S. EPA, Research Triangle Park, NC 27711, telephone number (919) 541–2910, electronic mail (e-mail) address, *melton.lula@epa.gov.*

**SUPPLEMENTARY INFORMATION:**

*Regulated Entities.* Categories and entities potentially regulated by this action include:

| Category | NAICS * | Example of regulated entities |
|---|---|---|
| Industry | 331111, 324199 | Coke plants and integrated iron and steel mills. |
| Federal government | | Not affected. |
| State/local/tribal government | | Not affected. |

* North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.7281 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

*Docket.* The EPA has established an official public docket for this action under Docket ID No. OAR–2002–0085. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Air Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

*Electronic Docket Access.* You may access the final rule electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr/.*

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility in the above paragraph entitled ''Docket.'' Once in the system, select ''search,'' then key in the appropriate docket identification number.

*Worldwide Web (WWW).* In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the final rule will be placed on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

*Judicial Review.* This action constitutes final administrative action on the proposed NESHAP for coke oven pushing, quenching, and battery stacks (66 FR 35326, July 3, 2001). Under CAA section 307(b)(1), judicial review of the final rule is achievable only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by June 13, 2003. Under CAA section 307(b)(2), the requirements that are the subject of this document may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

*Outline.* The information presented in this preamble is organized as follows:

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  B. What Criteria Are Used in the Development of NESHAP?
  C. How Did We Develop the Final Rule?
II. Summary of the Final Rule
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  C. What Are the Requirements for Soaking?
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## I. Background

### A. What Is the Source of Authority for NESHAP?

Section 112 of the CAA requires the EPA to establish technology-based regulations for all categories and subcategories of major and area sources emitting one or more of the HAP listed in section 112(b). Major sources are those that emit or have the potential to emit at least 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAP. We previously listed the category of major sources covered by today's final rule, ''Coke Ovens: Pushing, Quenching, and Battery Stacks,'' on July 16, 1992 (57 FR 31576). This action is a rulemaking under section 307(d) of the CAA.

### *B. What Criteria Are Used in the Development of NESHAP?*

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as MACT.

The MACT floor is the minimum level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (for which we have emissions information) in the category or subcategory or by the best-performing 5 sources (for which we have or could reasonably obtain emissions information) for categories or subcategories with fewer than 30 sources.

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, non-air quality health and environmental impacts, and energy impacts.

### *C. How Did We Develop the Final Rule?*

We proposed the NESHAP for the Coke Ovens: Pushing, Quenching, and Battery Stacks source category on July 3, 2001 (66 FR 35326). We provided a 90-day comment period for the proposed rule. We received a total of 18 comment letters. A copy of each of these comment letters is available in the docket for this rulemaking (Docket No. OAR–2002–0085).

The final rule reflects full consideration of all the comments we received. Major public comments on the proposed rule along with our responses to these comments are summarized in this document. A detailed response to all comments is included in the Background Information Document (BID) for the promulgated standards (Docket No. OAR–2002–0085).

Since publication of the proposal, six coke plants with 12 batteries have permanently closed. The plants have closed primarily because of the distressed economic condition of the iron and steel industry, and none of the closures are due to the cost of installing emission control systems. The requirements in the final rule take into account the levels of control that have been demonstrated as achievable, including in some cases levels achieved by batteries that are no longer operating. We believe it is appropriate to consider all of the data collected and relied upon for the proposed rule. These data reflect the level of performance of batteries operating concurrently with this rulemaking effort, and provide useful and relevant information about the emission limits that such sources can achieve.

## II. Summary of the Final Rule

### *A. What Are the Affected Sources and Emission Points?*

The affected source is each new or existing coke oven battery at a plant that is a major source of HAP emissions. A new affected source is one constructed or reconstructed after July 3, 2001. An existing affected source is one constructed or reconstructed on or before July 3, 2001. The final rule covers fugitive pushing emissions, emissions from control devices applied to pushing emissions, and emissions from quenching, soaking, and battery stacks.

### *B. What Are the Requirements for Pushing?*

1. By-Product Coke Oven Batteries With Vertical Flues

We proposed two options for controlling fugitive pushing emissions—numerical opacity limits (Option 1) and a work practice standard (Option 2). Based on comments received on the proposed rule and further consideration of the proposed options, we are promulgating a work practice standard.

Under the work practice standard, owners or operators must observe and record the opacity from four consecutive pushes each operating day. If the average opacity of the six highest 15-second consecutive readings for any individual push is more than 30 percent for a short battery or 35 percent for a tall battery, the owner or operator must take corrective action and/or increase coking time to fix the problem within a specified time frame. To demonstrate the corrective action and/or increased coking time was successful, the owner or operator must observe two additional daytime pushes for the oven after completing the corrective action. If the corrective action is not successful, the owner or operator must take additional corrective action. If the second attempt to fix the problem is not successful, the failure must be reported as a deviation, and the owner or operator must again take corrective action or increase the coking time. Each subsequent failure to

fix the problem on the same oven must also be reported as a deviation. We have included provisions to qualify an oven for decreased coking time after it is placed on increased coking time, which requires a demonstration that the opacity is 30 percent or less for a short battery or 35 percent or less for a tall battery when the oven is operated on the decreased coking time. If an oven fails to qualify for decreased coking time, it must be returned to the previously established increased coking time, or the owner or operator may implement some other corrective action or increased coking time. If the facility implements some other corrective action or increased coking time, it must confirm that the selected action was successful. If an individual oven fails to qualify for a decreased coking time in two or more consecutive attempts, the failure on the second and any subsequent attempts must be reported as a deviation.

The final rule requires that observers taking opacity readings to comply with the work practice standard for pushing must be certified according to Method 9 in 40 CFR part 60, appendix A. Opacity observations begin with the first detectable movement of the coke mass. The plant owner or operator must identify each oven that cannot be read using Method 9 due to obstructions, interferences, or sun angle and must propose alternative procedures to observe these ovens.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the plant will meet each of the requirements in the work practice standard. Records of all observations and calculations are needed to document continuous compliance. Additional records are required in each instance where pushing emissions from an oven exceed 30 percent opacity for a short battery or 35 percent opacity for a tall battery.

2. By-Product Coke Oven Batteries With Horizontal Flues

Plant owners or operators must prepare and implement a written plan to prevent incomplete coking. The plan must establish minimum flue temperatures at different coking times and a lowest acceptable minimum flue temperature. The minimum temperatures must be established based on a study conducted by the plant that establishes minimum flue temperatures at different minimum coking times and an absolute minimum flue temperature. The plan must be submitted to the Administrator for approval. The authority to approve the work practice plan is retained by the Administrator and is not delegated to the State, local, or tribal agency.

In implementing the plan, owners or operators must measure and record the temperature of all flues on two ovens per day within the 2 hours before the scheduled push time. If the measured temperature is below the minimum established for an oven's coking time, the coking time must be increased by the amount specified in the plant's written plan. If the flue temperature measurement is below the lowest acceptable minimum temperature, the oven must be removed from service for repairs. If a flue temperature is below the lowest acceptable minimum after return to service, the owner or operator must report the event as a deviation.

No performance test is required to demonstrate initial compliance with the work practice standards. The plant owner or operator must certify, as part of the notification of compliance status, that the plant has submitted the written plan to prevent incomplete coking and the supporting study to the Administrator for review and approval, and that the plant will meet each of the requirements in the work practice standard beginning no later than the first day that compliance is required according to § 63.7283 of the final rule. If the plan is disapproved, the owner or operator must revise the plan as directed by the Administrator and re-submit it for approval. If an original or re-submitted plan has not been approved by the applicable compliance date, the owner or operator must operate in accordance with the last plan submitted to the Administrator.

Plant owners or operators must demonstrate continuous compliance by: (1) Measuring and recording flue temperatures for two ovens a day and for all ovens in each battery at least once a month, and (2) recording the time each oven is charged and pushed and the net coking time. Plant owners or operators must keep additional records to show that the correct procedures were followed if any measured flue temperature is below the minimum flue temperature or the lowest acceptable minimum temperature.

3. Non-Recovery Coke Oven Batteries

The final work practice standards require plant owners or operators to visually inspect each oven prior to pushing by opening the door damper and observing the bed of coke. The oven cannot be pushed unless the visual inspection confirms that there is no smoke in the open space above the coke bed, and that there is an unobstructed view of the door on the opposite side of the oven. Plant owners or operators must demonstrate initial compliance by certifying in their initial notification of compliance status that they will follow the work practice standards. Plant owners or operators must demonstrate continuous compliance by maintaining records of each visual inspection.

4. Emission Control Devices

We are establishing emission limits for particulate matter (PM) as a measure of control device performance. Plant owners or operators that currently use capture and control equipment must continue to use such equipment and must meet the applicable PM emission limits. The limits differ in form and numerical value depending on the type of capture system used (cokeside shed or moveable hood) and whether the control device is stationary (land-based) or mobile. Where a cokeside shed is used as the capture system, the PM limit is 0.01 grain per dry standard cubic foot (gr/dscf). If a moveable hood vented to a stationary control device is used to capture emissions, the PM emission limit is 0.02 pound per ton (lb/ton) of coke pushed. For mobile scrubber cars that do not capture emissions during travel, the emission limits are 0.03 lb/ton of coke for short batteries and 0.01 lb/ton of coke for tall batteries. For mobile scrubber cars that capture emissions during travel, the limit is 0.04 lb/ton of coke.

We have also established operating limits for control devices and capture systems applied to pushing emissions. If a venturi scrubber is used, the daily average pressure drop and scrubber water flow rate must remain at or above the minimum level established during the initial performance test. The final rule provides two options for a capture system applied to pushing emissions: (1) Maintain the daily average fan motor amperes at or above the minimum level established during the initial performance test, or (2) maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test.

The final rule requires a performance test for each control device to demonstrate it meets the emission limit. The concentration of PM is to be measured using EPA Method 5 or 5D in 40 CFR part 60, appendix A. The testing requirements also include procedures for establishing operating limits for venturi scrubbers and capture systems and for revising the limits, if needed, after the performance test. To demonstrate continuous compliance with the applicable emission limit, plant owners or operators must conduct


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performance tests for each control device at least twice during each term of their title V operating permit (at midterm and renewal).

If a baghouse is applied to pushing emissions, plant owners or operators must monitor the relative change in PM loading using a bag leak detection system and make inspections at specified intervals. The basic inspection requirements include daily, weekly, monthly, or quarterly inspections of specified parameters or mechanisms with monitoring of bag cleaning cycles. Each bag leak detection system must be capable of detecting PM at concentrations of 10 milligrams per actual cubic meter or less and provide an output of relative PM loading, and be installed and operated according to EPA guidance.[1] If the system does not work based on the triboelectric effect, it must be installed and operated consistent with the manufacturer's written specifications and recommendations. In addition, the bag leak detection system must be equipped with an alarm system that will alert operators if PM is detected above a preset level. The proposed requirement that a bag leak detection system must not sound for more than 5 percent of the time in a semiannual period has been deleted from the final rule.

To demonstrate continuous compliance, the final rule requires plant owners or operators to maintain records of corrective actions taken in response to bag leak detection system alarms. They must also keep records documenting conformance with the inspection and maintenance requirements.

If a venturi scrubber is applied to pushing emissions, plant owners or operators must monitor the daily average pressure drop and scrubber water flow rate using continuous parameter monitoring systems (CPMS). The CPMS must measure and record the pressure drop and scrubber water flow rate at least once per push and determine and record the daily average of the readings. To demonstrate continuous compliance with the operating limits, plant owners or operators must maintain the daily average pressure drop and scrubber water flow rate at levels no lower than those established during the performance test. Valid monitoring data must be available for all pushes.

Section 63.7331 of the rule establishes requirements for the installation, operation, and maintenance of continuous monitoring systems. The final rule requires owners or operators to prepare a site-specific monitoring plan for CPMS that addresses installation, performance, operation and maintenance, quality assurance, and recordkeeping and reporting procedures. These requirements replace the more detailed performance specifications contained in the proposed rule.

For a capture system applied to pushing emissions, plant owners or operators are required to check the fan motor amperes or the volumetric flow rate at least once each 8-hour period to verify the daily average is at or above the level established during the initial performance test and to record the results of each check.

*C. What Are the Requirements for Soaking?*

The final rule contains a work practice standard to address emissions that occur during soaking, which is the period prior to pushing when an oven is dampered off the collecting main and vented to the atmosphere through an open standpipe to relieve oven pressure. Plant owners or operators must prepare and implement a plan to mitigate potential soaking emissions. Each plan must include measures and procedures to train topside workers to identify the cause of soaking emissions and to take corrective measures to reduce or eliminate such emissions.

If soaking emissions are caused by leaks from the collecting main, actions must be taken to eliminate the emissions, such as reseating the damper, cleaning the flushing liquor piping, applying aspiration, putting the oven back on the collecting main, or igniting the emissions. If soaking emissions are not caused by leaks from the collecting main, a designated responsible party must be notified, who must then determine whether the cause of emissions is incomplete coking. If so, the oven must either be put back on the collecting main until coking is complete, or the emissions must be ignited.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the plant has submitted the written plan for soaking to their permitting authority for review and approval, and that each of the requirements in the work practice standard will be met beginning no later than the first day that compliance is required according to § 63.7283 of the final rule. To demonstrate continuous compliance, plant owners or operators must keep records documenting conformance with these requirements.

*D. What Are the Requirements for Quenching?*

The equipment and work practice standards for quenching apply to all coke oven batteries. Each quench tower must be equipped with baffles such that no more than 5 percent of the cross sectional area of the tower may be uncovered or open to the sky. Baffles must be cleaned each day that the quench tower is used except when the highest measured ambient temperature during the day is below 30 degrees Fahrenheit. Each quench tower must be inspected at least monthly for damaged or missing baffles and blockage. If the monthly inspection reveals any damaged or missing baffles, plant owners or operators must initiate repairs within 30 days and complete repairs as soon as practicable.

The final rule also limits the total dissolved solids (TDS) content of water used for quenching to 1,100 milligrams per liter (mg/L). The final rule includes an alternative to the TDS limit that achieves an equivalent level of HAP control. The plant owner or operator may establish a site-specific constituent limit for the HAP that are characteristic of coke oven emissions (benzene, benzo(a)pyrene, and naphthalene). The constituent limit is based on analyses of at least nine samples of the quench water for TDS, benzene, benzo(a)pyrene, and naphthalene. The HAP limit is the highest sum of the concentrations of the HAP in any single sample that meets the TDS limit of 1,100 mg/L. We also replaced the definition of ''clean water'' with a definition of ''acceptable makeup water,'' which includes surface water from a river, lake, or stream; water meeting drinking water standards; storm water runoff and production area clean up water except for water from the by-product recovery plant area; process wastewater treated to meet effluent limitations guidelines; any of these types of water that have been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions.

To demonstrate initial compliance, the plant owner or operator must certify, as part of the notification of compliance status, that the equipment standard has been met, and that the work practice requirements regarding baffle repair and cleaning will be met beginning no later than the first day that compliance is required according to § 63.7283 of the final rule. The owner or operator must also conduct an initial performance test to demonstrate that the TDS content of quench water does not exceed 1,100 mg/

[1] ''Fabric Filter Bag Leak Detection Guidance,'' EPA 454/R–98–015, September 1997, available on the TTN at *http://www.epa.gov/ttnemc01/cem/tribo.pdf*

L or that the concentration of benzene, benzo(a)pyrene, and naphthalene does not exceed the site-specific constituent limit. To demonstrate continuous compliance, plant owners or operators are required to maintain baffles in each quench tower to meet the rule requirements, test quench water for TDS at least weekly or at least monthly for benzene, benzo(a)pyrene, and naphthalene, and keep records documenting conformance with the work practice requirements regarding baffle repair and cleaning.

Backup quench stations at existing coke oven batteries that are used for less than 5 percent of the quenches in a 12-month calendar period are not subject to the baffle requirements for quench towers. However, backup quench stations at new batteries are subject to the requirements for baffles.

*E. What Are the Requirements for Battery Stacks?*

The final rule requires plant owners or operators to monitor the opacity of emissions from each battery stack using a continuous opacity monitoring system (COMS) and to meet specified opacity limits at all times. The opacity limits are a daily average of 15 percent for a by-product coke oven battery on a normal coking cycle and a daily average of 20 percent for a by-product coke oven battery on a batterywide extended coking cycle. A battery is on batterywide extended coking if the average coking time for all ovens in a battery is increased by 25 percent or more over the manufacturer's specified design rate.

Initial compliance must be demonstrated through a performance test using a COMS. The opacity of emissions from each battery stack must be monitored for 24 hours and the daily average determined. A performance evaluation is also required to show that the COMS meets Performance Specification (PS) 1 in appendix B to 40 CFR part 60. To demonstrate continuous compliance, plant owners or operators must monitor opacity using the COMS and determine and record the 24-hour average opacity.

*F. What Are the Operation and Maintenance (O&M) Requirements?*

All plant owners or operators are required to prepare and implement a written startup, shutdown, and malfunction plan according to the O&M requirements in 40 CFR 63.6(e). Operation and maintenance plans are also required for each by-product coke oven battery and for capture systems and control devices applied to pushing emissions.

The plan for general O&M of each by-product coke oven battery must address procedures (and frequency of measurements, where appropriate) for underfiring gas parameters, flue and cross-wall temperatures, preventing ovens from being pushed before they are fully coked, preventing overcharging and undercharging of ovens, and inspecting flues, burners, and nozzles.

The O&M plan for capture systems and control devices applied to pushing emissions must describe procedures for monthly inspections of capture systems, preventative maintenance requirements for control devices, and corrective action requirements for baghouses. In the event of a bag leak detection system alarm, the plan must include specific requirements for initiating corrective action to determine the cause of the problem within 1 hour, initiating corrective action to fix the problem within 1 working day, and completing all corrective actions needed to fix the problem as soon as practicable.

To demonstrate initial compliance, plant owners or operators must certify in their notification of compliance status that they have prepared the plan according to the rule requirements and that the plant will operate according to the plan beginning no later than the first day that compliance is required under § 63.7283 of the final rule. To demonstrate continuous compliance, plant owners or operators must adhere to the requirements in the plan and keep records documenting conformance with these requirements.

*G. What Are the Notification, Recordkeeping, and Reporting Requirements?*

The notification, recordkeeping, and reporting requirements rely on the NESHAP General Provisions in 40 CFR part 63, subpart A. Table 1 of the final rule (subpart CCCCC) shows each of the requirements in the General Provisions (§§ 63.2 through 63.15) and whether they apply.

The final rule requires the owner or operator to submit each initial notification in the NESHAP General Provisions that applies to them. An initial notification of applicability with general information about the plant must be submitted within 120 days of April 14, 2003 (or for a new affected source, 120 days after becoming subject to the rule). A notification of performance tests must be provided at least 60 calendar days before each test. A notification of compliance status must be submitted within 60 calendar days of the compliance demonstration if a performance test is required or within 30 calendar days if no performance test is required. For the work practice standard for pushing for a by-product coke oven battery with horizontal flues, plant owners or operators must provide prior written notification of the date the study of flue temperatures will be initiated. Other notification requirements that may apply are shown in Table 1 of the final rule (subpart CCCCC).

The final rule requires plant owners or operators to maintain the records required by the NESHAP General Provisions that are needed to document compliance, such as performance test results; copies of startup, shutdown, and malfunction plans and associated corrective action records; monitoring data; and inspection records. All records must be kept for a total of 5 years, with the records from the most recent 2 years kept onsite. The final rule also requires that the current O&M plans be kept onsite and available for inspection upon request for the life of the affected source or until the affected source is no longer subject to the rule requirements.

We revised the reporting requirement for battery stacks from monthly to quarterly in response to comments. For other affected sources, semiannual reports are required for any deviation from an emission limitation (including an operating limit), work practice standard, or O&M requirement. Each report is due no later than 30 days after the end of the reporting period. If no deviation occurred and no continuous monitoring systems were out of control, only a summary report is required. If a deviation did occur, more detailed information is required.

An immediate report is required if there were actions taken during a startup, shutdown, or malfunction that were not consistent with the startup, shutdown, and malfunction plan. Deviations that occur during a period of startup, shutdown, or malfunction are not violations if the owner or operator demonstrates to the permitting authority that the source was operating in accordance with the startup, shutdown, and malfunction plan.

*H. What Are the Compliance Deadlines?*

We revised the compliance date for an existing affected source from 2 years to 3 years after April 14, 2003. New or reconstructed sources that startup on or before April 14, 2003. New or reconstructed sources that startup after April 14, 2003 must comply upon initial startup.


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## III. Summary of Responses to Major Comments

### *A. Why Did We Select a Work Practice Standard for Fugitive Pushing Emissions?*

We proposed an opacity standard for fugitive pushing emissions as one potential option for controlling sources in the category. Because we were uncertain about the feasibility of an opacity standard for this emission point, we also proposed a work practice standard. We refer to the opacity standard as Option 1 and the work practice standard as Option 2. Both options would require observing four consecutive pushes per day and determining the average opacity of each push. The opacity limits proposed were 20 percent for short batteries and 25 percent for tall batteries based on the average of four pushes. We proposed a work practice standard that would be triggered if the average opacity of any single push exceeded 30 percent for short batteries and 35 percent for tall batteries.

*Comment:* Four commenters stated a preference for a work practice standard. Two commenters said that EPA has not and cannot adequately subcategorize batteries to account for the range in performance achievable by batteries implementing a state-of-the-art O&M program for the minimization of green pushes. The commenters stated there are not enough data to set standards for each subcategory reflecting the performance of the top sources over time and under the worst foreseeable conditions. Therefore, the opacity standard (Option 1) must be rejected.

One commenter prefers an opacity standard over a work practice standard because he believes a work practice standard could cause several problems: (1) It would not allow them to effectively manage their long-term wall and end flue replacement program; (2) the constant change from taking ovens out of service and putting them back into service would result in damage to the battery; and (3) many of the actions required by the work practice standard would disrupt the heating system, damage refractory, and increase emissions in other areas of the battery.

Three commenters urged EPA to combine the opacity standard with the work practice standard. One commenter noted that the opacity standard does not require that an oven be repaired, and the work practice standard may not be sufficient to keep a problem oven from continuing to operate. Two commenters prefer a combination because it would more closely approach their existing State standards. Another commenter prefers the opacity standard but would support combining it with the work practice standard if it improved compliance.

*Response:* The insight provided by several commenters and further consideration of the two options we proposed lead us to conclude that a work practice standard that requires owners or operators to take appropriate corrective action and to confirm that they have successfully addressed problem ovens is the most effective approach to control fugitive pushing emissions. A work practice standard is appropriate because pushing emissions are fugitive in nature and are not emitted through a conveyance designed to capture and control HAP. Moreover, there is no practicable measurement methodology to determine the mass emission rate of HAP in these fugitive emissions. Section 112(h) of the CAA explicitly permits a work practice standard in lieu of an emission standard when emissions cannot be emitted through a conveyance.

We concluded an opacity limit as proposed would not be appropriate because coke oven batteries cannot entirely avoid green pushes. While facilities can significantly reduce the frequency of green pushes by carefully monitoring emissions and responding quickly to diagnose and repair problem ovens, they cannot eliminate them altogether. (For example, a flue may become plugged unexpectedly during coking.) Any steps that we might take to allow for the periodic exceedance of an emission limit (such as averaging across several pushes) would undermine the purpose of the standard by allowing malfunctioning ovens to continue operating without diagnosis or repair. Therefore, the most meaningful approach is to establish a work practice standard that requires coke oven facilities to identify and successfully remedy problems that result in increased emissions. Accordingly, considering the nature of the pushing operation, it is appropriate for EPA to establish a work practice standard that uses opacity observations to identify problem ovens (those which produce green pushes) and requires corrective action to diagnose and correct the problem.

There was a fundamental flaw in the opacity standard as proposed in that it would not ensure that an oven producing green pushes is repaired. If the four-push average exceeds the opacity standard, one or more of the ovens may have serious problems that require immediate attention to prevent subsequent green pushes. However, these problem ovens would not have to be observed again for 90 days, and during that 90-day period, many green pushes could occur.

Additionally, an opacity standard based on the average of four pushes does not reliably indicate when a green push has or has not occurred. We analyzed data from two batteries that had frequent green pushes to compare the effectiveness of the opacity standard and work practice standard in identifying green pushes. We found cases where the four-push average had one oven with a green push (an opacity of more than 30 percent), but the proposed opacity standard was not exceeded because the other pushes had low opacity. We also found cases where the 20 percent opacity standard was marginally exceeded, but none of the pushes were green (*i.e.*, all four pushes were less than 30 percent).

In contrast, the work practice standard is triggered by opacity observations of individual ovens. When a green push occurs, the problem oven is identified. This oven is then placed on a remedial track that requires appropriate repairs in a reasonable period of time. Consequently, the work practice standard will not allow green pushes to occur unabated.

Several commenters urged us to combine the performance standard (an opacity limit) with the work practice standard. While we are not adopting a specific performance standard in the form of a hard and fast opacity limit, and we do not believe that such a standard would provide a feasible mechanism for identifying and remediating individual problem ovens, we do recognize the benefits of having a mechanism to prevent ongoing failure to repair problem ovens.

Therefore, we have revised the work practice standard to ensure that ovens are properly repaired. As proposed, the work practice standard could have allowed individual problem ovens to continue to operate, while cycling through corrective actions without ever being properly repaired. Consequently, we revised the work practice standard to require an owner or operator to report a deviation after two consecutive unsuccessful attempts at corrective action and/or increased coking time and after two consecutive unsuccessful attempts to decrease coking time on the same oven. In addition, subsequent consecutive failures to repair or remediate the same oven must be reported as deviations. There is adequate time provided to correct any problems during the two attempts—20 days or more. An owner or operator may also remove an oven from service for as long as necessary to conduct repairs.


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This approach accurately reflects the performance of the best-controlled facilities in the category that already implement oven diagnosis and repair programs to successfully identify and remedy problems that lead to increased emissions. Most of the best-controlled batteries will seldom have an oven that enters the oven-directed program, and our data show that none have had the types of continuing problems that would result in a deviation under the final rule.

We believe that the work practice standard can be coordinated with a long-term repair program. The batteries upon which the MACT floor is based have a long-term repair program to address major repairs. This long-term program includes procedures for minimizing impacts on adjacent ovens and preventing excess emissions when ovens must be removed from service. In addition, these batteries have effective procedures for identifying problem ovens and making short-term repairs. There is no legitimate reason why this type of approach cannot be implemented at other coke oven batteries.

*B. What Changes Did We Make to the Work Practice Standard for Fugitive Pushing Emissions?*

*Comment:* Four commenters requested revisions to the work practice standard. They requested that the final rule require that all pushes be read exactly according to EPA Method 9 (40 CFR part 60, appendix A). They suggested that Method 9 observations begin with the first detectable movement of the coke mass because this would ensure that observations are made through the entire pushing sequence and would be consistent with how the data were generated for the proposed rule. They also requested that we not require ''independent certified observers'' because all Method 9 certified observers are qualified and should be treated the same.

The commenters asked that we allow the observation of more than four pushes per day so that every oven can be observed at least once every 3 months. In addition, the commenters asked that we clarify that the pushing schedule can be changed for operational reasons, but not ''solely'' for the purpose of changing the sequence of observations. They suggested we add a definition for ''increased coking time'' to prevent confusion with ''batterywide extended coking time,'' which is a term used only in the provisions for battery stacks.

*Response:* We agree with some of these suggested revisions and do not agree with others. We do not agree that all ovens must be read exactly as required by Method 9 (40 CFR part 60, appendix A) because we are aware that the view of opacity from some ovens may be obstructed within the sector required by the method. In this situation, the observer may need to find an alternative position to make opacity observations. We added a provision to the final rule requiring plant owners or operators to identify ovens that cannot be observed according to Method 9 and develop alternative procedures to determine if green pushes are occurring on those ovens. The alternative procedures must be submitted to the permitting authority for review and approval. Facilities must operate according to these procedures beginning no later than the applicable compliance date. Based on the information we received, there are only a few ovens that fall into this category.

We have written the final rule to state that Method 9 observations should begin with the first detectable movement of the coke mass. In addition, we agree that any Method 9 certified observer is qualified to make Method 9 opacity observations and have changed the provision to reflect this. We also agree that more than four ovens may be observed each day because doing so provides more scrutiny of performance and greater assurance that every oven can be observed at least once every 90 days.

With respect to the comment on changing pushing schedules, we do not believe that the precise language that the commenter suggests is appropriate (specifically the word ''solely'' would create an extraordinarily difficult burden of proof for purposes of enforcement). However, we do agree with the general idea underlying the commenter's recommendation, and we have written the final rule to acknowledge that there may be legitimate operational reasons for changing the pushing schedule. If an oven's pushing schedule is changed and that oven was previously scheduled to be one of the four consecutive ovens to be observed, the operator must keep records to document the legitimate operational reason for changing the schedule. We have added a definition for ''increased coking time'' to prevent confusion with ''batterywide extended coking time,'' which is a term used only in the provisions for battery stacks.

*Comment:* Several commenters said that the rule should not mandate that an oven be taken out of service if corrective actions are unsuccessful. In addition, commenters requested that after taking corrective actions or extending the coking time, we allow two coking cycles before requiring the facility to demonstrate that the action was successful. They believe it is necessary to observe only one push rather than two to show the action was successful. Finally, the commenters asked that we drop the requirement to obtain the permitting authority's permission to return an oven to service and instead change this to a notification requirement.

*Response:* We added a provision that requires plant owners or operators to report a deviation after two unsuccessful attempts at repair, and with this requirement, we believe that it is not necessary to require that an oven be removed from service. Our goal at proposal was to require that an oven be removed from service for repair to avoid endless cycling of unsuccessful repairs. This is accomplished in the final rule by requiring that the owner or operator repair the problem oven, and by requiring the owner or operator to bring any two or more consecutive failures to repair the same oven to the attention of the permitting authority by reporting the failure(s) as a deviation.

Based on the comments requesting more time to fix problem ovens before they are removed from service, we investigated the time that might reasonably be required to take corrective action and to demonstrate that it was successful. We discovered that there can be some situations in which it would be difficult to obtain valid opacity observations within the time period in the proposed rule. For example, the opportunity to make opacity observations according to the prescribed procedures depends on coking time, number of daylight hours, sun angle, and other factors. In some cases, it may take several days to meet the criteria in the opacity procedures for a specific oven, especially during the winter months for ovens with 22 to 26 hour coking times. Consequently, we have written the final rule to require that the opacity observations to demonstrate that corrective action and/or increased coking time was successful be made on the first two pushes that can be observed according to the procedures for opacity observations after the allowed number of days. We decreased the time period to complete corrective action or increase coking time because the time period no longer includes the demonstrative observations. We have written the final rule to allow either 10 days or the number of days determined using an equation, whichever is greater. Depending on coking time, the time period allows batteries 10 to about 20 days to diagnose the problem,

implement corrective action or increased coking time, and stabilize oven temperatures. After that period, the next two pushes that can be observed according to the procedures must be observed to evaluate the success of corrective action. Days during which the oven is removed from service do not count in the allowed number of days. We also revised the standard to allow two attempts at repair in case the problem is not initially diagnosed properly or in case a second independent problem develops.

We do not agree that two coking cycles are always necessary to stabilize an oven after corrective actions are taken. We believe there is one case in which two coking cycles are needed to allow the oven temperature to stabilize—when an oven that was placed on increased coking time has been repaired and the owner or operator attempts to qualify for decreased coking time. We have written the final rule to reflect this. There is adequate time within the allowed number of days following corrective action or increased coking time to allow the oven temperatures to stabilize. Adequate time is also provided for ovens removed from service because the time during which the oven is not operating is not counted in the allowed number of days. Relative to the comment that only one observation is needed to demonstrate the problem has been corrected, we continue to believe that two pushes should be observed rather than one to provide assurance that the repair was successful.

We agree that it is not necessary for a permitting authority to approve returning an oven to service, and the permitting authority may not be able to act within a time frame that is consistent with the legitimate needs of the operator. In addition, this requirement places a burden on the permitting authority that they may not want and may not have the resources or expertise to implement.

*Comment:* Three commenters stated that batteries with horizontal flues would be subject to significantly less stringent standards than batteries with vertical flues. They requested that these batteries be subject to the same pushing requirements as by-product batteries with vertical flues.

*Response:* As stated in the proposal preamble, unlike vertical flue batteries which include 25 to 37 individual flues along each oven wall, the horizontal flue system of the Semet Solvay design includes only five horizontal flues which convey the combustion gases from top to bottom in serpentine fashion. Because the hot combustion products flow from one flue to the next, the heat control of each upper flue materially affects the heating conditions in the next flue down. Each flue in the horizontal design affects a larger percentage of the total coke mass than for the vertical flue design. Consequently, the occurrence of a heating or combustion problem in any of the single horizontal flues could have a significant adverse effect on the degree and uniformity of coking across the entire length of the coke bed. Therefore, since these differences in design and operation affect pushing emissions, we developed a separate subcategory for batteries with horizontal flues. There are two batteries with this design, and the work practice standard is based on the procedures used by these batteries to prevent green pushes. We have received no technical information that indicates this subcategorization was inappropriate.

However, after we reviewed the proposed work practice standard, we concluded a revision was needed to ensure that a source would not be permitted to operate its ovens below the lowest acceptable minimum flue temperature. The source is required to evaluate coking time, coking temperature, and factors associated with incomplete coking to develop minimum flue temperatures and coking times. The source must then submit to the Administrator (or delegated authority) for review and approval a written plan that establishes minimum flue temperatures for different coking times, and that establishes the lowest acceptable minimum flue temperature for oven operation. The plan must also include appropriate operation and maintenance procedures to ensure compliance upon plan implementation.

*C. What Changes Did We Make to the Requirements for Pushing Emission Control Devices (PECD)?*

*Comment:* Two commenters stated that there is no legal basis for setting MACT standards for PECD given EPA's conclusion at proposal that PECD are not part of the MACT floor for pushing. One commenter also stated that EPA has no legal authority to set operating limits for PECD because they are simply a surrogate for the underlying emission limits. In addition, PECD should not be regulated because the emissions do not contain HAP. The commenter said the limits and monitoring are not necessary and are duplicative of other existing requirements, including State implementation plans, title V permits, and the compliance assurance monitoring program.

*Response:* We believe emission limits for PECD are appropriate and warranted. As we explained in the preamble to the proposed rule, there are several reasons we do not believe it is appropriate to include PECD as a component of the MACT floor for pushing. However, we also indicated at proposal that operation of these controls does have some HAP reduction benefits (although we are unable to specifically quantify these benefits in terms of either HAP or PM), and there is little doubt that these devices help to reduce HAP emissions, including POM and trace metals. Thus, while minimizing the frequency of green pushes is the basis for the MACT floor, and achieving this objective will significantly decrease the emission benefits of the add-on control devices, these devices will continue to reduce HAP emissions to some degree on a continuing basis. The EPA has reasonably concluded that it is important to ensure that the benefits related to the operation of these controls are maintained, and the appropriate way to accomplish this is to require that coke plants operate existing PECD at all times in a manner consistent with good air pollution control practices. Accordingly, today's requirements establish emission limitations for existing control devices that reflect the performance of well-operated PECD. The costs associated with the PECD requirements include those for periodic Method 5 testing, parametric monitoring (such as bag leak detection systems), and monthly inspections of capture and control systems. These costs are only $4,600 per year for a typical coke plant, which is a minimal cost relative to the overall costs of the final rule (less than 0.5 percent). While we are not able to quantify the HAP emission reductions associated with operation of PECD or with the PECD requirements in the final rule, we believe the requirements preserving these existing benefits of PECD's and ensuring proper operation of control devices is warranted. For example, bag leak detection systems and monthly inspections will ensure that corrective actions are taken promptly when the systems are not operating properly, and these actions will reduce excess emissions that might have occurred in the absence of the continuous monitoring.

We do not believe that the limits will duplicate existing State requirements because the limits are generally equivalent to or more stringent than those currently required by State agencies or contained in existing operating permits. By establishing these limits in national standards, we will

ensure that emissions from PECD do not increase in the future if existing State limits are relaxed or if operating permits are modified.

*Comment:* One commenter stated that the proposed emission limits are based on very limited data and that the limits are not achievable. In support of this claim, the commenter submitted statistical analyses that indicate that their ''statistically-derived values'' are much higher than the proposed limits and should be used in lieu of the proposed values. Several commenters submitted additional test data for EPA to consider and asked for higher limits.

*Response:* We reviewed the additional test data submitted by the commenters. These new data include additional tests on mobile scrubber cars used on short batteries and baghouses applied to cokeside sheds. We also reexamined our approach for selecting appropriate emission limits. We believe that it is not necessary to use statistical analyses to account for variability because these control devices operate uniformly over time, and the data indicate there is little variability when the device is operating properly. In addition, we have data for most of the affected control devices, including multiple tests for some units. We believe the large database inherently accounts for variability and choosing the highest three-run average means that 100 percent of the test results are below the limit. However, to account for inherent variability in the performance of the control devices (to more accurately reflect the actual performance of existing controls over time), we established the limits in the final rule by rounding the highest test results to two decimal places.

The two additional tests for mobile scrubber cars used on short batteries include one result slightly below the proposed limit and another slightly higher than the proposed limit. The tests were conducted using approved methods and appear to be representative of normal operation. In addition, the results expanded the database for this subcategory from three tests to five tests. The averages for the five tests ranged from 0.012 to 0.025 lb/ton of coke. We rounded 0.025 lb/ton to 0.03 lb/ton and established this value as the limit for mobile scrubber cars for short batteries.

We also reviewed additional test data for three batteries equipped with a cokeside shed and baghouse, including three tests conducted on a 6-meter battery at one plant and four tests conducted on two 4-meter batteries designated Batteries 1 and 4 at a second plant. The proposed limit for existing cokeside sheds and baghouses was 0.004 gr/dscf. With the additional data, we now have results for ten tests at five batteries with cokeside sheds and baghouses. All three tests on the 6-meter battery are below the proposed limit of 0.004 gr/dscf with values of 0.0009, 0.0024, and 0.0013 gr/dscf.

The additional data for the two 4-meter batteries plus one test result which we previously had gives us a total of five tests for that plant, four tests for Battery 1 and one test for Battery 4. The company acknowledged that a 1984 test which averaged 0.02 gr/dscf was performed under unrepresentative conditions because of operational problems with the baghouse during the test. We examined the other test reports for Battery 1 and found that a test conducted in 1984 averaged 0.004 gr/dscf, a 1988 test averaged 0.0036 gr/dscf, and a 1998 test averaged 0.01 gr/dscf. The test reports indicate that sampling was performed under representative conditions. Consequently, we revised the emission limit for batteries with cokeside sheds to 0.01 gr/dscf to reflect the level that has been demonstrated as achievable.

No additional data were submitted for two types of capture and control systems: mobile scrubber cars on tall batteries and mobile scrubber cars that capture during travel. We chose as limits the highest three-run average for each of these systems—0.01 lb/ton for mobile scrubber cars on tall batteries and 0.04 lb/ton for mobile scrubber cars that capture during travel. We believe the data show that these limits are achievable because they have been achieved at several different batteries over time.

*Comment:* One commenter requested that the 5 percent operating limit for bag leak detection system alarms be deleted. The commenter argued that the 5 percent of the operating time limit on alarms is arbitrary. In addition, the commenter stated that EPA had not demonstrated that a bag leak detection system is workable for pushing emissions given the intermittent operation of PECD (*e.g.*, 1 to 2 minutes during a push, which occurs every 15 to 20 minutes).

*Response:* We reexamined the proposed operating limit of 5 percent for bag leak detection systems and concluded it was not applicable for PECD. The proposed limit was adopted from other rules and was not based on data associated with baghouses applied to pushing emissions. We do not believe we can establish an appropriate limit in this application because of the intermittent operation of baghouses. For most systems, the device operates only during the push, which is 1 to 2 minutes every 10 to 15 minutes. In addition, we have no information on the effect of the initial surge when full evacuation is applied at the beginning of the push. Thus, given that emissions from PECD are not the major focus of today's final rule and are not included as part of the MACT floor calculation, we believe it is appropriate to delete the 5 percent operating limit for bag leak detection systems. However, we are requiring that corrective actions be initiated within 1 hour of an alarm.

*D. What Changes Did We Make to the Requirements for Quenching?*

*Comment:* One commenter stated that the definition of ''clean water'' needs to be clarified because it would be difficult or impossible for plant owners or operators to prove that some sources of water meet the definition. As proposed, ''clean water'' is defined to mean surface water from a river, lake, or stream; water meeting drinking water standards; water that has been used for non-contact cooling; or process wastewater that has been treated to remove organic compounds and/or dissolved solids. The commenter recommended that the definition be revised to state that any water can be used except untreated process wastewater from the by-product plant. Another commenter agreed and further stated that plant owners or operators should be allowed to use any source of makeup water that has been used historically and previously deemed acceptable by EPA. One commenter requested that the definition include water that is used in seals on standpipes; otherwise, the plant owner or operator would have to draw an additional 200,000 gallons per day from Lake Michigan and treat the same amount of water before discharge. Another commenter requested that storm water and wash down water associated with non-recovery plants be added. The commenter stated that this water does not pick up toxic chemicals at non-recovery plants, and using this water for quenching eliminates discharge to the watershed and reduces the amount of water drawn from the water supply.

Other commenters requested that the proposed definition of ''clean water'' be tightened by developing minimum quality standards for quench water. Two commenters suggested that ''clean water'' be defined as meeting Federal safe drinking water standards. Two other commenters asked that EPA establish a limit for TDS because the solids contain metals. Commenters also noted that the definition includes process water that has been treated to remove organic compounds and/or


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dissolved solids. They stated that removal of both solids and organics should be required, and EPA must establish appropriate levels of treatment. If an appropriate level of treatment cannot be defined, then all process wastewater should be prohibited for quenching coke. One commenter suggested that return water from the quench tower and all process wastewater be prohibited, whether treated or not. This commenter further stated that if EPA chooses to allow treated process water, then daily sampling and analysis must be required to ensure the treatment process is removing the contaminants.

*Response:* We agree that altering the definition of ''clean water'' is necessary to clarify what types of water can be used as makeup water. We also agree that it is appropriate to establish TDS limits to control quench water quality. Our intent at proposal was that untreated process wastewater, whether contaminated with solids, organic compounds, or both, should not be used for quenching. These contaminants have been shown to increase HAP emissions from quenching, and most plants have abandoned the practice of disposing of untreated wastewater in the quenching process.

Process wastewater must be treated to remove solids and organics, as necessary, before it can be used for quenching. This can be ensured by requiring that process wastewater be treated to meet effluent limitation guidelines. It was not our intent to prohibit the use of non-contact process water, cooling water, or other miscellaneous sources of water that would not contribute to additional emissions from pushing. For example, the water used to seal standpipe caps and storm water are not process wastewater. To address the above concerns, we have replaced the term ''clean water'' in the proposed rule with the term ''acceptable makeup water,'' which is defined in the final rule to mean surface water from a river, lake, or stream; water meeting drinking water standards; storm water runoff and production area cleanup water except for water from the by-product recovery plant area; process wastewater treated to meet effluent limitations guidelines; any of these types of water that has been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions. We believe this change accommodates most if not all of the concerns stated in the comments.

Water used for quenching is usually taken from a sump near the base of the quench tower and consists of recycled water and makeup water. Recycled water is the runoff from quenching that is returned from the quench tower to the sump. Makeup water is from some other source, such as a river or lake, and is added to replenish the water lost by evaporation during quenching. Dissolved solids in the quench water contribute to HAP and PM emissions during quenching. We reviewed data from tests at quench towers and found that HAP emissions increase as the TDS level in the quench water increases. Several States have established TDS limits for the quench water to ensure that high levels of solids are not present to contribute to emissions from the quench tower. We agree with commenters who requested that TDS limits be established in the final rule and that the quench water be sampled periodically. We reviewed the available data on TDS levels in quench water. However, we have only limited data, much of the data included the use of by-product plant wastewater which is no longer used for quenching, and we could not validate the procedures that were used for sampling and analysis by the various plants. In addition, we have only one data point for reporting plants, which does not reflect the variability in TDS levels over time.

We also reviewed existing State and local TDS requirements and found that most of the existing limits are in the range of 800 to 1,500 mg/L. We evaluated the five most stringent State limits (12 percent of 36 quench towers) applied to quench towers at coke plants that were operating during the development of the proposed rule. Two quench towers (one in Michigan and one in Ohio) are subject to a limit of 800 mg/L, two others in Illinois are subject to a limit of 1,200 mg/L, and one in Illinois is subject to a limit of 1,500 mg/L. We chose the mean value of 1,100 mg/L as the MACT floor. We chose the mean value rather than the median value (1,200 mg/L) because we usually use the median value when that value is associated with a specific source and the operation of a particular emission control technology. In this case, the mean value is more appropriate because the State limits are not directly related to the level of control achieved by a particular control technology.

We also evaluated the test method used by the plants that comprise the MACT floor and determined that all of these plants measure TDS by drying the filterable residue at 103 to 105° C. (There is an alternative TDS method that specifies drying at 180° C.) Our data indicate that the lower drying temperature is more appropriate for coke plant quench water because the higher temperature evaporates some organic PM and results in an inaccurate measure of TDS. This organic PM contributes to the total TDS and emissions at the normal temperatures of the quench water before it is used for quenching. Consequently, we specify that TDS must be determined by drying the filterable residue at 103 to 105° C.

We believe the existing limits are a reasonable proxy for TDS levels that can be achieved, and they account for the normal variability in TDS levels. For example, the available data indicate that TDS concentrations in clean makeup water are usually less than 600 mg/L. We reviewed data for several plants and concluded that TDS in quench water is about twice that in makeup water. Therefore, we believe a level of 1,100 mg/L TDS or less is indicative of acceptable quench water. Consequently, we are establishing this level in the final rule as the maximum TDS allowed in quench water. We are also requiring weekly sampling of the quench water to ensure that water quality is maintained.

Although a TDS limit is a proven historical method for limiting emissions from quenching, we believe that plant owners or operators can achieve equivalent levels of HAP control by limiting the HAP in quench water. To provide additional flexibility, we included in the final rule an alternative to develop a site-specific limit for the quench water for the HAP that are indicators of coke oven emissions—benzene, benzo(a)pyrene, and naphthalene. To qualify for the alternative, a plant owner or operator must sample and analyze at least nine quench water samples for TDS, benzene, benzo(a)pyrene, and naphthalene. The alternative HAP limit is the highest sum of the concentrations of the HAP in any single sample that meets the TDS limit of 1,100 mg/L.

*Comment:* Two commenters noted that baffles control PM and that EPA had not explained why PM is a suitable surrogate for HAP emissions from quenching. One commenter said that the requirement for 95 percent coverage of quench towers by baffles is unclear and that coverage cannot be measured. Another commenter stated that the 95 percent coverage requirement is too lenient and will allow the release of significant emissions. The commenter noted that two layer baffles which cause two changes in flow direction have been installed and successfully used at coke plants in Allegheny County, Pennsylvania.

Several commenters stated that it is difficult or impossible to wash and repair baffles in cold and inclement weather because water lines freeze and


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severe weather makes the process dangerous. One commenter said the company does not allow work on the quench tower during freezing weather due to safety concerns. One commenter recommended that baffles be cleaned daily or as often as weather conditions allow and that repair of damaged or missing baffles be initiated within 30 days and completed as soon as practicable. Materials needed for repair are not always available in a short time frame. Three commenters said that their experience indicates that monthly cleaning of baffles is adequate and added that additional cleaning should be performed if the upward flow of the steam plume is obstructed. These commenters also noted that it may not be possible to complete repairs to damaged baffles prior to the next scheduled monthly inspection and suggested that a requirement to initiate repairs prior to the next inspection is more appropriate.

Two commenters noted that some plants have backup quench stations that are used when the primary quench tower is unavailable because of maintenance or malfunction. These backup stations are used only a small amount of the time, and they are not designed to capture quenching emissions (*i.e.*, they have no stacks or baffles). Both commenters requested that EPA clarify that backup quench stations are not subject to the requirements for baffles.

*Response:* We agree with the comment that baffles reduce PM emissions. In addition, we believe that baffles also reduce the emission of HAP metal compounds contained in the particles of grit released, as well as semivolatile and VOC such as polycyclic aromatic hydrocarbons (PAH) and benzene, when green coke is quenched. Semivolatile organic compounds evolve from green coke and condense to form fine PM or condense on other particles during the quenching process. Consequently, baffles reduce emissions of both metal and organic HAP.

To clarify the provision for 95 percent coverage, we revised the coverage requirement to read that no more than 5 percent of the cross sectional area of the quench tower can be exposed to the sky when viewed from below. We understand there are several different designs and configurations used for baffles. However, there are many different factors that affect emissions from quench towers. For example, it is likely that the design of the quench tower affects the level of emission control and may also affect the choice of baffle type and configuration. Consequently, we do not believe it is appropriate to prescribe in the final rule the use of a particular baffle type or design and have provided the flexibility for the owner or operator to make this determination. However, all types of baffles must have adequate coverage to provide effective emission control for quench towers.

We believe requirements for daily cleaning, monthly inspection, and prompt repair of damaged baffles are reasonable and necessary to ensure that they are well maintained. These practices are common at many coke plants, and the frequencies are based on industry responses to a nationwide survey. However, we agree that repairing baffles during inclement weather conditions is a personnel safety issue. We also agree that there may be operational problems when baffles are washed during freezing weather. Consequently, we revised the requirement to wash baffles daily to allow daily washing to be suspended when the highest measured ambient temperature throughout the day is less than 30 degrees Fahrenheit. We understand that the time needed for repair can vary depending on the extent of repair needed and the availability of materials. Therefore, we have written the final rule to require that the repair of damaged or missing baffles be initiated within 30 days and that the repairs be completed as soon as practicable.

We gathered information on the use of backup quench stations by surveying coke plants. A total of nine coke plants among the 12 responding to the survey have 13 backup quench stations. Only one of these 13 backup quench stations is equipped with baffles, and the stations are typically used less than 5 percent of the time. Based on the information we received, we conclude that MACT for backup quench stations at existing coke oven batteries does not include the installation of baffles. We have specified in the final rule our subcategorization of backup quench stations, and we have defined this subcategory as those quench stations that are used for less than 5 percent of quenches for any coke oven battery in any 12-month period. However, the best-controlled similar source has baffles in the backup quench station. Consequently, the requirements for installing, inspecting, cleaning, and repairing baffles applies to backup quench stations at new batteries.

In addition, the TDS limit applies to backup quench stations because the existing State limits we used to determine the MACT floor apply to quench water, whether it is used in regular quench towers or backup quench stations. There is no reason to permit the use of higher TDS levels for quenching merely because a backup quench station is used.

*E. What Were the Major Comments on the Proposed Standard for Battery Stacks?*

*Comment:* One commenter stated that EPA has not adequately subcategorized batteries in developing the MACT for battery stacks, and that the EPA should have distinguished among short and tall batteries, pulse-fired batteries, batteries using preheated coal, batteries of older design, and foundry coke batteries that are consistently operated at longer coking times. The commenter also stated that each battery is unique with respect to the factors that affect battery stack emissions. Consequently, the O&M program required to control these emissions differs from battery to battery. The factors affecting emissions include the age and condition of the battery's refractory, the condition of the stack canal, the battery design, sealing carbon, coal properties and coke specifications, and the design and efficiency of the by-product recovery plant.

*Response:* We disagree with the commenter that we have not subcategorized batteries adequately in establishing performance standards for battery stacks. Our current database shows that the proposed opacity limits have been achieved on a continuing basis by numerous batteries with a variety of physical and operational differences. We do not believe that more subcategories are needed beyond those in the proposed rule.

At proposal, we had months of COMS data demonstrating that the limits for by-product batteries had been achieved by ten of the 46 by-product batteries. After proposal, we obtained data for six additional batteries that also achieve the proposed limits. In total, we have 13 months of data for each of five batteries, 18 months of data for each of eight batteries, and 12, 50, and 65 months of data for each of three batteries. Our database now covers 35 percent of all by-product batteries, spanning all types and ages and covering all seasons of the year. Among the 16 batteries demonstrated to have achieved the proposed MACT opacity limits are short and tall batteries, furnace and foundry coke batteries, and batteries with gun flue and under jet underfiring systems. Also included are batteries that use pulse firing, preheated coal, and underfiring gas with and without desulfurization. They range in age from 8 to 46 years.

We examined the data to determine if subcategories are needed for different battery designs as mentioned by the commenter. We could find no difference in performance levels achieved by short vs. tall batteries, under jet vs. gun flue, furnace vs. foundry coke, or the other factors mentioned by the commenter. We found a difference in performance when batteries are placed on extended coking, which reduces sealing carbon on the oven walls. Consequently, we developed a separate emission limit for batteries on extended coking. We also acknowledge that batteries operating routinely on coking cycles that are longer than that for which they are designed could qualify as extended coking. To accommodate this, we have revised the definition for ''batterywide extended coking'' to mean increasing the average coking time for all ovens in a battery by 25 percent or more over the manufacturer's design rate.

*Comment:* One commenter stated that EPA must develop a work practice standard for battery stacks because it is not feasible to set performance standards. The commenter noted that EPA uses three approaches to determine MACT floors (emissions data, existing emission limits from State regulations or operating permits, or technology). We used the technology approach for battery stacks. The commenter believes that the use of a technology approach for battery stacks is inappropriate because the technology is not an air pollution control device but is good O&M. The commenter further states that good O&M results in widely varying degrees of emission control. Good O&M is not a ''technology'' for the purposes of applying the technology approach because, unlike an add-on control device, good O&M cannot be associated with specific emission control levels at different batteries. The only way to establish a floor for battery stacks is to use actual emissions data. However, EPA does not have enough emissions data to subcategorize batteries adequately or to characterize performance over time and under the worst foreseeable operating conditions.

The commenter provided details for a suggested work practice program for battery stacks. The program would be implemented when a daily average opacity trigger is exceeded. The commenter suggests that the values EPA proposed for the emission limits (15 percent for normal coking time and 20 percent for extended coking time) be used as the triggers. The work practice program would include requirements for worker training as well as procedures for controlling oven to flue leakage, including diagnostic procedures for identifying problem ovens and a list of corrective actions.

*Response:* The EPA established the MACT floor for battery stacks by identifying the level of performance consistently achieved by the best-performing units. Because units in this category currently do not use add-on control devices to reduce stack emissions, we looked at other measures employed by existing facilities in order to identify the best-performing units. Specifically, we looked at equipment, work practices, and operational factors that reduce emissions at existing facilities. We identified good systematic operation and maintenance, along with operation of COMS to monitor stack opacity, as the most important factors affecting the level of emissions from coke oven battery stacks. In fact, we determined that all of the best-performing batteries employ measures that have the same basic features, including COMS monitoring to identify problems, ongoing systematic maintenance of oven walls, and procedures for prompt and efficient repair of damaged ovens. We also identified, based on the large amount of available COMS data, the level of performance that units employing such measures are consistently achieving. Therefore, this approach identifies what is being done at existing facilities to reduce coke oven emissions from battery stacks and correlates those control activities to a specific level of performance. Because a sufficient number of units in the category are employing these control strategies and achieving the identified emissions limitation, this limit is MACT for existing sources.[2] Contrary to the commenter's assertion, there is no basis to conclude that any existing battery, with appropriate repairs, monitoring and maintenance, would be unable to achieve a similar level of control. Therefore, it was reasonable here for EPA to use this approach to identify the best units and to establish emission limits based on the performance of those units.

Because the opacity data used to establish the emissions limits are, in fact, representative of what a well operated coke oven battery can achieve (with comprehensive O&M, continuous monitoring, and an efficient repair program), it is not only reasonable but required that EPA establish such a limit. Because these emissions are emitted through a stack, can be measured, and could be captured and controlled with the application of available emission control technologies, it would not be appropriate for EPA to establish a work practice standard in lieu of an emissions standard. Thus, the CAA requires us to develop an emission standard in this case because a work practice standard is allowed in lieu of an emission standard only if it is not feasible to prescribe or enforce an emission standard.

The primary factor affecting battery stack emissions is the condition of oven walls. Batteries that are well maintained can achieve the MACT limits. When the walls are allowed to deteriorate and cracks occur, coke oven emissions escape through the cracks into the underfiring system and lead to high stack opacity. Another important factor in meeting the proposed limit is using COMS for diagnostic purposes. When an opacity spike occurs, the last oven charged can be identified and corrective actions can be made to repair the oven. High stack opacity may on occasion be caused by combustion problems, which also result in HAP emissions. However, these are easily remedied by proper adjustment and operation of the underfiring system.

We identified batteries with good O&M practices, and we collected opacity data from their COMS to characterize the level of control they have achieved. As discussed earlier, these batteries are representative of the types currently operating, and aside from the effect of extended coking, we found no basis to develop additional subcategories. The opacity limits identified as MACT have been achieved by these different types of batteries by using good O&M procedures. The performance level associated with the floor has been demonstrated as achievable and is representative of the performance of the top performing sources.

We agree that a good work practice program is essential to maintain control of battery stack emissions and that we derived the emission limits based on the best-controlled batteries which have such programs. However, a work practice standard alone would not ensure that battery stacks are well maintained on a continuing basis. In contrast, a performance standard will ensure that battery stack emissions are well controlled and allows plant owners or operators the flexibility to implement a site-specific program appropriate for their operation. In addition, we are obligated under the CAA to set

[2] While, in the proposal, we described this as a ''technology approach'' and referred to good O&M as the ''MACT technology,'' these were merely short hand references for EPA's detailed analysis of the measures employed by best facilities to achieve the greatest degree of emissions reductions. In fact, the emission limit for battery stacks is based on the level of performance that the best existing sources consistently achieve, as demonstrated by actual emission test data (in the form of COMS readings).


Attachment II
Attachment II

numerical emission limitations unless it is infeasible, and we must prescribe requirements for continuous monitoring whenever possible. Moreover, we have battery stack emissions data for 16 batteries that cover many months of operation.

*Comment:* Two commenters claimed that EPA arbitrarily and improperly excluded critical COMS data. Specifically, 3 years of data were excluded for Battery 1 at Bethlehem Steel, Burns Harbor, and all of the data for U.S. Steel Gary Works were excluded. The commenter said that EPA excluded the Burns Harbor data because end flue repairs were suspended in 1994, but noted that twice as many end flue repairs were made in 1993 and after 1994 than in previous years. The commenter said that EPA excluded the Gary Works data because they do not represent periods of good systematic O&M. The commenter further stated that the data for two tall batteries at Gary Works should be included because they represent the battery's performance prior to a $150 million program of end flue and through wall repair. There is no basis for excluding these data, and EPA must account for all operating periods (other than startups, shutdowns, and malfunctions) to accurately reflect a source's performance under the most adverse operating conditions over time. The commenter provided details on periods of startup, shut down, and malfunction events that occurred during 31 days of the 2 years of data for Gary Works. The commenter concluded that EPA must include all of the data for Battery 1 at Burns Harbor and the data for Gary Works (except for the 31 days they identified) in the MACT floor analysis. Another commenter asked that all of the data supplied for Battery 1 at Burns Harbor be included in the analysis because it represents consistent operating practices over the period.

*Response:* We strongly disagree that our exclusion of certain COMS data was inappropriate. The data that we did not use were not generated at a facility while it was implementing an effective O&M program. We explained that the data for Battery 1 at Burns Harbor collected in the early 1990's do not represent proper MACT level O&M because repairs were decreased to maintain production while adjacent Battery 2 was being rebuilt. The data clearly show that abandoning repairs increased opacity, which averaged 8.1 percent prior to 1996 and 4.8 percent afterwards. It is also apparent that the earlier data show high opacity spikes (daily averages of 35 to 40 percent) that are indicative of damaged oven walls and clearly show that good O&M practices were not in place. By definition, good O&M means that the opacity spikes identified by the COMS would have been investigated, problems diagnosed, and repairs made. When repairs were resumed and better O&M procedures were followed, the daily average opacity was consistently maintained below 15 percent for subsequent months. We have 50 consecutive months of data for Battery 1 showing that it achieves the MACT emission limit on a continuing basis. In addition, these are the most recent data which indicate that the battery has improved with age rather than deteriorated with age. It is obvious that the measures taken in the early 1990s to maintain oven walls were not the same as those taken in subsequent years, and this has been confirmed by company data that show no end flue repairs in 1994.

A similar situation exists at U.S. Steel Gary Works. We obtained documentation from the company that shows that batteries were not employing good O&M during high opacity events. Equipment malfunction or untimely repair was the cause of most exceedances during that time period. However, subsequent events confirm that oven repairs and good systematic O&M resulted in batteries achieving the emission limit. After a $150 million program of end flue and through wall repairs, the four batteries at Gary Works have improved performance significantly and can meet the battery stack limit. We have COMS data for 13 recent months that show the four batteries have achieved the MACT level of control. Moreover, these batteries also show improved performance rather than deterioration as they age.

*Comment:* One commenter stated that EPA's emission estimates for battery stacks are based on a flawed correlation between opacity and HAP. The commenter said that no correlation exists because high opacity can be caused by situations that do not indicate the presence of HAP, such as poor or incomplete combustion and the presence of sulfates. The commenter noted that the data from two EPA tests (ABC Coke and Bethlehem Steel, Burns Harbor) show no correlation between opacity and PAH, extractable organics, or metal HAP. The commenter concluded that EPA has not met its burden of demonstrating that opacity is a reasonable surrogate for HAP emissions.

*Response:* It is well established that opacity is directly correlated with the concentration of particles in emissions. Our tests have shown that the particles emitted during coke oven pushing contain HAP compounds, including POM and metals. Higher opacities mean a higher concentration of particles and therefore higher concentrations of HAP. The correlation of opacity and HAP is also supported by the common industry practice of using COMS to detect leaks in oven walls. Coke oven gas escapes from ovens with cracked or damaged walls and results in increased battery stack opacity. These coke oven emissions that are detected with the COMS are a listed HAP.

The two batteries that we tested had very low opacities (2 to 5 percent), and it is not possible to develop a clear correlation over such a narrow range. The emissions from these well-controlled batteries are not representative of batteries that have high opacity emissions from their battery stacks.

Infrequently, higher opacity occurs because of combustion problems which result in the formation of products of incomplete combustion that also contain HAP. For example, such emissions contain a variety of PAH such as benzo(a)pyrene. All the available data related to poor performing batteries, including the available emissions data and the historical use of COMS to detect coke oven emissions, indicate that coke oven emissions can be appropriately identified by looking at opacity. Therefore, limiting opacity is an appropriate mechanism for limiting such emissions from coke oven battery stacks.

*Comment:* Two commenters stated that COMS should be used for diagnostic purposes only and not as an enforcement tool. One commenter cited an industry survey that identified 26 COMS used on 27 batteries and stated that they are used as a diagnostic tool. Most of these COMS are no longer commercially available and cannot meet EPA's PS 1 requirements. Consequently, it is inappropriate to use data generated by these COMS to set standards or to demonstrate compliance with an opacity limit. Another commenter also stated that the COMS do not meet PS 1 requirements and added that EPA should not base emission limits on data that were collected by methods less stringent than those that will be used to determine compliance. One commenter noted that there are demonstrated inaccuracies that make COMS unreliable at opacity levels below 10 percent. This is important because battery stack opacity is below 5 percent most of the time at virtually all batteries, so a large number of unreliable data points would be averaged with fewer reliable data points to calculate the daily average opacity. Another

commenter stated that COMS readings are inaccurate and that only opacity data generated by Method 9 observations should be used to determine compliance.

*Response:* We proposed a performance standard for battery stacks in the form of an opacity limit. The COMS have been well established as the preferred method to show continuous compliance with an opacity limit. The data we collected from the U.S. Steel batteries at Clairton and the more recent data from the new COMS installed at U.S. Steel Gary Works were from devices that meet PS 1 requirements.

Moreover, while we agree that COMS are subject to greater imprecision at low opacity, this imprecision is inherent in the data we used to develop the opacity limits; therefore, these limits already account for this imprecision. Additionally, the limits have been shown to be achievable by numerous batteries over time. Consequently, we believe that COMS are an appropriate tool for enforcement of the standard that was based on data collected by COMS.

We do agree with the commenter that COMS should also be used for diagnostic purposes. A COMS is an important part of good systematic O&M that we identified as the MACT floor technology. The COMS will provide information on problem ovens in need of repair, and diagnostic procedures coupled with corrective action will provide good control of HAP emissions from battery stacks.

We do not believe observations by Method 9 should be used to determine compliance. A COMS provides data in a more timely manner, monitors emissions continuously, and is the only reasonable way to collect enough data to determine a daily average opacity.

*F. What Changes Did We Make to the Requirements for Soaking?*

*Comment:* Several commenters requested that we remove the soaking work practice and recordkeeping requirements from the final rule. They claim that soaking emissions cannot be considered as part of the rule because they were addressed in the 1993 negotiated coke ovens: Charging, topside, and door leaks NESHAP (40 CFR part 63, subpart L), which addressed charging emissions and emissions from leaking topside port lids, offtake systems, and doors. The commenters state that the 1993 coke ovens: charging, topside, and door leaks NESHAP allow up to three ovens to be dampered off the main and not counted when determining daily compliance with the offtake system(s) standard, and as a result, are specifically addressed in the previous negotiated coke ovens: charging, topside, and door leaks NESHAP. Two commenters expressed support for the proposed soaking standards.

*Response:* Soaking emissions were not specifically addressed in the regulatory negotiations for the coke ovens: charging, topside, and door leaks NESHAP. The emissions points that were negotiated include charging, topside port lid leaks, offtake system(s) leaks, door leaks, and bypass or bleeder stacks. For offtake systems, the coke ovens: charging, topside, and door leaks NESHAP limit the percent allowed to leak during the coking cycle. The only discussion regarding soaking is a clarification in the test method about whether open standpipes on ovens dampered off the main would be counted as offtake leaks. There was no discussion of the voluminous emissions that can occur when the standpipes are opened on an oven containing green coke and the emissions do not ignite. We believe soaking emissions are part of the pushing operation because they occur when the oven is taken off the collecting main in preparation for pushing. These emissions should be addressed by the MACT standards because they have not been addressed previously by EPA, they are a source of coke oven emissions (a listed HAP), and reasonable control measures are available to reduce emissions.

*Comment:* Two commenters requested an alternative work practice requirement for soaking emissions instead of the proposed requirement that the emissions be ignited. Because soaking emissions are often not readily ignitable, several commenters noted the potential danger involved in the proposed requirement to ignite open standpipes since the flame is often invisible and igniting the emissions could cause serious injury if the person igniting the flame doesn't see it or is standing downwind from the standpipe.

Several commenters stated that the proposed requirement carries an enormous administrative burden associated with the tracking, recording, and documenting the lighting off of standpipes. One commenter said that any benefits associated with the proposed soaking requirements are far outweighed by the administrative costs.

*Response:* After the close of the comment period, we visited several coke plants specifically to observe and discuss soaking emissions. We determined visible emissions from soaking stem from two causes: leaks from the collecting main (*i.e.*, the standpipe is not completely sealed from the main) and incomplete coking (''green'' coke). The cause of emissions can be determined by introducing a small amount of aspirating steam/liquor into the standpipe. If this stops the emissions, the cause of emissions is a leak from the collecting main. Corrective actions from collecting main leaks include reseating the damper dish, cleaning the flushing liquor distribution piping, or leaving the aspirating steam or liquor cracked on. If introducing aspirating steam/liquor does not stop the emissions, the cause is incomplete coking. Further investigation (for example, by opening charging lids and observing the coke mass) will determine if the entire charge or only a small portion is undercoked. Emissions from incomplete coking (*e.g.*, from a cold spot) can be ignited by partially or fully removing the oven lid nearest the standpipe, cracking open and then closing an adjacent standpipe cap, partially opening the opposite aspirating steam valve for a short time on a dual main battery, or manually igniting emissions.

In light of our increased understanding of soaking emissions and their causes and remedies, we have replaced the proposed requirements for soaking with a more comprehensive work practice requirement. If there are visible emissions from a standpipe during soaking, plant personnel must immediately investigate the cause and take corrective action. Work practices are triggered by visible emissions from standpipes that do not ignite automatically. These work practices include eliminating soaking emissions that result from leaks from the collecting main and either igniting the emissions or continuing coking if they are caused by incomplete coking.

We understand that there are times when igniting standpipes can be dangerous. If flames are invisible (*i.e.*, there are no visible emissions from the standpipe), there is no need to attempt ignition. If there are visible emissions that do not automatically ignite, several things can be done to encourage self-ignition, such as partially or fully removing the oven lid nearest the standpipe, cracking open and then closing an adjacent standpipe cap, or partially opening the opposite aspirating steam valve for a short time on a dual main battery. We know of at least one plant with three batteries that require their workers to manually ignite emissions when they do not ignite automatically. Devices are available to ignite these emissions safely and at a reasonable distance from the open standpipe. The work practice standard requires owners or operators to train workers in the procedures to reduce

soaking emissions, and each plant should address all aspects of safety. We do not believe that the revised standard jeopardizes the safety of plant workers.

We agree with the commenters that the proposed standard would have imposed unnecessary administrative burdens related to soaking emissions. Accordingly, we have eliminated the requirement to document the ignition of soaking emissions every time an oven is dampered off the main. Instead, plant owners or operators must prepare and operate at all times according to a written work practice plan for soaking.

*G. What Changes Did We Make to the O&M Requirements?*

*Comment:* Several commenters suggested changes to the general batterywide O&M plan. One comment was to delete the requirement to measure or compute the air:fuel ratio. They noted that the air:fuel ratio is not normally measured, and it would be impractical to do so given that it would require flow measurements of every oven's air box and gas orifice to calculate the air:fuel ratio. Another commenter asked that the requirement for procedures to prevent pushing an oven out of sequence be deleted. The commenter argued that any oven placed on extended coking would of necessity be pushed out of sequence. Another comment was to delete the requirement for procedures to prevent undercharging an oven because it has no effect on emissions. In addition, procedures for measuring the volume of coal are not appropriate because many plants calculate coal volume rather than measure it.

*Response:* We agree that it may be impractical to measure air:fuel ratio since it is a calculated value at most plants. Different parameters may be monitored at different plants to ensure the underfiring system is operating properly. Consequently, we have written the final rule to require that the O&M plan include the frequency and method of recording underfiring gas parameters. We are also clarifying the pushing an oven out of sequence requirement. Our intent is to prevent an oven from being pushed ahead of schedule before it is fully coked. We have added language to the final rule that clarifies this intent. Relative to undercharging an oven, we disagree with the commenter that undercharging does not produce emissions. Our research and discussions with coke plant operators indicate that undercharging an oven can produce excess carbon on oven walls, which can result in pushing difficulties and excess pushing emissions. Consequently, we are retaining the requirements for procedures to prevent both undercharging and overcharging ovens in the work plan. We understand that not all plant owners or operators measure the volume of coal; some calculate the volume from weight and bulk density. We have written the language in the final rule to require procedures for determining coal volume rather than the measurement of coal volume.

*H. Why Did We Change the Compliance Dates for Existing Sources?*

*Comment:* Several commenters said 3 years should be allowed to achieve compliance. They note that we provided no rationale for providing for only 2 years to comply and should give the full 3 years allowed under the CAA. Two years may not provide enough time because of the substantial work that must be done at many plants, and it may be difficult to raise the necessary capital to make the batteries compliant.

*Response:* The CAA requires that compliance occur as expeditiously as practicable, but no later than 3 years after the effective date of the standard. (*See* CAA section 112(i)(3).) We agree with the commenters that many batteries will require extensive repairs in order to comply with the final rule. As a result, we have written the final rule to provide the 3 years allowed under the CAA. We estimate that 23 batteries will need major repairs (oven patching, endflues, and through walls) with capital costs of $2.4 million to $9.3 million per battery. In light of the cost and time required to complete necessary repairs at many facilities, we believe that a period of 3 years is necessary in order to allow sufficient time for all existing facilities to meet the requirements of today's final rule.

## IV. Summary of Environmental, Energy, and Economic Impacts

*A. What Are the Air Emission Reduction Impacts?*

Accurate emission estimates are difficult to make, especially for fugitive pushing emissions. When green pushes occur, most of the organic HAP escape the capture system and are unmeasurable. Our estimate for pushing emissions is based on our best estimates of the capture efficiency and frequency of green pushes. For battery stacks, we have opacity and emissions data for the best-controlled batteries. We had to extrapolate the test data to account for higher emissions from batteries with higher battery stack opacities.

At the proposal stage, we estimated that coke oven emissions, measured as methylene chloride extractable organic compounds from pushing, quenching, and battery stacks, would be reduced to approximately 500 tpy from a baseline level of about 1,000 tpy. However, six coke plants have permanently closed since proposal. Our current best estimate is that baseline emissions of 680 tpy will be reduced to 390 tpy. The final rule will also significantly reduce emissions of other HAP, such as metals, benzene, toluene, and other volatile compounds that are not included with the extractable organics. However, we do not have a reliable means of estimating the overall reductions of these other HAP emissions. Today's final rule will also reduce emissions of PM.

*B. What Are the Cost Impacts?*

As with the emission estimates, there is some uncertainty in the cost estimates. However, we obtained data from the best-controlled plants for their emission controls, oven repairs, and work practices. After proposal, we collected additional information on the extent of repairs needed and their costs. We then applied these costs to those batteries that we project would be impacted by the rule and developed revised cost estimates. We estimate that 23 batteries may require major repairs and could incur aggregate capital costs of $2.4 to $9.3 million to rebuild ovens to meet the final standards for pushing and battery stacks. Relative to add-on air pollution controls, we believe that three batteries will have to install baffles in their quench towers to control quenching emissions. We do not believe that any plant will need to upgrade or install new control devices to meet the final PECD standard.

Monitoring is also an important component of MACT and the cost estimate. Approximately 20 batteries will need to install COMS on their battery stacks. In addition, 44 batteries are expected to incur the cost of visible emissions observers for daily observation of pushing emissions, and 18 bag leak detection systems must be installed. The cost of control and monitoring associated with the above measures is expected to result in nationwide capital costs of about $90 million and total annualized cost of $20 million per year.

*C. What Are the Economic Impacts?*

We conducted a detailed assessment of the economic impacts associated with the final rule. We expect the compliance costs associated with the final rule to increase the price of coke, steel mill products, and iron castings and to reduce their domestic production and

consumption. We project the market price of furnace coke to increase by almost 3 percent, while the market price for foundry coke should remain unchanged. We expect domestic production of furnace coke to decline by 348,000 tons, or 3.9 percent. For foundry coke, we expect domestic production to remain unchanged.

In terms of industry impacts, we project the integrated steel producers to experience a slight decrease in operating profits, which reflects increased costs of furnace coke inputs and associated reductions in revenues from producing their final products. Our analysis indicates that one of the captive batteries may stop supplying furnace coke to the open market but will continue to satisfy internal coke requirements for integrated steel production. Through the market impacts described above, the final rule will produce impacts within the merchant segment. We project merchant plants producing furnace coke as a whole to experience profit increases in response to the final rule. We also project other merchant plants producing foundry coke and some integrated steel plants to lose profits. Furthermore, the economic impact analysis indicates that two of the 13 merchant batteries producing furnace coke are at risk of closure, while none of the foundry coke producing batteries are at risk of closure. For more information, consult the economic impact analysis supporting the final rule.

*D. What Are the Non-Air Environmental and Energy Impacts?*

The technology associated with MACT relies primarily on pollution prevention techniques in the form of work practices and diagnostic procedures to prevent green pushes and leakage through oven walls. Consequently, there are no significant non-air environmental and energy impacts.

**V. Statutory and Executive Order Reviews**

*A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is ''significant'' and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(C) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(M) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(R) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this final rule is a ''significant regulatory action'' because it may raise novel legal or policy issues. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

*B. Paperwork Reduction Act*

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An information collection request (ICR) document has been prepared by EPA (ICR No. 1995.02), and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. A copy may also be downloaded off the Internet at *http://www.epa.gov/icr.* The information requirements are not enforceable until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to NESHAP. These recordkeeping and reporting requirements are specifically authorized by section 112 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies in 40 CFR part 2, subpart B.

The final rule requires maintenance inspections of control devices, two types of written plans (in addition to the startup, shutdown, and malfunction plan required by the NESHAP General Provisions), and a special study of flue temperatures for by-product coke oven batteries with horizontal flues (with notification of the date the study is to be initiated). Quarterly reports of any deviations from the applicable limits for battery stacks are required, with semiannual reports for other affected sources. The recordkeeping requirements require only the specific information needed to determine compliance.

The annual public reporting and recordkeeping burden for this collection of information (averaged over the first 3 years after April 14, 2003, is estimated to total 2,200 labor hours per year at a total annual cost of $131,000. This estimate includes one-time performance tests and reports, preparation and submission of O&M plans, and a special study of flue temperatures; one-time purchase and installation of continuous monitoring systems; one-time preparation of a standard operating procedures manual for baghouses; one-time preparation of a startup, shutdown, and malfunction plan, notifications, and recordkeeping. Total capital/startup costs associated with the monitoring requirements over the 3-year period of the ICR is estimated at $32,000 per year, with operation and maintenance costs of $51,000 per year.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to a collection of information; search existing data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

*C. Regulatory Flexibility Act*

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impact of today's final rule on small entities,

small entity is defined as: (1) A small business according to the U.S. Small Business Administration size standards for NAICS codes 331111 and 324199 ranging from 500 to 1,000 employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities. We have determined that three of the 14 companies within this source category are small businesses. Small businesses represent 21 percent of the companies within the source category and are expected to incur 19 percent of the total industry compliance costs of $20.2 million. The average total annual compliance cost is projected to be $1.3 million per small company, while the average for large companies is projected to be $1.5 million per company. Under the final rule, the mean annual compliance cost, as a share of sales, for small businesses is 2 percent, and the median is 1.8 percent, with a range of 0.3 to 5 percent. We estimate that two of the three small businesses may experience an impact greater than 1 percent of sales, and one small businesses will experience an impact greater than 3 percent of sales.

We performed an economic impact analysis to estimate the changes in product price and production quantities for the firms affected by the final rule. Although this industry is characterized by average profit margins of close to 4 percent, our analysis indicates that none of the coke manufacturing plants owned by small businesses are at risk of closure because of today's final rule. In fact, the one plant manufacturing furnace coke is projected to experience an increase in profits because of market feedbacks related to higher costs incurred by competitors, while the plants manufacturing foundry coke are projected to experience a decline in profits of slightly less than 5 percent.

In summary, the economic impact analysis supports our conclusion that a regulatory flexibility analysis is not necessary because, while a few small firms may experience initial impacts greater than 1 percent of sales, no significant impacts on their viability to continue operations and remain profitable are indicated. See Docket OAR–2002–0085 for more information on the economic analysis.

Although the final rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of the final rule on small entities. We have made site visits to these plants and discussed potential impacts and opportunities for emissions reductions with company representatives. Company representatives have also attended meetings held with industry trade associations to discuss the rule development, and we have included provisions in the final rule that address their concerns.

*D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final rule contains no Federal mandate (under the regulatory provisions of the UMRA) for State, local, or tribal governments. The EPA has determined that the final rule does not contain a Federal mandate that may result in estimated costs of $100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any 1 year. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. The EPA has also determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus, today's final rule is not subject to the requirements of section 203 of the UMRA.

*E. Executive Order 13132: Federalism*

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected facilities are owned or operated by State governments. Thus, Executive Order 13132 does not apply to the final rule.

*F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.''

The final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal

government and Indian tribes. No tribal governments own or operate coke oven batteries. Thus, Executive Order 13175 does not apply to the final rule.

*G. Executive Order 13045: Protection of Children From Environmental Health & Safety Risks*

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant,'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on control technology and not health or safety risks.

*H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

This final rule is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that the final rule is not likely to have any adverse energy effects.

*I. National Technology Transfer Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law 104–113; 15 U.S.C 272 note) directs EPA to use voluntary consensus standards in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (such as material specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The final rule requires plants to use EPA Methods 1, 2, 2F, 2G, 3, 3A, 3B, 4, 5, 5D, and 9 in 40 CFR part 60, appendix A, and PS 1 in 40 CFR part 60, appendix B. Consistent with the NTTAA, we conducted searches to identify voluntary consensus standards in addition to these EPA methods.

One voluntary consensus standard was identified as applicable to PS 1. The standard, ASTM D6216 (1998), Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, has been incorporated by reference into PS 1 (65 FR 48920, August 10, 2000).

Our search for emissions monitoring procedures identified 16 other voluntary consensus standards. We determined that 13 of these standards identified for measuring emissions of HAP or surrogates would not be practical due to lack of equivalency, detail, or quality assurance/quality control requirements. The three remaining consensus standards identified in the search are under development or under EPA review. Therefore, the final rule does not require these voluntary consensus standards. *See* Docket OAR–2002–0085 for more detailed information on the search and review results.

Section 63.7322 of the final rule lists the EPA test methods that coke plants are required to use when conducting a performance test. Most of these methods have been used by States and the industry for more than 10 years. Nevertheless, 40 CFR 63.7(e) and (f) allow any State or source to apply to EPA for permission to use an alternative method in place of any of the EPA test methods or performance specifications required by a rule.

*J. Congressional Review Act*

The Congressional Review Act, 5.U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. The final rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

**List of Subjects in 40 CFR Part 63**

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: February 28, 2003.

**Christine Todd Whitman,**

*Administrator.*

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

## PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

■ 2. Part 63 is amended by adding subpart CCCCC to read as follows:

Sec.

### Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

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63.7281 Am I subject to this subpart?
63.7282 What parts of my plant does this subpart cover?
63.7283 When do I have to comply with this subpart?

**Emission Limitations and Work Practice Standards**

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63.7291 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with vertical flues?
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**Tables to Subpart CCCCC of Part 63**

Table 1 to Subpart CCCCC of Part 63—Applicability of General Provisions to Subpart CCCCC

## What This Subpart Covers

### § 63.7280 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for pushing, soaking, quenching, and battery stacks at coke oven batteries. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations, work practice standards, and operation and maintenance requirements in this subpart.

### § 63.7281 Am I subject to this subpart?

You are subject to this subpart if you own or operate a coke oven battery at a coke plant that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

### § 63.7282 What parts of my plant does this subpart cover?

(a) This subpart applies to each new or existing affected source at your coke plant. The affected source is each coke oven battery.

(b) This subpart covers emissions from pushing, soaking, quenching, and battery stacks from each affected source.

(c) An affected source at your coke plant is existing if you commenced construction or reconstruction of the affected source before July 3, 2001.

(d) An affected source at your coke plant is new if you commenced construction or reconstruction of the affected source on or after July 3, 2001. An affected source is reconstructed if it meets the definition of ''reconstruction'' in § 63.2.

### § 63.7283 When do I have to comply with this subpart?

(a) If you have an existing affected source, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than April 14, 2006.

(b) If you have a new affected source and its initial startup date is on or before April 14, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by April 14, 2006.

(c) If you have a new affected source and its initial startup date is after April 14, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(d) You must meet the notification and schedule requirements in § 63.7340. Several of these notifications must be submitted before the compliance date for your affected source.

## Emission Limitations and Work Practice Standards

### § 63.7290 What emission limitations must I meet for capture systems and control devices applied to pushing emissions?

(a) You must not discharge to the atmosphere emissions of particulate matter from a control device applied to pushing emissions from a new or existing coke oven battery that exceed the applicable limit in paragraphs (a)(1) through (4) of this section:

(1) 0.01 grain per dry standard cubic foot (gr/dscf) if a cokeside shed is used to capture emissions;

(2) 0.02 pound per ton (lb/ton) of coke if a moveable hood vented to a stationary control device is used to capture emissions;

(3) If a mobile scrubber car that does not capture emissions during travel is used:

(i) 0.03 lb/ton of coke for a control device applied to pushing emissions from a short battery, or

(ii) 0.01 lb/ton of coke for a control device applied to pushing emissions from a tall battery; and

(4) 0.04 lb/ton of coke if a mobile scrubber car that captures emissions during travel is used.

(b) You must meet each operating limit in paragraphs (b)(1) through (3) of this section that applies to you for a new or existing coke oven battery.

(1) For each venturi scrubber applied to pushing emissions, you must maintain the daily average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

(2) For each hot water scrubber applied to pushing emissions, you must maintain the daily average water pressure and water temperature at or above the minimum levels established during the initial performance test.

(3) For each capture system applied to pushing emissions, you must:

(i) Maintain the daily average fan motor amperes at or above the minimum level established during the initial performance test; or

(ii) Maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test.

### § 63.7291 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with vertical flues?

(a) You must meet each requirement in paragraphs (a)(1) through (7) of this

section for each new or existing by-product coke oven battery with vertical flues.

(1) Observe and record the opacity of fugitive pushing emissions from each oven at least once every 90 days. If an oven cannot be observed during a 90-day period due to circumstances that were not reasonably avoidable, you must observe the opacity of the first push of that oven following the close of the 90-day period that is capable of being observed in accordance with the procedures in § 63.7334(a), and you must document why the oven was not observed within a 90-day period. All opacity observations of fugitive pushing emissions for batteries with vertical flues must be made using the procedures in § 63.7334(a).

(2) If two or more batteries are served by the same pushing equipment and total no more than 90 ovens, the batteries as a unit can be considered a single battery.

(3) Observe and record the opacity of fugitive pushing emissions for at least four consecutive pushes per battery each day. Exclude any push during which the observer's view is obstructed or obscured by interferences and observe the next available push to complete the set of four pushes. If necessary due to circumstances that were not reasonably avoidable, you may observe fewer than four consecutive pushes in a day; however, you must observe and record as many consecutive pushes as possible and document why four consecutive pushes could not be observed. You may observe and record one or more non-consecutive pushes in addition to any consecutive pushes observed in a day.

(4) Do not alter the pushing schedule to change the sequence of consecutive pushes to be observed on any day. Keep records indicating the legitimate operational reason for any change in your pushing schedule which results in a change in the sequence of consecutive pushes observed on any day.

(5) If the average opacity for any individual push exceeds 30 percent opacity for any short battery or 35 percent opacity for any tall battery, you must take corrective action and/or increase coking time for that oven. You must complete corrective action or increase coking time within either 10 calendar days or the number of days determined using Equation 1 of this section, whichever is greater:

$$X = 0.55 * Y \qquad \text{(Eq. 1)}$$

Where:

X = Number of calendar days allowed to complete corrective action or increase coking time; and

Y = Current coking time for the oven, hours.

For the purpose of determining the number of calendar days allowed under Equation 1 of this section, day one is the first day following the day you observed an opacity in excess of 30 percent for any short battery or 35 percent for any tall battery. Any fraction produced by Equation 1 of this section must be counted as a whole day. Days during which the oven is removed from service are not included in the number of days allowed to complete corrective action.

(6)(i) You must demonstrate that the corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this section, observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in § 63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery. If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the corrective action and/or increased coking time was unsuccessful, and you must complete additional corrective action and/or increase coking time for that oven within the number of days allowed in paragraph (a)(5) of this section.

(ii) After implementing any additional corrective action and/or increased coking time required under paragraph (a)(6)(i) or (a)(7)(ii) of this section, you must demonstrate that corrective action and/or increased coking time was successful. After a period of time no longer than the number of days allowed in paragraph (a)(5) of this section, you must observe and record the opacity of the first two pushes for the oven capable of being observed using the procedures in § 63.7334(a). The corrective action and/or increased coking time was successful if the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery. If the corrective action and/or increased coking time was successful, you may return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the corrective action and/or increased coking time was unsuccessful, and you must follow the procedures in paragraph (a)(6)(iii) of this section.

(iii) If the corrective action and/or increased coking time was unsuccessful as described in paragraph (a)(6)(ii) of this section, you must repeat the procedures in paragraph (a)(6)(ii) of this section until the corrective action and/or increased coking time is successful. You must report to the permitting authority as a deviation each unsuccessful attempt at corrective action and/or increased coking time under paragraph (a)(6)(ii) of this section.

(7)(i) If at any time you place an oven on increased coking time as a result of fugitive pushing emissions that exceed 30 percent for a short battery or 35 percent for a tall battery, you must keep the oven on the increased coking time until the oven qualifies for decreased coking time using the procedures in paragraph (a)(7)(ii) or (a)(7)(iii) of this section.

(ii) To qualify for a decreased coking time for an oven placed on increased coking time in accordance with paragraph (a)(5) or (6) of this section, you must operate the oven on the decreased coking time. After no more than two coking cycles on the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in § 63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery, you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iii) If the attempt to qualify for decreased coking time was unsuccessful as described in paragraph (a)(7)(ii) of this section, you may again attempt to qualify for decreased coking time for the oven. To do this, you must operate the oven on the decreased coking time. After no more than two coking cycles on

the decreased coking time, you must observe and record the opacity of the first two pushes that are capable of being observed using the procedures in § 63.7334(a). If the average opacity for each of the two pushes is 30 percent or less for a short battery or 35 percent or less for a tall battery, you may keep the oven on the decreased coking time and return the oven to the 90-day reading rotation described in paragraph (a)(1) of this section. If the average opacity of either push exceeds 30 percent for a short battery or 35 percent for a tall battery, the attempt to qualify for a decreased coking time was unsuccessful. You must then return the oven to the previously established increased coking time, or implement other corrective action(s) and/or increased coking time. If you implement other corrective action and/or a coking time that is shorter than the previously established increased coking time, you must follow the procedures in paragraph (a)(6)(ii) of this section to confirm that the corrective action(s) and/or increased coking time was successful.

(iv) You must report to the permitting authority as a deviation the second and any subsequent consecutive unsuccessful attempts on the same oven to qualify for decreased coking time as described in paragraph (a)(7)(iii) of this section.

(b) As provided in § 63.6(g), you may request to use an alternative to the work practice standards in paragraph (a) of this section.

**§ 63.7292 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with horizontal flues?**

(a) You must comply with each of the requirements in paragraphs (a)(1) through (4) of this section.

(1) Prepare and operate by a written plan that will eliminate or minimize incomplete coking for each by-product coke oven battery with horizontal flues. You must submit the plan and supporting documentation to the Administrator (or delegated authority) for approval no later than 90 days after completing all observations and measurements required for the study in paragraph (a)(3) of this section or April 14, 2004, whichever is earlier. You must begin operating by the plan requirements by the compliance date that is specified in § 63.7283. The written plan must identify minimum flue temperatures for different coking times and a battery-wide minimum acceptable flue temperature for any oven at any coking time.

(2) Submit the written plan and supporting documentation to the Administrator (or delegated authority) for review and approval. Include all data collected during the study described in paragraph (a)(3) of this section. If the Administrator (or delegated authority) disapproves the plan, you must revise the plan as directed by the Administrator (or delegated authority) and submit the amended plan for approval. The Administrator (or delegated authority) may require you to collect and submit additional data. You must operate according to your submitted plan (or submitted amended plan, if any) until the Administrator (or delegated authority) approves your plan.

(3) You must base your written plan on a study that you conduct that meets each of the requirements listed in paragraphs (a)(3)(i) through (x) of this section.

(i) Initiate the study by July 14, 2003. Notify the Administrator (or delegated authority) at least 7 days prior to initiating the study according to the requirements in § 63.7340(f).

(ii) Conduct the study under representative operating conditions, including but not limited to the range of moisture content and volatile matter in the coal that is charged.

(iii) Include every oven in the study and observe at least two pushes from each oven.

(iv) For each push observed, measure and record the temperature of every flue within 2 hours before the scheduled pushing time. Document the oven number, date, and time the oven was charged and pushed, and calculate the net coking time.

(v) For each push observed, document the factors to be used to identify pushes that are incompletely coked. These factors must include (but are not limited to): average opacity during the push, average opacity during travel to the quench tower, average of six highest consecutive observations during both push and travel, highest single opacity reading, color of the emissions (especially noting any yellow or brown emissions), presence of excessive smoke during travel to the quench tower, percent volatile matter in the coke, percent volatile matter and percent moisture in the coal that is charged, and the date the oven was last rebuilt or completely relined. Additional documentation may be provided in the form of pictures or videotape of emissions during the push and travel. All opacity observations must be conducted in accordance with the procedures in § 63.7334(a)(3) through (7).

(vi) Inspect the inside walls of the oven after each observed push for cool spots as indicated by a flue that is darker than others (the oven walls should be red hot) and record the results.

(vii) For each push observed, note where incomplete coking occurs if possible (*e.g.*, coke side end, pusher side end, top, or center of the coke mass). For any push with incomplete coking, investigate and document the probable cause.

(viii) Use the documented factors in paragraph (a)(3)(v) of this section to identify pushes that were completely coked and those that were not completely coked. Provide a rationale for the determination based on the documentation of factors observed during the study.

(ix) Use only the flue temperature and coking time data for pushes that were completely coked to identify minimum flue temperatures for various coking times. Submit the criteria used to determine complete coking, as well as a table of coking times and corresponding temperatures for complete coking as part of your plan.

(x) Determine the battery-wide minimum acceptable flue temperature for any oven. This temperature will be equal to the lowest temperature that provided complete coking as determined in paragraph (a)(3)(ix) of this section.

(4) You must operate according to the coking times and temperatures in your approved plan and the requirements in paragraphs (a)(4)(i) through (viii) of this section.

(i) Measure and record the percent volatile matter in the coal that is charged.

(ii) Measure and record the temperature of all flues on two ovens per day within 2 hours before the scheduled pushing time for each oven. Measure and record the temperature of all flues on each oven at least once each month.

(iii) For each oven observed in accordance with paragraph (a)(4)(ii) of this section, record the time each oven is charged and pushed and calculate and record the net coking time. If any measured flue temperature for an oven is below the minimum flue temperature for an oven's scheduled coking time as established in the written plan, increase the coking time for the oven to the coking time in the written plan for the observed flue temperature before pushing the oven.

(iv) If you increased the coking time for any oven in accordance with paragraph (a)(4)(iii) of this section, you must investigate the cause of the low


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flue temperature and take corrective action to fix the problem. You must continue to measure and record the temperature of all flues for the oven within 2 hours before each scheduled pushing time until the measurements meet the minimum temperature requirements for the increased coking time for two consecutive pushes. If any measured flue temperature for an oven on increased coking time falls below the minimum flue temperature for the increased coking time, as established in the written plan, you must increase the coking time for the oven to the coking time specified in the written plan for the observed flue temperature before pushing the oven. The oven must continue to operate at this coking time (or at a longer coking time if the temperature falls below the minimum allowed for the increased coking time) until the problem has been corrected, and you have confirmed that the corrective action was successful as required by paragraph (a)(4)(v) of this section.

(v) Once the heating problem has been corrected, the oven may be returned to the battery's normal coking schedule. You must then measure and record the flue temperatures for the oven within 2 hours before the scheduled pushing time for the next two consecutive pushes. If any flue temperature measurement is below the minimum flue temperature for that coking time established in the written plan, repeat the procedures in paragraphs (a)(4)(iii) and (iv) of this section.

(vi) If any flue temperature measurement is below the battery-wide minimum acceptable temperature for complete coking established in the written plan for any oven at any coking time, you must remove the oven from service for repairs.

(vii) For an oven that has been repaired and returned to service after being removed from service in accordance with paragraph (a)(4)(vi) of this section, you must measure and record the temperatures of all flues for the oven within 2 hours before the first scheduled pushing time. If any flue temperature measurement is below the minimum flue temperature for the scheduled coking time, as established in the written plan, you must repeat the procedures described in paragraphs (a)(4)(iii) and (iv) of this section.

(viii) For an oven that has been repaired and returned to service after removal from service in accordance with paragraph (a)(4)(vi) of this section, you must report as a deviation to the permitting authority any flue temperature measurement made during the initial coking cycle after return to service that is below the lowest acceptable minimum flue temperature.

(b) As provided in § 63.6(g), you may request to use an alternative to the work practice standards in paragraph (a) of this section.

### § 63.7293 What work practice standards must I meet for fugitive pushing emissions if I have a non-recovery coke oven battery?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section for each new and existing non-recovery coke oven battery.

(1) You must visually inspect each oven prior to pushing by opening the door damper and observing the bed of coke.

(2) Do not push the oven unless the visual inspection indicates that there is no smoke in the open space above the coke bed and that there is an unobstructed view of the door on the opposite side of the oven.

(b) As provided in § 63.6(g), you may request to use an alternative to the work practice standard in paragraph (a) of this section.

### § 63.7294 What work practice standard must I meet for soaking?

(a) For each new and existing by-product coke oven battery, you must prepare and operate at all times according to a written work practice plan for soaking. Each plan must include measures and procedures to:

(1) Train topside workers to identify soaking emissions that require corrective actions.

(2) Damper the oven off the collecting main prior to opening the standpipe cap.

(3) Determine the cause of soaking emissions that do not ignite automatically, including emissions that result from raw coke oven gas leaking from the collecting main through the damper, and emissions that result from incomplete coking.

(4) If soaking emissions are caused by leaks from the collecting main, take corrective actions to eliminate the soaking emissions. Corrective actions may include, but are not limited to, reseating the damper, cleaning the flushing liquor piping, using aspiration, putting the oven back on the collecting main, or igniting the emissions.

(5) If soaking emissions are not caused by leaks from the collecting main, notify a designated responsible party. The responsible party must determine whether the soaking emissions are due to incomplete coking. If incomplete coking is the cause of the soaking emissions, you must put the oven back on the collecting main until it is completely coked or you must ignite the emissions.

(b) As provided in § 63.6(g), you may request to use an alternative to the work practice standard in paragraph (a) of this section.

### § 63.7295 What requirements must I meet for quenching?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section for each quench tower and backup quench station at a new or existing coke oven battery.

(1) For the quenching of hot coke, you must meet the requirements in paragraph (a)(1)(i) or (ii) of this section.

(i) The concentration of total dissolved solids (TDS) in the water used for quenching must not exceed 1,100 milligrams per liter (mg/L); or

(ii) The sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in the water used for quenching must not exceed the applicable site-specific limit approved by the permitting authority.

(2) You must use acceptable makeup water, as defined in § 63.7352, as makeup water for quenching.

(b) For each quench tower at a new or existing coke oven battery and each backup quench station at a new coke oven battery, you must meet each of the requirements in paragraphs (b)(1) through (4) of this section.

(1) You must equip each quench tower with baffles such that no more than 5 percent of the cross sectional area of the tower may be uncovered or open to the sky.

(2) You must wash the baffles in each quench tower once each day that the tower is used to quench coke, except as specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) You are not required to wash the baffles in a quench tower if the highest measured ambient temperature remains less than 30 degrees Fahrenheit throughout that day (24-hour period). If the measured ambient temperature rises to 30 degrees Fahrenheit or more during the day, you must resume daily washing according to the schedule in your operation and maintenance plan.

(ii) You must continuously record the ambient temperature on days that the baffles were not washed.

(3) You must inspect each quench tower monthly for damaged or missing baffles and blockage.

(4) You must initiate repair or replacement of damaged or missing baffles within 30 days and complete as soon as practicable.

(c) As provided in § 63.6(g), you may request to use an alternative to the work practice standards in paragraph (b) of this section.


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**§ 63.7296 What emission limitations must I meet for battery stacks?**

You must not discharge to the atmosphere any emissions from any battery stack at a new or existing by-product coke oven battery that exhibit an opacity greater than the applicable limit in paragraphs (a) and (b) of this section.

(a) Daily average of 15 percent opacity for a battery on a normal coking cycle.

(b) Daily average of 20 percent opacity for a battery on batterywide extended coking.

## Operation and Maintenance Requirements

**§ 63.7300 What are my operation and maintenance requirements?**

(a) As required by § 63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (b)(1) through (6) of this section.

(1) Frequency and method of recording underfiring gas parameters.

(2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures.

(3) Procedures to prevent pushing an oven before it is fully coked.

(4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal bulk density, and procedures for determining volume of coal charged.

(5) Frequency and procedures for inspecting flues, burners, and nozzles.

(6) Schedule and procedures for the daily washing of baffles.

(c) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system and control device applied to pushing emissions from a new or existing coke oven battery. Each plan must address at a minimum the elements in paragraphs (c)(1) through (3) of this section.

(1) Monthly inspections of the equipment that are important to the performance of the total capture system (*e.g.*, pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.*, presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). The operation and maintenance plan must also include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

(2) Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(3) Corrective action for all baghouses applied to pushing emissions. In the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Actions may include, but are not limited to:

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

## General Compliance Requirements

**§ 63.7310 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in § 63.2.

(b) During the period between the compliance date specified for your affected source in § 63.7283 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3).

## Initial Compliance Requirements

**§ 63.7320 By what date must I conduct performance tests or other initial compliance demonstrations?**

(a) As required in § 63.7(a)(2), you must conduct a performance test to demonstrate compliance with each limit in § 63.7290(a) for emissions of particulate matter from a control device applied to pushing emissions that applies to you within 180 calendar days after the compliance date that is specified in § 63.7283.

(b) You must conduct performance tests to demonstrate compliance with the TDS limit or constituent limit for quench water in § 63.7295(a)(1) and each opacity limit in § 63.7297(a) for a by-product coke oven battery stack by the compliance date that is specified in § 63.7283.

(c) For each work practice standard and operation and maintenance requirement that applies to you, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified in § 63.7283.

(d) If you commenced construction or reconstruction between July 3, 2001 and April 14, 2003, you must demonstrate initial compliance with either the proposed emission limit or the promulgated emission limit no later than October 14, 2003, or no later than 180 calendar days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(e) If you commenced construction or reconstruction between July 3, 2001 and April 14, 2003, and you chose to comply with the proposed emission limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limit by October 11, 2006, or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

**§ 63.7321 When must I conduct subsequent performance tests?**

For each control device subject to an emission limit for particulate matter in § 63.7290(a), you must conduct subsequent performance tests no less frequently than twice (at mid-term and renewal) during each term of your title V operating permit.

**§ 63.7322 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?**

(a) You must conduct each performance test that applies to your affected source according to the requirements in paragraph (b) of this section.

(b) To determine compliance with the emission limit for particulate matter from a control device applied to pushing emissions where a cokeside shed is the capture system, follow the test methods and procedures in paragraphs (b)(1) and (2) of this section. To determine compliance with a process-weighted mass rate of particulate matter (lb/ton of coke) from a control device applied to pushing emissions where a cokeside shed is not used, follow the test methods and procedures in paragraphs (b)(1) through (4) of this section.

(1) Determine the concentration of particulate matter according to the following test methods in appendix A to 40 CFR part 60.

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5 or 5D, as applicable, to determine the concentration of front half particulate matter in the stack gas.

(2) During each particulate matter test run, sample only during periods of actual pushing when the capture system fan and control device are engaged. Collect a minimum sample volume of 30 cubic feet of gas during each test run. Three valid test runs are needed to comprise a performance test. Each run must start at the beginning of a push and finish at the end of a push (*i.e.*, sample for an integral number of pushes).

(3) Determine the total combined weight in tons of coke pushed during the duration of each test run according to the procedures in your source test plan for calculating coke yield from the quantity of coal charged to an individual oven.

(4) Compute the process-weighted mass emissions ($E_p$) for each test run using Equation 1 of this section as follows:

$$E_p = \frac{C \times Q \times T}{P \times K} \qquad \text{(Eq. 1)}$$

Where:

$E_p$ = Process weighted mass emissions of particulate matter, lb/ton;

C = Concentration of particulate matter, gr/dscf;

Q = Volumetric flow rate of stack gas, dscf/hr;

T = Total time during a run that a sample is withdrawn from the stack during pushing, hr;

P = Total amount of coke pushed during the test run, tons; and

K = Conversion factor, 7,000 gr/lb.

### § 63.7323 What procedures must I use to establish operating limits?

(a) For a venturi scrubber applied to pushing emissions from a coke oven battery, you must establish site-specific operating limits for pressure drop and scrubber water flow rate according to the procedures in paragraphs (a)(1) and (2) of this section.

(1) Using the continuous parameter monitoring systems (CPMS) required in § 63.7330(b), measure and record the pressure drop and scrubber water flow rate for each particulate matter test run during periods of pushing. A minimum of one pressure drop measurement and one scrubber water flow rate measurement must be obtained for each push.

(2) Compute and record the average pressure drop and scrubber water flow rate for each test run. Your operating limits are the lowest average pressure drop and scrubber water flow rate values recorded during any of the three runs that meet the applicable emission limit.

(b) For a hot water scrubber applied to pushing emissions from a coke oven battery, you must establish site-specific operating limits for water pressure and water temperature according to the procedures in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in § 63.7330(c), measure and record the hot water pressure and temperature for each particulate matter test run during periods of pushing. A minimum of one pressure measurement and one temperature measurement must be made just prior to each push by monitoring the hot water holding tank on the mobile scrubber car.

(2) Compute and record the average water pressure and temperature for each test run. Your operating limits are the lowest pressure and temperature values recorded during any of the three runs that meet the applicable emission limit.

(c) For a capture system applied to pushing emissions from a coke oven battery, you must establish a site-specific operating limit for the fan motor amperes or volumetric flow rate according to the procedures in paragraph (c)(1) or (2) of this section.

(1) If you elect the operating limit in § 63.7290(b)(3)(i) for fan motor amperes, measure and record the fan motor amperes during each push sampled for each particulate matter test run. Your operating limit is the lowest fan motor amperes recorded during any of the three runs that meet the emission limit.

(2) If you elect the operating limit in § 63.7290(b)(3)(ii) for volumetric flow rate, measure and record the total volumetric flow rate at the inlet of the control device during each push sampled for each particulate matter test run. Your operating limit is the lowest volumetric flow rate recorded during any of the three runs that meet the emission limit.

(d) You may change the operating limit for a scrubber or capture system if you meet the requirements in paragraphs (d)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate that emissions of particulate matter from the control device do not exceed the applicable limit in § 63.7290(a).

(3) Establish revised operating limits according to the applicable procedures in paragraph (a) through (c) of this section.

### § 63.7324 What procedures must I use to demonstrate initial compliance with the opacity limits?

(a) You must conduct each performance test that applies to your affected source according to the requirements in paragraph (b) of this section.

(b) To determine compliance with the daily average opacity limit for stacks of 15 percent for a by-product coke oven battery on a normal coking cycle or 20 percent for a by-product coke oven battery on batterywide extended coking, follow the test methods and procedures in paragraphs (b)(1) through (3) of this section.

(1) Using the continuous opacity monitoring system (COMS) required in § 63.7330(e), measure and record the opacity of emissions from each battery stack for a 24-hour period.

(2) Reduce the monitoring data to hourly averages as specified in § 63.8(g)(2).

(3) Compute and record the 24-hour (daily) average of the COMS data.

### § 63.7325 What test methods and other procedures must I use to demonstrate initial compliance with the TDS or constituent limits for quench water?

(a) If you elect the TDS limit for quench water in § 63.7295(a)(1)(i), you must conduct each performance test that applies to your affected source according to the conditions in paragraphs (a)(1) and (2) of this section.

(1) Take the quench water sample from a location that provides a representative sample of the quench water as applied to the coke (*e.g.*, from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) Determine the TDS concentration of the sample using Method 160.1 in 40 CFR part 136.3 (see ''residue—filterable''), except that you must dry the total filterable residue at 103 to 105 °C (degrees Centigrade) instead of 180 °C.

(b) If at any time you elect to meet the alternative requirements for quench water in § 63.7295(a)(1)(ii), you must establish a site-specific constituent limit according to the procedures in paragraphs (b)(1) through (4) of this section.

(1) Take a minimum of nine quench water samples from a location that provides a representative sample of the quench water as applied to the coke (*e.g.*, from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) For each sample, determine the TDS concentration according to the requirements in paragraph (a)(2) of this section and the concentration of benzene, benzo(a)pyrene, and naphthalene using the applicable methods in 40 CFR part 136 or an approved alternative method.

(3) Determine and record the highest sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in any sample that has a TDS concentration less than or equal to the TDS limit of 1,100 mg/L. This concentration is the site-specific constituent limit.

(4) Submit the site-specific limit, sampling results, and all supporting data and calculations to your permitting authority for review and approval.

(c) If you elect the constituent limit for quench water in § 63.7295(a)(1)(ii), you must conduct each performance test that applies to your affected source according to the conditions in paragraphs (c)(1) and (2) of this section.

(1) Take a quench water sample from a location that provides a representative sample of the quench water as applied to the coke (*e.g.*, from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

(2) Determine the sum of the concentration of benzene, benzo(a)pyrene, and naphthalene in the sample using the applicable methods in 40 CFR part 136 or an approved alternative method.

**§ 63.7326 How do I demonstrate initial compliance with the emission limitations that apply to me?**

(a) For each coke oven battery subject to the emission limit for particulate matter from a control device applied to pushing emissions, you have demonstrated initial compliance if you meet the requirements in paragraphs (a)(1) through (4) of this section that apply to you.

(1) The concentration of particulate matter, measured in accordance with the performance test procedures in § 63.7322(b)(1) and (2), did not exceed 0.01 gr/dscf for a control device where a cokeside shed is used to capture pushing emissions or the process-weighted mass rate of particulate matter (lb/ton of coke), measured in accordance with the performance test procedures in § 63.7322(b)(1) through (4), did not exceed:

(i) 0.02 lb/ton of coke if a moveable hood vented to a stationary control device is used to capture emissions;

(ii) If a mobile scrubber car that does not capture emissions during travel is used, 0.03 lb/ton of coke from a control device applied to pushing emissions from a short coke oven battery or 0.01 lb/ton of coke from a control device applied to pushing emissions from a tall coke oven battery; and

(iii) 0.04 lb/ton of coke if a mobile scrubber car that captures emissions during travel is used.

(2) For each venturi scrubber applied to pushing emissions, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with § 63.7323(a).

(3) For each hot water scrubber applied to pushing emissions, you have established appropriate site-specific operating limits and have a record of the water pressure and temperature measured during the performance test in accordance with § 63.7323(b).

(4) For each capture system applied to pushing emissions, you have established an appropriate site-specific operating limit, and:

(i) If you elect the operating limit in § 63.7290(b)(3)(i) for fan motor amperes, you have a record of the fan motor amperes during the performance test in accordance with § 63.7323(c)(1); or

(ii) If you elect the operating limit in § 63.7290(b)(3)(ii) for volumetric flow rate, you have a record of the total volumetric flow rate at the inlet of the control device measured during the performance test in accordance with § 63.7323(c)(2).

(b) For each new or existing by-product coke oven battery subject to the opacity limit for stacks in § 63.7296(a), you have demonstrated initial compliance if the daily average opacity, as measured according to the performance test procedures in § 63.7324(b), is no more than 15 percent for a battery on a normal coking cycle or 20 percent for a battery on batterywide extended coking.

(c) For each new or existing by-product coke oven battery subject to the TDS limit or constituent limits for quench water in § 63.7295(a)(1),

(1) You have demonstrated initial compliance with the TDS limit in § 63.7295(a)(1)(i) if the TDS concentration, as measured according to the performance test procedures in § 63.7325(a), does not exceed 1,100 mg/L.

(2) You have demonstrated initial compliance with the constituent limit in § 63.7295(a)(1)(ii) if:

(i) You have established a site-specific constituent limit according to the procedures in § 63.7325(b); and

(ii) The sum of the constituent concentrations, as measured according to the performance test procedures in § 63.7325(c), is less than or equal to the site-specific limit.

(d) For each by-product coke oven battery stack subject to an opacity limit in § 63.7296(a) and each by-product coke oven battery subject to the requirements for quench water in § 63.7295(a)(1), you must submit a notification of compliance status containing the results of the COMS performance test for battery stacks and the quench water performance test (TDS or constituent limit) according to § 63.7340(e)(1). For each particulate matter emission limitation that applies to you, you must submit a notification of compliance status containing the results of the performance test according to § 63.7340(e)(2).

**§ 63.7327 How do I demonstrate initial compliance with the work practice standards that apply to me?**

(a) For each by-product coke oven battery with vertical flues subject to the work practice standards for fugitive pushing emissions in § 63.7291(a), you have demonstrated initial compliance if you certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in § 63.7283.

(b) For each by-product coke oven battery with horizontal flues subject to the work practice standards for fugitive pushing emissions in § 63.7292(a), you have demonstrated initial compliance if you have met the requirements of paragraphs (b)(1) and (2) of this section:


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(1) You have prepared and submitted a written plan and supporting documentation establishing appropriate minimum flue temperatures for different coking times and the lowest acceptable temperature to the Administrator (or delegated authority) for review and approval; and

(2) You certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in § 63.7283.

(c) For each non-recovery coke oven battery subject to the work practice standards for fugitive pushing emissions in § 63.7293(a), you have demonstrated initial compliance if you certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in § 63.7283.

(d) For each by-product coke oven battery subject to the work practice standards for soaking in § 63.7294, you have demonstrated initial compliance if you have met the requirements of paragraphs (d)(1) and (2) of this section:

(1) You have prepared and submitted a written work practice plan in accordance with § 63.7294(a); and

(2) You certify in your notification of compliance status that you will meet each of the work practice requirements beginning no later than the compliance date that is specified in § 63.7283.

(e) For each coke oven battery, you have demonstrated initial compliance with the work practice standards for quenching in § 63.7295(b) if you certify in your notification of compliance status that you have met the requirements of paragraphs (e)(1) and (2) of this section:

(1) You have installed the required equipment in each quench tower; and

(2) You will meet each of the work practice requirements beginning no later than the compliance date that is specified in § 63.7283.

(f) For each work practice standard that applies to you, you must submit a notification of compliance status according to the requirements in § 63.7340(e)(1).

### § 63.7328 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

You have demonstrated initial compliance if you certify in your notification of compliance status that you have met the requirements of paragraphs (a) through (d) of this section:

(a) You have prepared the operation and maintenance plans according to the requirements in § 63.7300(b) and (c);

(b) You will operate each by-product coke oven battery and each capture system and control device applied to pushing emissions from a coke oven battery according to the procedures in the plans beginning no later than the compliance date that is specified in § 63.7283;

(c) You have prepared a site-specific monitoring plan according to the requirements in § 63.7331(b); and

(d) You submit a notification of compliance status according to the requirements in § 63.7340(e).

## Continuous Compliance Requirements

### § 63.7330 What are my monitoring requirements?

(a) For each baghouse applied to pushing emissions from a coke oven battery, you must at all times monitor the relative change in particulate matter loadings using a bag leak detection system according to the requirements in § 63.7331(a) and conduct inspections at their specified frequency according to the requirements in paragraphs (a)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual;

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or equivalent means of ensuring the proper functioning of removal mechanisms;

(3) Check the compressed air supply for pulse-jet baghouses each day;

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology;

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means;

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices;

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks; and

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(b) For each venturi scrubber applied to pushing emissions, you must at all times monitor the pressure drop and water flow rate using a CPMS according to the requirements in § 63.7331(e).

(c) For each hot water scrubber applied to pushing emissions, you must at all times monitor the water pressure and temperature using a CPMS according to the requirements in § 63.7331(f).

(d) For each capture system applied to pushing emissions, you must at all times monitor the fan motor amperes according to the requirements in § 63.7331(g) or the volumetric flow rate according to the requirements in § 63.7331(h).

(e) For each by-product coke oven battery, you must monitor at all times the opacity of emissions exiting each stack using a COMS according to the requirements in § 63.7331(i).

### § 63.7331 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each baghouse applied to pushing emissions, you must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (a)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less;

(2) The system must provide output of relative changes in particulate matter loadings;

(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel;

(4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, ''Fabric Filter Bag Leak Detection Guidance'' (EPA–454/R–98–015, September 1997). You may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations;

(5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time;

(6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible

official certifies, in writing, that the baghouse has been inspected and found to be in good operating condition; and

(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(b) For each CPMS required in § 63.7330, you must develop and make available for inspection upon request by the permitting authority a site-specific monitoring plan that addresses the requirements in paragraphs (b)(1) through (6) of this section.

(1) Installation of the CPMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system;

(3) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations);

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §§ 63.8(c)(1), (3), (4)(ii), (7), and (8);

(5) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(6) Ongoing recordkeeping and reporting procedures in accordance the general requirements of §§ 63.10(c), (e)(1), and (e)(2)(i).

(c) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(d) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

(e) For each venturi scrubber applied to pushing emissions, you must install, operate, and maintain CPMS to measure and record the pressure drop across the scrubber and scrubber water flow rate during each push according to the requirements in paragraphs (b) through (d) of this section except as specified in paragraphs (e)(1) through (3) of this section.

(1) Each CPMS must complete a measurement at least once per push;

(2) Each CPMS must produce valid data for all pushes; and

(3) Each CPMS must determine and record the daily (24-hour) average of all recorded readings.

(f) For each hot water scrubber applied to pushing emissions, you must install, operate, and maintain CPMS to measure and record the water pressure and temperature during each push according to the requirements in paragraphs (b) through (d) of this section, except as specified in paragraphs (e)(1) through (3) of this section.

(g) If you elect the operating limit in § 63.7290(b)(3)(i) for a capture system applied to pushing emissions, you must install, operate, and maintain a device to measure the fan motor amperes.

(h) If you elect the operating limit in § 63.7290(b)(3)(ii) for a capture system applied to pushing emissions, you must install, operate, and maintain a device to measure the total volumetric flow rate at the inlet of the control device.

(i) For each by-product coke oven battery, you must install, operate, and maintain a COMS to measure and record the opacity of emissions exiting each stack according to the requirements in paragraphs (i)(1) through (5) of this section.

(1) You must install, operate, and maintain each COMS according to the requirements in § 63.8(e) and Performance Specification 1 in 40 CFR part 60, appendix B. Identify periods the COMS is out-of-control, including any periods that the COMS fails to pass a daily calibration drift assessment, quarterly performance audit, or annual zero alignment audit.

(2) You must conduct a performance evaluation of each COMS according to the requirements in § 63.8 and Performance Specification 1 in appendix B to 40 CFR part 60;

(3) You must develop and implement a quality control program for operating and maintaining each COMS according to the requirements in § 63.8(d). At minimum, the quality control program must include a daily calibration drift assessment, quarterly performance audit, and an annual zero alignment audit of each COMS;

(4) Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. You must reduce the COMS data as specified in § 63.8(g)(2).

(5) You must determine and record the hourly and daily (24-hour) average opacity according to the procedures in § 63.7324(b) using all the 6-minute averages collected for periods during which the COMS is not out-of-control.

### § 63.7332 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times the affected source is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels, or in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitor to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

### § 63.7333 How do I demonstrate continuous compliance with the emission limitations that apply to me?

(a) For each control device applied to pushing emissions and subject to the emission limit in § 63.7290(a), you must demonstrate continuous compliance by meeting the requirements in paragraphs (a)(1) and (2) of this section:

(1) Maintaining emissions of particulate matter at or below the applicable limits in paragraphs § 63.7290(a)(1) through (4); and

(2) Conducting subsequent performance tests to demonstrate continuous compliance no less frequently than twice during each term of your title V operating permit (at mid-term and renewal).

(b) For each venturi scrubber applied to pushing emissions and subject to the operating limits in § 63.7290(b)(1), you must demonstrate continuous compliance by meeting the requirements in paragraphs (b)(1) through (3) of this section.

(1) Maintaining the daily average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test.

(2) Operating and maintaining each CPMS according to § 63.7331(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to § 63.7331(e)(1) through (3).

(c) For each hot water scrubber applied to pushing emissions and subject to the operating limits in § 63.7290(b)(2), you must demonstrate continuous compliance by meeting the requirements in paragraphs (c)(1) through (3) of this section.

(1) Maintaining the daily average water pressure and temperature at levels no lower than those established during the initial or subsequent performance test.

(2) Operating and maintaining each CPMS according to § 63.7331(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for water pressure and temperature according to § 63.7331(f).

(d) For each capture system applied to pushing emissions and subject to the operating limit in § 63.7290(b)(3), you must demonstrate continuous compliance by meeting the requirements in paragraph (d)(1) or (2) of this section:

(1) If you elect the operating limit for fan motor amperes in § 63.7290(b)(3)(i):

(i) Maintaining the daily average fan motor amperes at or above the minimum level established during the initial or subsequent performance test; and

(ii) Checking the fan motor amperes at least every 8 hours to verify the daily average is at or above the minimum level established during the initial or subsequent performance test and recording the results of each check.

(2) If you elect the operating limit for volumetric flow rate in § 63.7290(b)(3)(ii):

(i) Maintaining the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial or subsequent performance test; and

(ii) Checking the volumetric flow rate at least every 8 hours to verify the daily average is at or above the minimum level established during the initial or subsequent performance test and recording the results of each check.

(e) Beginning on the first day compliance is required under § 63.7283, you must demonstrate continuous compliance for each by-product coke oven battery subject to the opacity limit for stacks in § 63.7296(a) by meeting the requirements in paragraphs (e)(1) and (2) of this section:

(1) Maintaining the daily average opacity at or below 15 percent for a battery on a normal coking cycle or 20 percent for a battery on batterywide extended coking; and

(2) Operating and maintaining a COMS and collecting and reducing the COMS data according to § 63.7331(i).

(f) Beginning on the first day compliance is required under § 63.7283, you must demonstrate continuous compliance with the TDS limit for quenching in § 63.7295(a)(1)(i) by meeting the requirements in paragraphs (f)(1) and (2) of this section:

(1) Maintaining the TDS content of the water used to quench hot coke at 1,100 mg/L or less; and

(2) Determining the TDS content of the quench water at least weekly according to the requirements in § 63.7325(a) and recording the sample results.

(g) Beginning on the first day compliance is required under § 63.7283, you must demonstrate continuous compliance with the constituent limit for quenching in § 63.7295(a)(1)(ii) by meeting the requirements in paragraphs (g)(1) and (2) of this section:

(1) Maintaining the sum of the concentrations of benzene, benzo(a)pyrene, and naphthalene in the water used to quench hot coke at levels less than or equal to the site-specific limit approved by the permitting authority; and

(2) Determining the sum of the constituent concentrations at least monthly according to the requirements in § 63.7325(c) and recording the sample results.

**§ 63.7334 How do I demonstrate continuous compliance with the work practice standards that apply to me?**

(a) For each by-product coke oven battery with vertical flues subject to the work practice standards for fugitive pushing emissions in § 63.7291(a), you must demonstrate continuous compliance according to the requirements of paragraphs (a)(1) through (8) of this section:

(1) Observe and record the opacity of fugitive emissions for four consecutive pushes per operating day, except you may make fewer or non-consecutive observations as permitted by § 63.7291(a)(3). Maintain records of the pushing schedule for each oven and records indicating the legitimate operational reason for any change in the pushing schedule according to § 63.7291(a)(4).

(2) Observe and record the opacity of fugitive emissions from each oven in a battery at least once every 90 days. If an oven cannot be observed during a 90-day period, observe and record the opacity of the first push of that oven following the close of the 90-day period that can be read in accordance with the procedures in paragraphs (a)(1) through (8) of this section.

(3) Make all observations and calculations for opacity observations of fugitive pushing emissions in accordance with Method 9 in appendix A to 40 CFR part 60 using a Method 9 certified observer unless you have an approved alternative procedure under paragraph (a)(7) of this section.

(4) Record pushing opacity observations at 15-second intervals as required in section 2.4 of Method 9 (appendix A to 40 CFR part 60). The requirement in section 2.4 of Method 9 for a minimum of 24 observations does not apply, and the data reduction requirements in section 2.5 of Method 9 do not apply. The requirement in § 63.6(h)(5)(ii)(B) for obtaining at least 3 hours of observations (thirty 6-minute averages) to demonstrate initial compliance does not apply.

(5) If fewer than six but at least four 15-second observations can be made, use the average of the total number of observations to calculate average opacity for the push. Missing one or more observations during the push (*e.g.*, as the quench car passes behind a building) does not invalidate the observations before or after the interference for that push. However, a minimum of four 15-second readings must be made for a valid observation.

(6) Begin observations for a push at the first detectable movement of the coke mass. End observations of a push when the quench car enters the quench tower.

(i) For a battery without a cokeside shed, observe fugitive pushing emissions from a position at least 10 meters from the quench car that provides an unobstructed view and avoids interferences from the topside of the battery. This may require the observer to be positioned at an angle to the quench car rather than perpendicular to it. Typical interferences to avoid include emissions from open standpipes and charging. Observe the opacity of emissions above the battery top with the sky as the background where possible. Record the oven number of any push not observed because of obstructions or interferences.

(ii) For a battery with a cokeside shed, the observer must be in a position that provides an unobstructed view and avoids interferences from the topside of the battery. Typical interferences to avoid include emissions from open standpipes and charging. Observations must include any fugitive emissions that escape from the top of the shed, from the ends of the shed, or from the area where the shed is joined to the battery. If the observer does not have a clear view to identify when a push starts or ends, a second person can be positioned to signal the start or end of the push and notify the observer when to start or end the observations. Radio communications with other plant personnel (*e.g.*, pushing ram operator or quench car operator) may also serve to notify the observer of the start or end of a push. Record the oven number of any push

not observed because of obstructions or interferences.

(iii) You may reposition after the push to observe emissions during travel if necessary.

(7) If it is infeasible to implement the procedures in paragraphs (a)(1) through (6) of this section for an oven due to physical obstructions, nighttime pushes, or other reasons, you may apply to your permitting authority for permission to use an alternative procedure. The application must provide a detailed explanation of why it is infeasible to use the procedures in paragraphs (a)(1) through (6) of this section, identify the oven and battery numbers, and describe the alternative procedure. An alternative procedure must identify whether the coke in that oven is not completely coked, either before, during, or after an oven is pushed.

(8) For each oven observed that exceeds an opacity of 30 percent for any short battery or 35 percent for any tall battery, you must take corrective action and/or increase the coking time in accordance with § 63.7291(a). Maintain records documenting conformance with the requirements in § 63.7291(a).

(b) For each by-product coke oven battery with horizontal flues subject to the work practice standards for fugitive pushing emissions in § 63.7292(a), you must demonstrate continuous compliance by having met the requirements of paragraphs (b)(1) through (3) of this section:

(1) Measuring and recording the temperature of all flues on two ovens per day within 2 hours before the oven's scheduled pushing time and ensuring that the temperature of each oven is measured and recorded at least once every month;

(2) Recording the time each oven is charged and pushed and calculating and recording the net coking time for each oven; and

(3) Increasing the coking time for each oven that falls below the minimum flue temperature trigger established for that oven's coking time in the written plan required in § 63.7292(a)(1), assigning the oven to the oven-directed program, and recording all relevant information according to the requirements in § 63.7292(a)(4) including, but not limited to, daily pushing schedules, diagnostic procedures, corrective actions, and oven repairs.

(c) For each non-recovery coke oven battery subject to the work practice standards in § 63.7293(a), you must demonstrate continuous compliance by maintaining records that document each visual inspection of an oven prior to pushing and that the oven was not pushed unless there was no smoke in the open space above the coke bed and there was an unobstructed view of the door on the opposite side of the oven.

(d) For each by-product coke oven battery subject to the work practice standard for soaking in § 63.7294(a), you must demonstrate continuous compliance by maintaining records that document conformance with requirements in § 63.7294(a)(1) through (5).

(e) For each coke oven battery subject to the work practice standard for quenching in § 63.7295(b), you must demonstrate continuous compliance according to the requirements of paragraphs (e)(1) through (3) of this section:

(1) Maintaining baffles in each quench tower such that no more than 5 percent of the cross-sectional area of the tower is uncovered or open to the sky as required in § 63.7295(b)(1);

(2) Maintaining records that document conformance with the washing, inspection, and repair requirements in § 63.7295(b)(2), including records of the ambient temperature on any day that the baffles were not washed; and

(3) Maintaining records of the source of makeup water to document conformance with the requirement for acceptable makeup water in § 63.7295(a)(2).

### § 63.7335 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each by-product coke oven battery, you must demonstrate continuous compliance with the operation and maintenance requirements in § 63.7300(b) by adhering at all times to the plan requirements and recording all information needed to document conformance.

(b) For each coke oven battery with a capture system or control device applied to pushing emissions, you must demonstrate continuous compliance with the operation and maintenance requirements in § 63.7300(c) by meeting the requirements of paragraphs (b)(1) through (3) of this section:

(1) Making monthly inspections of capture systems according to § 63.7300(c)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to § 63.7300(c)(2) and recording all information needed to document conformance with these requirements; and

(3) Initiating and completing corrective action for a bag leak detection system alarm according to § 63.7300(c)(3) and recording all information needed to document conformance with these requirements. This includes records of the times the bag leak detection system alarm sounds, and for each valid alarm, the time you initiated corrective action, the corrective action(s) taken, and the date on which corrective action is completed.

(c) To demonstrate continuous compliance with the operation and maintenance requirements for a baghouse applied to pushing emissions from a coke oven battery in § 63.7331(a), you must inspect and maintain each baghouse according to the requirements in § 63.7331(a)(1) through (8) and record all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in § 63.7331(a)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(d) You must maintain a current copy of the operation and maintenance plans required in § 63.7300(b) and (c) onsite and available for inspection upon request. You must keep the plans for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

### § 63.7336 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations.* You must report each instance in which you did not meet each emission limitation in this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. You must also report each instance in which you did not meet each work practice standard or operation and maintenance requirement in this subpart that applies to you. These instances are deviations from the emission limitations (including operating limits), work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements in § 63.7341.

(b) *Startup, shutdowns, and malfunctions.* During periods of startup, shutdown, and malfunction, you must operate in accordance with your startup, shutdown, and malfunction plan.

(1) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in

accordance with the startup, shutdown, and malfunction plan.

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

## Notification, Reports, and Records

### § 63.7340 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in § 63.9(b)(2), if you startup your affected source before April 14, 2003, you must submit your initial notification no later than August 12, 2003.

(c) As specified in § 63.9(b)(3), if you startup your new affected source on or after April 14, 2003, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following completion of the performance test according to § 63.10(d)(2).

(f) For each by-product coke oven battery with horizontal flues, you must notify the Administrator (or delegated authority) of the date on which the study of flue temperatures required by § 63.7292(a)(3) will be initiated. You must submit this notification no later than 7 days prior to the date you initiate the study.

### § 63.7341 What reports must I submit and when?

(a) *Compliance report due dates.* Unless the Administrator has approved a different schedule, you must submit quarterly compliance reports for battery stacks and semiannual compliance reports for all other affected sources to your permitting authority according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) The first quarterly compliance report for battery stacks must cover the period beginning on the compliance date that is specified for your affected source in § 63.7283 and ending on the last date of the third calendar month. Each subsequent compliance report must cover the next calendar quarter.

(2) The first semiannual compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.7283 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your affected source. Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(3) All quarterly compliance reports for battery stacks must be postmarked or delivered no later than one calendar month following the end of the quarterly reporting period. All semiannual compliance reports must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(4) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a)(1) through (3) of this section.

(b) *Quarterly compliance report contents.* Each quarterly report must provide information on compliance with the emission limitations for battery stacks in § 63.7296. The reports must include the information in paragraphs (c)(1) through (3), and as applicable, paragraphs (c)(4) through (8) of this section.

(c) *Semiannual compliance report contents.* Each compliance report must provide information on compliance with the emission limitations, work practice standards, and operation and maintenance requirements for all affected sources except battery stacks. The reports must include the information in paragraphs (c)(1) through (3) of this section, and as applicable, paragraphs (c)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in § 63.7333(e) for battery stacks, a statement that there were no deviations from the emission limitations during the reporting period. If there were no deviations from the continuous compliance requirements in §§ 63.7333 through 63.7335 that apply to you (for all affected sources other than battery stacks), a statement that there were no deviations from the emission limitations, work practice standards, or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including COMS, continuous emission monitoring system (CEMS), or CPMS) was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which a continuous monitoring system was out-of-control during the reporting period.

(7) For each deviation from an emission limitation in this subpart (including quench water limits) and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where you are not using a continuous monitoring system (including a COMS, CEMS, or CPMS) to comply with the emission limitations in this subpart, the compliance report must contain the information in paragraphs (c)(4) and (7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if

applicable) as applicable and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a continuous monitoring system (including COMS, CEMS, or CPMS) to comply with the emission limitation in this subpart, you must include the information in paragraphs (c)(4) and (8)(i) through (xii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring system (including COMS, CEMS, or CPMS) was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system (including COMS, CEMS, or CPMS) was out-of-control, including the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) An identification of each HAP that was monitored at the affected source.

(ix) A brief description of the process units.

(x) A brief description of the continuous monitoring system.

(xi) The date of the latest continuous monitoring system certification or audit.

(xii) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(d) *Immediate startup, shutdown, and malfunction report.* If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in § 63.10(d)(5)(ii).

(e) *Part 70 monitoring report.* If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or work practice standard in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements to your permitting authority.

### § 63.7342 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in § 63.10(b)(2)(viii).

(b) For each COMS or CEMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Monitoring data for COMS during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (that is, superceded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records in § 63.6(h)(6) for visual observations.

(d) You must keep the records required in §§ 63.7333 through 63.7335 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies to you.

### § 63.7343 In what form and how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

## Other Requirements and Information

### § 63.7350 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

### § 63.7351 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities in paragraphs (c)(1) through (6) of this section will not be delegated to State, local, or tribal agencies.

(1) Approval of alternatives to work practice standards for fugitive pushing emissions in § 63.7291(a) for a by-product coke oven battery with vertical flues, fugitive pushing emissions in § 63.7292(a) for a by-product coke oven battery with horizontal flues, fugitive pushing emissions in § 63.7293 for a non-recovery coke oven battery, soaking

for a by-product coke oven battery in § 63.7294(a), and quenching for a coke oven battery in § 63.7295(b) under § 63.6(g).

(2) Approval of alternative opacity emission limitations for a by-product coke oven battery under § 63.6(h)(9).

(3) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, except for alternative procedures in § 63.7334(a)(7).

(4) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(5) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(6) Approval of the work practice plan for by-product coke oven batteries with horizontal flues submitted under § 63.7292(a)(1).

**§ 63.7352 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA), in § 63.2, and in this section as follows:

*Acceptable makeup water* means surface water from a river, lake, or stream; water meeting drinking water standards; storm water runoff and production area clean up water except for water from the by-product recovery plant area; process wastewater treated to meet effluent limitations guidelines in 40 CFR part 420; water from any of these sources that has been used only for non-contact cooling or in water seals; or water from scrubbers used to control pushing emissions.

*Backup quench station* means a quenching device that is used for less than 5 percent of the quenches from any single coke oven battery in the 12-month period from July 1 to June 30.

*Baffles* means an apparatus comprised of obstructions for checking or deflecting the flow of gases. Baffles are installed in a quench tower to remove droplets of water and particles from the rising vapors by providing a point of impact. Baffles may be installed either inside or on top of quench towers and are typically constructed of treated wood, steel, or plastic.

*Battery stack* means the stack that is the point of discharge to the atmosphere of the combustion gases from a battery's underfiring system.

*Batterywide extended coking* means increasing the average coking time for all ovens in the coke oven battery by 25 percent or more over the manufacturer's specified design rate.

*By-product coke oven battery* means a group of ovens connected by common walls, where coal undergoes destructive distillation under positive pressure to produce coke and coke oven gas from which by-products are recovered.

*By-product recovery plant area* means that area of the coke plant where process units subject to subpart L in part 61 are located.

*Coke oven battery* means a group of ovens connected by common walls, where coal undergoes destructive distillation to produce coke. A coke oven battery includes by-product and non-recovery processes.

*Coke plant* means a facility that produces coke from coal in either a by-product coke oven battery or a non-recovery coke oven battery.

*Cokeside shed* means a structure used to capture pushing emissions that encloses the cokeside of the battery and ventilates the emissions to a control device.

*Coking time* means the time interval that starts when an oven is charged with coal and ends when the oven is pushed.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including operating limits) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Emission limitation* means any emission limit, opacity limit, or operating limit.

*Four consecutive* pushes means four pushes observed successively.

*Fugitive pushing emissions* means emissions from pushing that are not collected by a capture system.

*Horizontal flue* means a type of coke oven heating system used on Semet-Solvay batteries where the heating flues run horizontally from one end of the oven to the other end, and the flues are not shared with adjacent ovens.

*Hot water scrubber* means a mobile scrubber used to control pushing emissions through the creation of an induced draft formed by the expansion of pressurized hot water through a nozzle.

*Increased coking time* means increasing the charge-to-push time for an individual oven.

*Non-recovery coke oven battery* means a group of ovens connected by common walls and operated as a unit, where coal undergoes destructive distillation under negative pressure to produce coke, and which is designed for the combustion of the coke oven gas from which by-products are not recovered.

*Oven* means a chamber in the coke oven battery in which coal undergoes destructive distillation to produce coke.

*Pushing* means the process of removing the coke from the oven. Pushing begins with the first detectable movement of the coke mass and ends when the quench car enters the quench tower.

*Quenching* means the wet process of cooling (wet quenching) the hot incandescent coke by direct contact with water that begins when the quench car enters the quench tower and ends when the quench car exits the quench tower.

*Quench tower* means the structure in which hot incandescent coke in the quench car is deluged or quenched with water.

*Remove from service* means that an oven is not charged with coal and is not used for coking. When removed from service, the oven may remain at the operating temperature or it may be cooled down for repairs.

*Responsible official* means responsible official as defined in § 63.2.

*Short battery* means a by-product coke oven battery with ovens less than five meters in height.

*Soaking* means that period in the coking cycle that starts when an oven is dampered off the collecting main and vented to the atmosphere through an open standpipe prior to pushing and ends when the coke begins to be pushed from the oven.

*Soaking emissions* means the discharge from an open standpipe during soaking of visible emissions due to either incomplete coking or leakage into the standpipe from the collecting main.

*Standpipe* means an apparatus on the oven that provides a passage for gases from an oven to the atmosphere when the oven is dampered off the collecting main and the standpipe cap is opened. This includes mini-standpipes that are not connected to the collecting main.

*Tall battery* means a by-product coke oven battery with ovens five meters or more in height.

*Vertical flue* means a type of coke oven heating system in which the heating flues run vertically from the bottom to the top of the oven, and flues are shared between adjacent ovens.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination

thereof, that is promulgated pursuant to section 112(h) of the CAA.

As required in § 63.7350, you must comply with each applicable requirement of the NESHAP General Provisions (40 CFR part 63, subpart A) as shown in the following table:

TABLES TO SUBPART CCCCC OF PART 63

[Table 1 to Subpart CCCCC of Part 63. Applicability of General Provisions to Subpart CCCCC]

| Citation | Subject | Applies to Subpart CCCCC? | Explanation |
|---|---|---|---|
| § 63.1 | Applicability | Yes. | |
| § 63.2 | Definitions | Yes. | |
| § 63.3 | Units and Abbreviations | Yes. | |
| § 63.4 | Prohibited Activities | Yes. | |
| § 63.5 | Construction/Reconstruction | Yes. | |
| § 63.6(a), (b), (c), (d), (e), (f), (g), (h)(2)–(8). | Compliance with Standards and Maintenance Requirements. | Yes. | |
| § 63.6(h)(9) | Adjustment to an Opacity Emission Standard | Yes. | |
| § 63.7(a)(3), (b), (c)–(h). | Performance Testing Requirements | Yes. | |
| § 63.7(a)(1)–(2) | Applicability and Performance Test Dates | No | Subpart CCCCC specifies applicability and dates. |
| § 63.8(a)(1)–(3), (b), (c)(1)–(3), (c)(4)(i)–(ii), (c)(5)–(8), (d), (e), (f)(1)–(5), (g)(1)–(4). | Monitoring Requirements | Yes | CMS requirements in § 63.8(c)(4) (i)–(ii), (c)(5), and (c)(6) apply only to COMS for battery stacks. |
| § 63.8(a)(4) | Additional Monitoring Requirements for Control Devices in § 63.11. | No | Flares are not a control device for Subpart CCCCC affected sources. |
| § 63.8(c)(4) | Continuous Monitoring System (CMS) Requirements. | No | Subpart CCCCC specifies requirements for operation of CMS. |
| § 63.8(e)(4)–(5) | Performance Evaluations | Yes | Except COMS performance evaluation must be conducted before the compliance date. |
| § 63.8(f)(6) | RATA Alternative | No | Subpart CCCCC does not require CEMS. |
| § 63.8(g)(5) | Data Reduction | No | Subpart CCCCC specifies data that can't be used in computing averages for COMS. |
| § 63.9 | Notification Requirements | Yes | Additional notifications for CMS in § 63.9(g) apply only to COMS for battery stacks. |
| § 63.10(a), (b)(1)–(b)(2)(xii), (b)(2)(xiv), (b)(3), (c)(1)–(6), (c)(9)–(15), (d), (e)(1)–(2), (e)(4), (f). | Recordkeeping and Reporting Requirements | Yes. | Additional records for CMS in § 63.10(c)(1)–(6), (9)–(15), and reports in § 63.10(d)(1)–(2) apply only to COMS for battery stacks. |
| § 63.10(b)(2) (xi)–(xii). | CMS Records for RATA Alternative | No | Subpart CCCCC doesn't require CEMS. |
| § 63.10(c)(7)–(8) | Records of Excess Emissions and Parameter Monitoring Exceedances for CMS. | No | Subpart CCCCC specifies record requirements. |
| § 63.10(e)(3) | Excess Emission Reports | No | Subpart CCCCC specifies reporting requirements. |
| § 63.11 | Control Device Requirements | No | Subpart CCCCC does not require flares. |
| § 63.12 | State Authority and Delegations. | Yes. | |
| §§ 63.13–63.15 | Addresses, Incorporation by Reference, Availability of Information. | Yes. | |

[FR Doc. 03–5625 Filed 4–11–03; 8:45 am]

**BILLING CODE 6560–50–P**

# Corrections

Federal Register

Vol. 68, No. 77

Tuesday, April 22, 2003

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 63

**[Docket ID No. OAR–2002–0085; FRL–7462–3]**

**RIN 2060–AH55**

### National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

*Correction*

In rule document 03–5625 beginning on page 18008 in the issue of Monday, April 14, 2003 make the following corrections:

1. On page 18012, in the third column, the fourth line from the bottom, after ''April 14, 2003'', add the words, ''must comply by April 14, 2003.''.

**§ 63.7283 [Corrected]**

2. On page 18026, in the second column, under § 63.7283, in paragraph (b), in the eigth line, ''2006'' should read ''2003''.

[FR Doc. C3–5625 Filed 4–21–03; 8:45 am]

BILLING CODE 1505–01–D

## FEDERAL RESERVE SYSTEM

### Agency Information Collection Activities: Proposed Collection; Comment Request

*Correction*

In notice document 03–9264 beginning on page 18653 in the issue of Wednesday, April 16, 2003, make the following correction:

On page 18653, in the second column, under the heading **DATES**, in the second and third lines, ''[insert date 60 days from publication in the Federal Register]'' should read ''June 16, 2003''.

[FR Doc. C3–9264 Filed 4–21–03; 8:45 am]

BILLING CODE 1505–01–D

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### 14 CFR Part 71

**[Docket No. FAA–2003–14843; Airspace Docket No. 03–ACE–28]**

### Modification of Class E Airspace; Rock Rapids, IA

*Correction*

In rule document 03–9179 beginning on page 18115 in the issue of Tuesday, April 15, 2003, make the following corrections:

1. On page 18116, in the first column, under the **ADDRESSES** heading, in the eighth line, ''03–ACD–28'' should read ''03–ACE–28''.

**§71.1 [Corrected]**

2. On the same page, in the third column, in §71.1, under the heading **ACE IA E5 Rock Rapids, IA**, in the fourth line, ''6.2'' should read ''6.3''.

[FR Doc. C3–9179 Filed 4–21–03; 8:45 am]

BILLING CODE 1505–01–D

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### 14 CFR Part 71

**[Docket No. FAA–2003–14844; Airspace Docket No. 03–ACE–29]**

### Modification of Class E Airspace; New Madrid, MO

*Correction*

In rule document 03–9178 beginning on page 18117 in the issue of Tuesday, April 15, 2003, make the following corrections:

1. On page 18117, in the first column, under the **SUMMARY** heading, in the second paragraph, in the first line ''is not'' should read ''is''.

2. On the same page, in the same column, under the **ADDRESSES** heading, in the eigth line, ''03–AC–29'' should read ''03–ACE–29''.

**§ 71.1 [Corrected]**

3. On page 18118, in the first column, in §71.1, under the heading **ACE MO E5 New Madrid, MO**, in the fourth line, ''(Lat. 36°33′17″ N.,'' should read ''(Lat. 36°33′18″ N.,''.

[FR Doc. C3–9178 Filed 4–21–03; 8:45 am]

BILLING CODE 1505–01–D

Federal Register

Tuesday,
May 20, 2003

# Part II

# Environmental Protection Agency

**40 CFR Part 63**

**National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

**[OAR 2002–0083; FRL–7460–2]**

**RIN 2060–AE48**

## National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** This action promulgates national emission standards for hazardous air pollutants (NESHAP) for integrated iron and steel manufacturing facilities. The final standards establish emission limitations for hazardous air pollutants (HAP) emitted from new and existing sinter plants, blast furnaces, and basic oxygen process furnace (BOPF) shops. The final standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting application of the maximum achievable control technology (MACT).

The HAP emitted by integrated iron and steel manufacturing facilities include metals (primarily manganese and lead with small quantities of other metals) and trace amounts of organic HAP (such as polycyclic organic matter, benzene, and carbon disulfide). Exposure to these substances has been demonstrated to cause adverse health effects, including chronic and acute disorders of the blood, heart, kidneys, reproductive system, and central nervous system.

**EFFECTIVE DATE:** May 20, 2003. The incorporation by reference of certain publications listed in the final rule is approved by the Director of the Federal Register as of May 20, 2003.

**ADDRESSES:** *Docket.* The official public docket is the collection of materials used in developing the final rule and is available for public viewing at the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC 20004.

**FOR FURTHER INFORMATION CONTACT:** Phil Mulrine, Metals Group (C439–02), Emission Standards Division, U.S. EPA, Research Triangle Park, NC 27711, telephone number (919) 541–5289, electronic mail (e-mail) address, *mulrine.phil@epa.gov.*

**SUPPLEMENTARY INFORMATION:**

*Regulated Entities.* Categories and entities potentially regulated by this action include:

| Category | NAICS code * | Example of regulated entities |
|---|---|---|
| Industry | 331111 | Integrated iron and steel mills, steel companies, sinter plants, blast furnaces, BOPF shops. |
| Federal government | | Not affected. |
| State/local/tribal government | | Not affected. |

* North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.7781 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section. *Docket.* The EPA has established an official public docket for this action under Docket ID No. OAR–2002–0083. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. Although a part of the official docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is the collection of materials that is available for public viewing at the Air Docket in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. *Electronic Docket Access.* You may access the final rule electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr/.*

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility in the above paragraph entitled ''Docket.'' Once in the system, select ''search,'' then key in the appropriate docket identification number. *Worldwide Web* (*WWW*). In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the final rule will be placed on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

*Judicial Review.* This action constitutes final administrative action on the proposed NESHAP for integrated iron and steel manufacturing facilities (66 FR 36836, July 13, 2001). Under CAA section 307(b)(1), judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by July 21, 2003. Under CAA section 307(b)(2), the requirements that are the subject of this document may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

*Outline.* The information presented in this preamble is organized as follows:

I. Background
II. Summary of Final Rule
A. Who must comply with the final rule?
B. What are the affected sources and emission points?
C. What are the emission limitations?
D. What are the operation and maintenance requirements?
E. What are the general compliance requirements?
F. What are the initial compliance requirements?
G. What are the continuous compliance requirements?

H. What are the notification, recordkeeping, and reporting requirements?
I. What are the compliance deadlines?
III. Summary of Responses to Major Comments
A. How did we develop the MACT floors?
B. What surrogates did we use for HAP?
C. Is a risk analysis warranted?
D. How did we revise the emission limitations?
E. How did we revise the performance test requirements?
F. How did we revise the cost estimates and economic analysis?
IV. Summary of Environmental, Energy, and Economic Impacts
A. What are the air emission impacts?
B. What are the cost impacts?
C. What are the economic impacts?
D. What are the non-air health, environmental and energy impacts?
V. Statutory and Executive Order Reviews
A. Executive Order 12866: Regulatory Planning and Review
B. Paperwork Reduction Act
C. Regulatory Flexibility Act
D. Unfunded Mandates Reform Act
E. Executive Order 13132: Federalism
F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
G. Executive Order 13045: Protection of Children from Environmental Health & Safety Risks
H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use
I. National Technology Transfer Advancement Act
J. Congressional Review Act

## I. Background

Section 112(d) of the CAA requires us (the EPA) to establish national emission standards for all categories and subcategories of major sources of HAP and for area sources listed for regulation under section 112(c). Major sources are those that emit or have the potential to emit at least 10 tons per year (tpy) of any single HAP or 25 tpy of any combination of HAP. Area sources are stationary sources of HAP that are not major sources. Additional information on the NESHAP development process can be found in the preamble to the proposed rule (66 FR 36836).

We received a total of 16 comment letters on the proposed NESHAP from industry and trade association representatives, State agencies, industry experts, environmental groups, universities, and private citizens. We offered to provide interested individuals the opportunity for oral presentations of data, views, or arguments concerning the proposed rule, but a public hearing was not requested.

Today's final rule reflects our full consideration of all the comments we received. Major public comments on the proposed rule along with our responses to these comments are summarized in section III of this document. A detailed response to all the comments is included in the Background Information Document (BID) for the Promulgated Standards (Docket ID No. OAR–2002–0083).

## II. Summary of Final Rule

### *A. Who Must Comply With the Final Rule?*

Each owner or operator of an affected source at an integrated iron and steel manufacturing facility that is (or is part of) a major source of HAP emissions must comply with the final rule.

### *B. What Are the Affected Sources and Emission Points?*

The affected sources are each new or existing sinter plant, blast furnace, and BOPF shop at an integrated iron and steel manufacturing facility that is (or is part of) a major source of HAP emissions. Emission limitations apply to the sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace casthouse; and the BOPF shop including each furnace and ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy). These processes, as well as their emissions and controls, are described in the preamble to the proposed rule (66 FR 36838–36839).

### *C. What Are the Emission Limitations?*

The final rule includes particulate matter (PM) emission limits and opacity limits as well as operating limits for capture systems and control devices. An operating limit also applies either to the oil content of the sinter plant feedstock or to the volatile organic compound (VOC) emissions from the sinter plant windbox exhaust stream. Particulate matter and opacity serve as surrogate measures of HAP emissions.

1. Sinter Plants

The PM emission limits for a windbox exhaust stream are 0.4 pounds per ton (lb/ton) of product sinter for an existing sinter plant and 0.3 lb/ton for a new sinter plant. The final rule limits PM emissions from a discharge end to 0.02 grains per dry standard cubic foot (gr/dscf) for an existing plant and 0.01 gr/dscf for a new plant. The discharge end PM limits are a flow-weighted average when multiple control devices are operated in parallel. A 20 percent opacity limit applies to fugitive emissions from a discharge end at an existing sinter plant; a 10 percent opacity limit applies to a new sinter plant (both are 6-minute averages). The PM emission limits for sinter cooler stacks are 0.03 gr/dscf for an existing plant and 0.01 gr/dscf for a new plant. If the sinter cooler is vented to the same control device as the discharge end, the PM limit is 0.02 gr/dscf for an existing plant and 0.01 gr/dscf for a new plant.

2. Blast Furnaces

The PM emission limits for a control device applied to emissions from a casthouse are 0.01 gr/dscf for an existing blast furnace and 0.003 gr/dscf for a new blast furnace. The opacity limits for fugitive emissions from a casthouse are 20 percent for an existing blast furnace and 15 percent for a new blast furnace (both are 6-minute averages).

3. BOPF Shops

For primary emissions from BOPF, different PM emission limits apply based on the type of hood system (closed or open). For BOPF with closed hood systems at a new or existing BOPF shop, the PM emission limit is 0.03 gr/dscf, and it only applies during periods of primary oxygen blow. The primary oxygen blow is the period in which oxygen is initially blown into the furnace and does not include any subsequent reblows. For BOPF with open hood systems, the PM emission limits are 0.02 gr/dscf for an existing BOPF shop and 0.01 gr/dscf for a new BOPF shop. These emission limits apply during all periods of the steel production cycle. The steel production cycle begins when the furnace is first charged with scrap and ends 3 minutes after slag is removed. The BOPF limits are a flow-weighted average when multiple control devices are operated in parallel.

The PM emission limits for a control device applied solely to secondary emissions from a BOPF are 0.01 gr/dscf for an existing BOPF shop and 0.0052 gr/dscf for a new BOPF shop. Secondary emissions are those not controlled by the primary emission control system, including emissions that escape from open and closed hoods and openings in the ductwork to the primary control system.

For the BOPF shop, the PM emission limit for a control device applied to emissions from ancillary operations (hot metal transfer, skimming, and desulfurization) is 0.01 gr/dscf for an existing BOPF shop and 0.003 for a new BOPF shop. The PM emission limits for ladle metallurgy operations are 0.01 gr/dscf for an existing BOPF shop and 0.004 gr/dscf for a new BOPF shop.

For the BOPF roof monitor, a 20 percent opacity limit applies to fugitive emissions from the BOPF or BOPF shop operations in an existing BOPF shop. This opacity limit is based on 3-minute

averages. For a new BOPF shop housing a bottom-blown furnace, a 10 percent opacity limit applies (6-minute average) except that one 6-minute period not to exceed 20 percent may occur once during each steel production cycle. For a new BOPF shop housing a top-blown furnace, a 10 percent opacity limit applies (3-minute average) except that one 3-minute period greater than 10 percent but less than 20 percent may occur once during each steel production cycle.

4. Capture Systems

We revised the requirements for capture systems to allow plants to choose operating parameters appropriate for assessing capture system performance, establish the values or settings for the parameters, and designate monitoring requirements. At a minimum, the limits must indicate the level of the ventilation draft and damper position settings. Plants must include information to support their selected parameter(s) in their operation and maintenance plan (including other process configurations that may be used) and certify in their performance test report that during the tests, the capture system operated at the limit(s) established in their plan.

5. Operating Limits

For bag leak detection systems, we require that corrective actions be initiated within 1 hour of a bag leak detection system alarm. For a venturi scrubber, the hourly average pressure drop and scrubber water flow rate must remain at or above the level established during the initial performance test. Plants using an electrostatic precipitator (ESP) must install and operate a continuous opacity monitoring system (COMS) according to Performance Specification 1 in 40 CFR part 60, appendix B. The average opacity for each 6-minute period must remain at or below the site-specific limit. The final rule uses a statistical approach, requiring that the limit be based on the COMS average corresponding to the 99 percent upper confidence limit on the mean of a normal distribution of average opacity values established during the initial performance test. Plants must submit information on monitoring parameters if another type of control device is used.

The final rule requires sinter plants to maintain the oil content of the feedstock at or below 0.02 percent. This limit is based on a 30-day rolling average. We are including an alternative VOC limit of 0.2 pound of VOC per ton (lb/ton) of sinter produced. This limit is also based on a 30-day rolling average.

*D. What Are the Operation and Maintenance Requirements?*

All plants subject to the final rule must prepare and implement a written startup, shutdown, and malfunction plan according to the requirements in 40 CFR 63.6(e). A written operation and maintenance plan is also required for capture systems and control devices subject to an operating limit. This plan must describe procedures for monthly inspections of capture systems, preventative maintenance requirements for control devices, and corrective action requirements for baghouses. To avoid potential implementation issues, we have added specific descriptions of the equipment to be inspected and a requirement to correct any deficiency or defect as soon as practicable. In the event of a bag leak detection system alarm, the plan must include specific requirements for initiating corrective action to determine the cause of the problem within 1 hour, initiating corrective action to fix the problem within 24 hours, and completing all corrective actions needed to fix the problem as soon as practicable. If applicable, the plan also must include procedures for determining and recording the sinter plant production rate.

*E. What Are the General Compliance Requirements?*

The final rule requires compliance with the emission limitations and operation and maintenance requirements at all times, except during periods of startup, shutdown, and malfunction as defined in 40 CFR 63.2. The owner or operator must develop and implement a written startup, shutdown, and malfunction plan according to the requirements in 40 CFR 63.6(e)(3).

The final rule also requires keeping a log detailing the operation and maintenance of the process and emission control equipment. This requirement applies during the period between the compliance date and the date that continuous monitoring systems are installed and any operating limits set.

*F. What Are the Initial Compliance Requirements?*

The final rule requires performance tests to demonstrate that each affected source meets all applicable emission and opacity limits. The final rule allows the owner or operator to conduct representative sampling of stacks where there are more than three stacks associated with a process (subject to approval by the permitting authority). The PM concentration (front-half filterable catch only) is to be measured using EPA Method 5, 5D, or 17 in 40 CFR part 60, appendix A. The EPA Method 9 in 40 CFR part 60, appendix A, is required for determining the opacity of emissions, with instructions for computing 6-minute and 3-minute block averages.

The final rule also includes procedures for establishing site-specific operating limits for control devices during the performance test. We have also included procedures to be followed during opacity tests to ensure capture systems operate at the limits established in the operation and maintenance plan.

The final rule requires a performance test to demonstrate initial compliance with the operating limit for the oil content of the sinter plant feedstock using OSW 846 Method 9071B (Revision 2, April 1998). Plants must sample for 30 consecutive days and compute the 30-day rolling average for each operating day. Plants electing the alternative operating limit must conduct a performance test by sampling VOC emissions and analyzing the samples according to EPA Method 25 in 40 CFR part 60, appendix A. Plants may use an alternative method that has been previously approved by the permitting authority in lieu of OSW 846 Method 9071B for oil content or EPA Method 25 for VOC emissions.

To demonstrate initial compliance with the operation and maintenance requirements, owners or operators must prepare the operation and maintenance plan, certify in the performance test report that capture systems operated at the limits established in the operation and maintenance plan, and submit their notification of compliance status. In the notification of compliance status, the owner or operator must certify that the capture systems will be operated at the limits established in the plan.

*G. What Are the Continuous Compliance Requirements?*

Plant owners or operators must conduct PM and opacity performance tests at least twice during each title V operating permit term (at midterm and renewal). Owners or operators also must monitor operating parameters for capture systems and control devices subject to operating limits, and carry out the procedures in their operation and maintenance plan.

To demonstrate continuous compliance with the operating limit for the oil content of sinter plant feedstock, owners or operators must determine the oil content every 24 hours (from the composite of at least three samples taken at 8-hour intervals) and compute

and record the 30-day rolling average percent oil content of sinter feed for each operating day. Plants electing the alternative limit must determine VOC emissions every 24 hours (from at least three samples taken at 8-hour intervals) and compute and record the 30-day rolling average emissions (in lb/ton of sinter) for each operating day.

The final rule requires a continuous parameter monitoring system (CPMS) to measure and record operating parameters for capture systems subject to an operating limit. Dampers that are manually set and remain in the same position are exempt from the CPMS requirement. For dampers that are not manually set and remain in the same position, the final rule requires a daily visual check (every 24 hours) to verify they are in the correct positions.

For baghouses, owners or operators are required to monitor the relative change in PM loading using a bag leak detection system and make inspections at specified intervals. The bag leak detection system must be installed and operated according to the EPA guidance document ''Fabric Filter Bag Leak Detection Guidance,'' EPA 454/R–98–015, September 1997. The document is available on the TTN at *http://www.epa.gov/ttnemc01/cem/tribo.pdf*. If the system does not work based on the triboelectric effect, it must be installed and operated consistent with the manufacturer's written specifications and recommendations. The basic inspection requirements include daily, weekly, monthly, or quarterly inspections of specified parameters or mechanisms with monitoring of bag cleaning cycles by an appropriate method. To demonstrate continuous compliance, the final rule requires records documenting conformance with the operation and maintenance plan, as well as the inspection and maintenance procedures.

For venturi scrubbers, owners or operators must use CPMS to measure and record the hourly average pressure drop and scrubber water flow rate. For ESP, owners or operators must use COMS to measure and record the average opacity of emissions exiting each stack of the control device for each 6-minute period. Owners or operators must operate and maintain the COMS according to the requirements in 40 CFR 63.8 and Performance Specification 1 in 40 CFR part 60, appendix B. These requirements include a quality control program including a daily calibration drift assessment, quarterly performance audit, and annual zero alignment.

The final rule requires owners or operators to prepare a site-specific monitoring plan for CPMS that addresses installation, performance, operation and maintenance, quality assurance, and recordkeeping and reporting procedures. These requirements replace the more detailed performance specifications contained in the proposed rule.

To demonstrate continuous compliance, owners or operators must keep records documenting compliance with the monitoring requirements (including installation, operation, and maintenance requirements for monitoring systems) and the operation and maintenance plan.

*H. What Are the Notification, Recordkeeping, and Reporting Requirements?*

The notification, recordkeeping, and reporting requirements are based on the NESHAP General Provisions in 40 CFR part 63, subpart A. Table 4 to subpart FFFFF lists each of the requirements in the General Provisions (§§ 63.2 through 63.15) with an indication of whether they apply.

The plant owner or operator must submit each initial notification required in the NESHAP General Provisions that applies to their facility. These include an initial notification of applicability with general information about the facility and notifications of performance tests, performance evaluations, and compliance status.

Owners or operators are required to maintain the records required by the NESHAP General Provisions that are needed to document compliance, such as performance test results; copies of startup, shutdown, and malfunction plans and associated corrective action records; monitoring data; and inspection records. Except for the operation and maintenance plan for capture systems and control devices, all records must be kept for a total of 5 years, with the records from the most recent 2 years kept onsite. The final rule requires that the operation and maintenance plan for capture systems and control devices subject to an operating limit be kept onsite and available for inspection upon request for the life of the affected source or until the affected source is no longer subject to the final rule requirements.

We clarified the recordkeeping requirements required to demonstrate compliance with the operating limit for sinter plants. The final rule requires records of the sampling date and time, sampling values (oil content or VOC measurements), sinter produced (tons/day), and the 30-day rolling average for each operating day.

Semiannual reports are required for any deviation from an emission limitation (including an operating limit) or operation and maintenance requirement. Each report is due no later than 30 days after the end of the reporting period. If no deviation occurs, only a summary report is required. If a deviation does occur, more detailed information is required.

An immediate report is required if actions taken during a startup, shutdown, or malfunction are not consistent with the startup, shutdown, and malfunction plan. Deviations that occur during a period of startup, shutdown, or malfunction are not violations if the owner or operator demonstrates to the authority with delegation for enforcement that the source was operating in accordance with the startup, shutdown, and malfunction plan.

*I. What Are the Compliance Deadlines?*

The owner or operator of an existing affected source must comply by May 22, 2006. An existing affected source is one constructed or reconstructed before July 13, 2001. We changed the compliance date for existing affected sources from 2 years to 3 years after the effective date because some plants must install new capture and control systems and perform significant upgrades of primary emission control systems.

In the final rule, we have corrected a printing error that incorrectly listed the date defining a new affected source as July 23, 2001. A new affected source is one constructed or reconstructed on or after July 13, 2001. New or reconstructed sources that startup on or before the effective date of today's final rule must comply by May 20, 2003. New or reconstructed sources that startup after the effective date of the final rule must comply upon initial startup.

## III. Summary of Responses to Major Comments

*A. How Did We Develop the MACT Floors?*

We stated in the proposal preamble that we may take alternative approaches to establish a MACT floor, depending on the type, quality, and applicability of available data. The three approaches most commonly used involve: (1) Reliance on State regulations or permit limits in conjunction with emission test data; (2) use of emissions test data alone to estimate actual emissions; and (3) use of control technology information in conjunction with emission test data to estimate actual emissions performance. In practice, regardless of what approach we select, we attempt to ensure that our emissions performance estimates reasonably characterize the level of performance that the relevant sources

consistently achieve, considering normal operational variability.

*Comment.* One commenter contends that EPA may use State regulations or permit limits to set floors only to the extent that such regulations and limits provide a demonstrably accurate picture of the relevant best source's actual performance. The commenter also states that EPA may only use the performance of a chosen floor technology to set floors if such technology is the only factor influencing the relevant best sources' actual performance. In addition, the floor must reflect actual performance, not what EPA thinks is achievable with a particular technology. The commenter concludes that all of EPA's floors suffer from the same basic defect in that ''. . . they do not represent the actual performance of the relevant best sources.''

*Response.* While EPA may use any reasonable approach to estimate the emissions control achieved in practice by the best-controlled similar source and the average emissions limitation achieved by the best-performing 12 percent of units in a category (or best 5 units for categories of less that 30 sources), we generally agree with the commenter that it is preferable to use actual performance test data to determine the MACT floor when there are adequate such data available to reasonably characterize the level of performance of the relevant sources. Our approach to identifying the MACT floors and establishing emission limits for the various emission points at integrated iron and steel facilities is consistent with this preference. Nonetheless, we did use State regulations and permit limits in some instances to help us estimate the MACT floor level of performance for certain emission points for which we have limited emission test data. However, in each case where we used such information, we also evaluated the available emission test data and other factors (such as type of control technology and the design parameters that affect performance) to confirm that the State limits reasonably reflect the actual performance of the best units.

In those instances where we had a sufficient quantity of emission test data to reasonably estimate the performance of the relevant best units, we applied a statistical approach to confirm and refine the emission estimates from proposal. This process involved application of a statistical approach to determine the average emission limitation achieved and account for normal operational variability. As described below, this approach ensures that the emissions estimates used to identify the MACT floors reasonably reflect the level of control that is actually achieved by the relevant units over time, and under the most adverse foreseeable circumstances. (The full supplemental analysis is documented in the docket.) We had adequate test data to apply this approach to the emission limits for the sinter plant windboxes, casthouse control devices, primary control systems on open and closed hood BOPF, and control devices applied to hot metal transfer, desulfurization, and ladle metallurgy.

For each of these emission points we confirmed and refined our earlier estimates of the performance of the relevant best-performing units used to identify the MACT floors. At proposal, we estimated the performance of the best-controlled sources by identifying the best control technology that had been demonstrated for each source. We then evaluated the available data for sources using the best control technology and established emission limits for new and existing sources based on the level of control that sources with the technology had achieved.

Conceptually, our approach to estimating the performance of the best-controlled units is relatively straightforward. While we believe each emissions source test gives a good indication of the level of control achieved by the control device during the time of the emissions test, we do not believe a single emissions source test can be used as an estimate of the long term emissions performance achieved by that source. Normal variations in process and control device performance and other factors, such as the inherent imprecision of sampling and analysis, which cannot be controlled, will result in variability in the performance of every source over time, including the best-performing sources. We believe that the MACT floor performance level must reasonably account for the ordinary variability in the performance of the best-controlled sources over time and under the most adverse circumstances which can reasonably be expected to occur. As such, the MACT floor performance limit must include a consideration for the variability inherent in the process operations and the control device performance.

For today's final rule, when emissions source test data were available, we used a statistical method to confirm and refine the emission estimates used at proposal to identify the MACT floors for the relevant units. For each case where emissions source test data were available, we estimated the emissions limitation achieved for each source at the 95th percentile using the one-sided z-statistic test (*i.e.*, the emission limitation which the emission point is estimated to be able to achieve 95 percent of the time). Assuming a normal distribution, the 95th percentile is 1.645 standard deviations above the mean. We chose the median of the 95th percentiles of the top-performing sources as the MACT floor. We used the median as the most representative estimate of the average emission limitation achieved by the best-performing five sources because the median points to the performance of an actual unit, with a specific combination of process operations and control device performance.

We evaluated several options to estimate the standard deviation that is needed to perform the analysis. We decided not to estimate the standard deviation for each source based on the available emissions data for just that one source since we have only three data points for most sources to use in estimating the standard deviation-one data point for each run in a three run emissions source test. Instead, we calculated a relative standard deviation (RSD) for each test and then averaged the RSD to provide our best estimate of the variability of the test data. The RSD is the standard deviation divided by the mean. The RSD provides a way to estimate the standard deviation for different values of the mean when there are too few data points to calculate the standard deviation directly. We believe this method adequately accounts for the normal variability in emissions source test data and provides a reasonable estimate of the long term emissions limitation achieved.

For new sources, the MACT floor is the emissions control that is achieved in practice by the best-controlled similar source. In order to confirm and refine our emissions estimates for new sources, we identified the best-controlled source based on test data and applied the same statistical techniques to determine the emission limitation achieved in practice for new sources. We calculated the upper 95th percentile of performance for the best-controlled source, and we chose this value as the emission limitation that can be achieved by new sources.

We believe the statistical technique used to account for general variability is appropriate and reasonable. However, we also recognize that some of the empirical test data may imply a level of accuracy that is not present throughout the entire data set. As a result, we have some reservations about identifying a MACT floor with a level of accuracy that is not warranted by the underlying data. Accordingly, we have concluded


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that it is appropriate in some instances to round the results to two decimal places. This approach encompasses the specific statistically-derived numbers, while acknowledging that there is some residual uncertainty about the representativeness of the data. Thus, while we believe generally that our use of the 95th percentile adequately identifies the range of actual performance of individual facilities, our rounding approach should alleviate any concerns regarding whether the statistics sufficiently capture the full range of ordinary performance of the best-performing units over time and under the most adverse circumstances that can be reasonably expected to occur.

Changes resulting from rounding will have no practical effect on how industry responds to the emission limitations. That is, the control technology needed is exactly the same and the equipment must be operated in the same manner regardless of whether the numbers are rounded or not. A properly designed and operated control device will still be required to meet the rounded emission limit. Today's final rule has provisions for operating parameters and operation and maintenance plans to ensure proper operation. Thus, other than serving to better reflect uncertainties in the underlying data, the rounding has no practical impact on the stringency of the requirements.

Additional information on the statistical analysis used to confirm and refine our emissions estimates, including the data used and the complete ranking of sources, is available in the docket.

The objective of both the MACT floor methodology used at proposal, and the methodology used here to confirm and refine the proposed estimates of performance, is exactly the same. For each relevant operation at integrated iron and steel facilities, both approaches expressly are intended to provide a quantified estimate of the emission performance of the best-controlled similar source, or of the average emission limitation achieved by the relevant best-performing sources in the category, taking into consideration the ordinary and unavoidable variations in process operations and performance of the emissions control equipment.

Moreover, the conclusions growing from the supplemental statistical analysis, regarding the levels of performance that reflect the MACT floor for both new and existing units, in large measure simply confirm that the analysis underlying the proposal provided a reasonable estimation of performance.

Indeed, none of the refinements to our performance estimates will have any practical effect on how industry responds to the emission limitations. As is the case with our decision to round the emission estimates, any changes in the emission limitations in the final rule will require the same control technology as would have been needed to meet the proposed limits, and the control equipment will need to be operated in the same manner as would have been the case with the proposed emission limitations.

For three emission points (sinter cooler, sinter plant discharge end, and control devices for BOPF fugitive emissions), we had only one or two test results. Consequently, we did not have an adequate set of emissions test data to directly estimate the actual performance of the top-performing sources. Consequently, we developed the floors for these three emission points based on the facilities subject to the most stringent State regulations or permit limits, and we used the available emissions information (emissions data and a characterization of the operational processes and emissions controls) to confirm that the identified State limits reasonably reflect the actual performance of the relevant best-performing units. That is, the best units are able to achieve the required State limits but are not consistently achieving a level of emissions performance that is more stringent than the State limits. The EPA may use State limits as long as we demonstrate that such limits provide a reasonable estimate of the actual performance of the best-performing sources.

For floors based on State opacity regulations that limit fugitive emissions, we collected additional data and found that sources are achieving a level of performance that is within the current limits, but they are not consistently achieving a level of control more stringent than the identified State limits. Consequently, we believe these State limits provide an accurate picture of the best sources' actual performance considering inherent and unavoidable variability. We used this approach to develop the MACT floor for opacity from the sinter plant discharge end, blast furnace casthouse, and BOPF shop.

We provide additional rationale in the following sections where we discuss in detail the development of the MACT floors for each emission point.

1. Sinter Plant Windbox Exhaust

*Comment.* One commenter stated that EPA proposed an emission limitation of 0.3 lb/ton of PM based on the performance of either a baghouse or scrubber. According to the commenter, EPA's floor does not reflect the actual performance of the relevant best sources—the average emission limitation achieved by the top five sources. As shown in the BID, the average emission limitation achieved by the best-performing five sources is 0.079 pound per ton (lb/ton), not the proposed limit of 0.3 lb/ton. Second, floor reflects what EPA believed to be achievable with the control technologies and not the actual performance of the relevant best sources. Third, EPA admits that several factors other than the performance of the technologies influence emissions.

*Response.* As we documented in appendix B of the BID, the floor for sinter plant windboxes was based on actual source test data and the five best-performing sources. We collected test data and verified that EPA Method 5 (40 CFR part 60, appendix A) was used. We ranked the results (in lb/ton of sinter) and calculated the average of the five best-performing sources (0.3 lb/ton). Contrary to the commenter's assertion, we did not rely on control technology to identify the best-performing units or to estimate the performance of the best units. In this particular case, we had adequate test data to directly estimate the average emission limitation achieved by the five best-performing sources.

The calculation performed by the commenter is inappropriate and does not provide an accurate estimate of the emission limitation achieved by the plants. The commenter misinterpreted the information in the BID, which is not source test data, but is simply a best estimate of annual average emissions based on approximate emissions factors and the assumption that all plants operate continuously at their design capacity. Such an estimate cannot be used to represent actual performance in a MACT floor calculation.

After proposal, we reviewed our approach for developing the MACT floor and concluded that our original analysis did not sufficiently account for the normal and unavoidable variability inherent in the process operations and emission control equipment (as demonstrated by the emission test data). The average performance of the five best-performing sinter plants ranged from 0.26 to 0.32 lb/ton of sinter. To account for inherent variability, we applied the z-statistic to estimate the 95th percentile of a normal distribution for each source. The median of the 95th percentiles of the five best-performing sources is 0.4 lb/ton, which we chose to represent the MACT floor. This level of performance reasonably reflects the

average emission limitation achieved by the five best-performing sources considering inherent variability. The best-controlled source averaged 0.26 lb/ton with a 95th percentile of 0.3 lb/ton, which represents the MACT floor for new sources.

2. Sinter Plant Limit on Oil Content

*Comment.* Two commenters stated that the proposed limit on oil content of 0.025 percent was based on the highest oil percentage of any of the four plants for which EPA had oil percentage data. They claim this is not a valid approach because it does not represent the actual performance of the relevant best sources. One commenter recommended that EPA consider beyond-the-floor technologies for dioxin emissions, such as elimination of rolling mill scale from sinter feed, de-greasing of sinter plant feed, quality control of water used in sinter plant feed preparation, and use of low-organic waterborne rolling mill lubricants.

*Response.* Our research indicates that emissions of organic compounds from sinter plant windboxes are controlled by limiting the amount of oil in the sinter feed. Emission control devices applied to sinter plants are designed primarily for the removal of PM and not for the various organic compounds that are formed from the oil. We believe that oil content is the most significant factor affecting organic compound HAP emissions. Consequently, we identified the MACT floor for organic HAP emissions from sinter plants based on the level of oil content that we observed for the sinter plants with the best programs to control oil in the sinter feed.

We obtained data from four sinter plants that have implemented a program to control the oil content of the sinter feed. We then examined the data and evaluated the variability to determine the level of control that has been achieved. The average results for oil content for each plant ranged from 0.014 to 0.025 percent. These are the best-performing plants because they were the only ones that routinely sample for oil content. We applied the z-statistic and estimated the 95th percentile for each plant. (The statistical analysis considered that the limit is based on a 30-day rolling average, which reduces the inherent variability as indicated by a lower standard deviation than that associated with a single analysis of oil content.) The median of the 95th percentiles for the top-performing plants is 0.022 percent. We rounded this value to 0.02 percent, and this level represents the MACT floor for existing units. The best-performing source averaged 0.014 percent oil with a 95th percentile of 0.015 percent. We rounded this value to 0.02 percent, and this level represents the MACT floor for new units.

We reviewed opportunities for control beyond the floor. We do not believe it is practical or feasible to eliminate rolling mill scale from the sinter feed. The sinter plant provides the only opportunity to recycle and recover the raw material value. Otherwise, the mill scale would be landfilled. De-greasing or de-oiling the sinter feed has been investigated by the industry, but there is no demonstrated technology in use at any sinter plant that has proven to be successful. There is no indication that the water used in preparing the sinter feed contributes to the oil content; therefore, water quality control is not expected to have an impact on emissions of organic compounds. Waterborne lubricants may have some advantages in certain applications. However, they are problematic in some applications in the demanding environment of steel rolling mills. We could find no indication that the practices cited by the commenter have been demonstrated to reduce dioxin or other organic compound emissions. Consequently, we selected a limit on oil content as the MACT floor. We believe it is more appropriate to set a performance standard that limits oil content rather than mandating a technology that an owner or operator must use to reduce oil content. The performance standard for oil content will encourage owners or operators to investigate technologies that reduce oil content to find the most effective approach for their specific situation.

*Comment.* Six commenters object to the proposed limit on oil content because EPA has not shown that it is achievable by the best-performing sinter plants under the most adverse anticipated circumstances over time.

*Response.* As we discussed in our previous response, we confirmed and refined the MACT floor estimates using a statistical approach to account for inherent variability. Based on this approach, we believe the MACT floor has been achieved on a continuing basis by the best-performing units. In addition, the limit is enforced based on a 30-day rolling average, which further enhances achievability because it allows an occasional high daily value to be averaged with lower values on other days to achieve compliance. A 30-day rolling average also provides time to take corrective action and lower the oil content before the limit is exceeded.

3. PM Standard for Blast Furnace Casthouse Control Device

*Comment.* One commenter stated that the technology approach used to develop the floor does not reflect the actual performance of the relevant best sources. The commenter further states that EPA admits that there are factors other than the type of control technology that affect the actual emission control performance of blast furnace casthouse control devices. Specifically, factors affecting emissions include duration of tapping, exposed surface area of metal and slag, length of runners, and the presence or absence of runner covers or flame suppression. Thus, the performance of a baghouse cannot be representative of the best sources's actual performance.

*Response.* We proposed a PM standard of 0.009 gr/dscf for blast furnace casthouse control devices based on the performance of existing units using baghouses. We re-evaluated the emissions test data for blast furnace casthouses based on the statistical approach previously discussed in order to confirm and refine our emissions estimates for the best-performing units. We have test data for fugitive emissions from source tests at four casthouses. The available data clearly indicate that a baghouse is the best technology for controlling emissions from blast furnace casthouses. We reviewed the test data and the design features of these baghouses (such as air-to-cloth ratio), and we concluded that the baghouses that had been tested were among the best-performing units. The test results ranged from 0.002 to 0.0072 gr/dscf. We calculated the 95th percentile for each plant. The median of the 95th percentiles for the top-performing plants is 0.005 gr/dscf. We rounded this value to two decimal places and chose 0.01 gr/dscf to represent the MACT floor level of control for existing sources.

The best-controlled source averaged 0.002 gr/dscf with a 95th percentile of 0.0034 gr/dscf. We rounded the 95th percentile to 0.003 gr/dscf to represent the MACT floor for new sources.

4. PM Standard for BOPF Primary Control Devices

*Comment.* One commenter stated that the chosen floor technologies do not represent the actual performance of the relevant best sources.

*Response.* We proposed a PM limit of 0.019 gr/dscf for new and existing open hood BOPF primary control systems based on the performance of existing units using ESP. We re-evaluated the emissions test data for open hood BOPF using the statistical approach previously

discussed, in order to confirm and refine our emissions estimates for the best-performing units. The available data clearly indicate that ESP perform better than venturi scrubbers in controlling emissions from open hood shops. We have test data for five ESP that are similar in design, each of which, based on design and operating data, are among the best-performing units at open hood shops. The data include multiple tests at some plants, and these data indicate there is variability in performance from test to test and from run to run. The plant averages ranged from 0.007 to 0.019 gr/dscf, and individual tests (three-run averages) ranged from 0.004 to 0.019 gr/dscf. We calculated the 95th percentile for each plant. The median of the 95th percentiles for the top-performing plants is 0.019 gr/dscf. We rounded this value to two decimal places and chose 0.02 gr/dscf to represent the MACT floor for existing units.

The best-controlled open hood shop averaged 0.0066 gr/dscf with a 95th percentile of 0.01 gr/dscf, which we chose to represent the MACT floor for new sources.

We proposed a limit of 0.024 gr/dscf for new and existing closed hood BOPF primary control systems based on the performance of existing units using venturi scrubbers. All of the closed hood shops use venturi scrubbers as the primary control device. The test data and design information indicated that shops having high-energy venturi scrubbers with a pressure drop of 50 inches of water or more are the best-performing sources. We have recent test data for only one closed hood shop. However, we have data from 1971 to 1978 for high-energy venturi scrubbers on closed hood shops. These data include four BOPF shops that are currently operating. The test results range from 0.021 to 0.024 gr/dscf. For purposes of today's final rule, we did not include Kaiser Steel because the plant has been closed for several years. We calculated the 95th percentile for each plant. The median of the 95th percentiles for the top-performing plants is 0.027 gr/dscf. We rounded this value to two decimal places and chose 0.03 gr/dscf to represent the MACT floor for existing sources.

The best-controlled closed hood shop averaged 0.021 gr/dscf with a 95th percentile of 0.027 gr/dscf. We rounded the 95th percentile to two decimal places and chose 0.03 gr/dscf to represent the MACT floor for new sources.

*Comment.* Six commenters said EPA used test data dating from 1971 through 1978 to establish the limit for closed hood systems. These commenters believe the data do not reflect current configurations or actual performance and cannot be used to establish the floor. Many systems have been upgraded to increase capture efficiency (including some furnaces used to establish the standard). Because there are little or no data for these sources, the commenters recommend that EPA use existing State implementation plans (SIP) to determine the floor. Another commenter agrees, adding that the test data used to support the 0.024 gr/dscf limit ranged up to 0.031 gr/dscf and represent the minimum anticipated variation of emissions from a MACT floor technology source. The proposed limit is more stringent than existing SIP and may not be achievable by plants using MACT floor controls. The analysis does not consider the current PM limit of 0.03 gr/dscf for plants in Ohio, which the commenter believes should be the limit.

*Response.* The test data for closed hood shops are not just from tests in 1971 to 1978—there is a 1992 test for Geneva Steel. The commenters did not provide any information on the nature of the upgrades or rationale as to their effect on emissions. For closed hood systems, testing is performed only during the oxygen blow with the capture hood tightly fitted to the furnace. Our understanding is that capture system upgrades have been made primarily to improve the capture of fugitive emissions from charging and tapping, which are not included in the performance testing for closed hood furnaces. In addition, the operating conditions of the scrubbers during the tests (*e.g.*, pressure drops of 50 inches of water or more) are representative of the way these scrubbers are currently operated. Data for venturi scrubbers in other similar processes indicate that high-pressure drop scrubbers can achieve control levels of 0.03 gr/dscf or less. We believe the statistical approach that we used to confirm and refine emissions estimates for the floor analysis accounts for inherent variability over time. We believe that source test data provide a better picture of actual performance than the use of State limits as the commenter suggests. Moreover, based on our analysis of the emission tests, we have identified as MACT an emissions limit of 0.03 gr/dscf which is consistent with the emissions limits that the commenters identified as appropriate.

5. PM Standards for Ancillary Operations at BOPF Shops

*Comment.* According to eight commenters, the three data points for hot metal transfer and desulfurization are not sufficient to define the floor, accurately represent current operating conditions, or reflect a level that is consistently achievable under the most adverse foreseeable circumstances over time. If sufficient data are not available, EPA should use existing State limits, if it can show that the level of control is realistically achievable under the most adverse anticipated circumstances over time. The commenters also question that the data used for characterizing performance were collected using the same test procedures specified in the proposed rule (average of three 1-hour tests during actual operation of the processes). Using data from a test method other than the required compliance method to set a standard does not meet CAA requirements.

*Response.* We proposed a PM standard of 0.007 gr/dscf for a control device serving BOPF ancillary processes based on the performance of existing units using baghouses. We reviewed the emissions data and confirmed the tests were conducted using EPA Method 5 (40 CFR part 60, appendix A). Every test result was presented as the average of three runs, which is consistent with our performance test requirements. Several test reports confirmed that sampling was conducted under normal operating conditions, and none of the reports indicated conditions were not normal. The tests used a sampling time of 1 hour or more to ensure an adequate sample volume was collected. As explained earlier, in response to another comment, EPA believes that it is preferable to use actual performance test data to determine the MACT floor when there are adequate such data available to reasonably characterize the level of performance of the relevant sources. The commenters did not provide us with any additional facts or data to show that any of the data we relied upon are invalid. For the reasons described above, we believe that these data are adequate to reasonably estimate the performance of the best sources for purposes of establishing a MACT floor, and these estimates more accurately reflect the actual performance of the best-performing sources than would estimates based on State permit data. Moreover, the approach that we used to confirm and refine the emissions estimates for the top-performing sources assures that we have adequately accounted for variability over time, and, therefore, addresses the concerns of the commenter.

We re-evaluated the emissions test data for ancillary operations based on the statistical approach previously discussed, in order to confirm and


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refine our earlier analysis. At proposal, we considered the combined data for hot metal transfer/desulfurization and ladle metallurgy. However, we believe it is necessary to separate the two operations because hot metal transfer/desulfurization is performed on molten iron before charging to the BOPF. Ladle metallurgy is performed on molten steel from the BOPF. Consequently, the two processes have different emission characteristics which suggests each should have a separate MACT floor determination.

We have test data from three source tests of desulfurization and hot metal transfer. The control device used in these source tests, and the only type of control used for these processes, is a baghouse. We reviewed the test data and the design features of these baghouses (such as air-to-cloth ratio), and we concluded that the baghouses that had been tested were among the best-performing units. The three tests ranged from 0.0016 to 0.012 gr/dscf. We calculated the 95th percentile for each plant. The median of the 95th percentiles for the top-performing plants is 0.006 gr/dscf. We rounded this value to two decimal places and chose 0.01 gr/dscf to represent the MACT floor for existing units.

The best-controlled source averaged 0.0016 gr/dscf with a 95th percentile of 0.003 gr/dscf, which we chose to represent the MACT floor for new sources.

We have test results for six source tests of typical ladle metallurgy operations. As with desulfurization, the control device used in these source tests, and the only type of control used for these processes, is a baghouse. We reviewed the test data and the design features of these baghouses (such as air-to-cloth ratio), and we concluded that the baghouses that had been tested were among the best-performing units. The five best-performing units ranged from 0.0021 to 0.0047 gr/dscf. We calculated the 95th percentile for each plant. The median of the 95th percentiles for the top-performing plants is 0.006 gr/dscf. We rounded this value to two decimal places and chose 0.01 gr/dscf to represent the MACT floor for existing units.

The best-controlled source with typical ladle metallurgy operations (lance injection, electromagnetic stirring, and alloy addition), averaged 0.0021 gr/dscf with a 95th percentile of 0.004 gr/dscf, which we chose to represent the MACT floor for ladle metallurgy for new sources.

6. Opacity Standard for Sinter Plant Discharge End

*Comment.* According to one commenter, EPA does not explain how the floor determination represents an accurate picture of the relevant best sources' actual performance, or how it knows that the best sources are not doing better than their permits require.

*Response.* We proposed an opacity limit of 20 percent for the sinter plant discharge end based on the five sources subject to the most stringent existing State regulations or permit limits. One plant has a 10 percent opacity limit, and four plants have a 20 percent opacity limit. We chose the median (20 percent) to represent the MACT floor.

A total of six of the seven operating plants use a capture and control system vented to a baghouse for the discharge end, and engineering knowledge of their design features and the nature of emissions indicate that these baghouses are the best demonstrated control technology for the discharge end. Following the end of the comment period, in order to confirm the appropriateness of the proposed opacity limit, we surveyed the industry to obtain additional opacity data for the discharge end. The only substantive data we obtained was from Ispat-Inland, which submitted the results of 1,745 hours of observations by EPA Method 9 (40 CFR part 60, appendix A) conducted over 4 years (1997 to 2000). Ispat-Inland is among the better-performing plants because it controls the discharge end, crusher, and hot screen by capturing emissions using local hooding and ventilation and venting them to a baghouse for collection. Consequently, we believe that the control system at Ispat-Inland is representative of the best-performing sources.

At Ispat-Inland, approximately one percent of the hourly opacity observations had a 6-minute average that exceeded 20 percent opacity, and the plant met the proposed limit 99 percent of the time. Although many of the observations were below 20 percent opacity, the limit accommodates the normal variability in the process operations and control equipment. The data clearly show that Ispat-Inland is not consistently performing substantially better than what their permit requires and that our proposed limit is a reasonable picture of what the best-controlled sources can achieve.

*Comment.* Seven commenters contend that EPA has not shown that existing State limits are consistently achievable under the worst foreseeable conditions over time. The commenters claimed that opacity data they submitted to EPA demonstrates that the limits are not consistently achievable by well-operated and maintained sinter plants. The EPA must reevaluate the achievability of the proposed opacity standard.

*Response.* None of the commenters provided evidence that facilities subject to the identified State limits have been unable to meet those limits (*e.g.*, in the form of reported violations). Moreover, as discussed in the previous response, approximately 99 percent of the hourly opacity observations at Ispat-Inland never had a 6-minute average in excess of 20 percent opacity. Performance improved to 99.9 percent compliance for more recent, 1998 to 2000, observations. As stated previously, these data show that the opacity limit based on existing State limits is achievable because it has been achieved on a continuing basis. Our analysis considered all of the data that we could obtain, and the only data available was that for Ispat-Inland which we discussed in detail.

7. Opacity Standard for Blast Furnace Casthouse

*Comment.* One commenter states that we failed to explain how the floor we selected reflects the best-performing 12 percent of the blast furnace casthouses. The commenter further states that we failed to pursue and collect from the affected sources or State and local agencies available opacity data, and we undermined the floor-setting process of the CAA.

*Response.* For blast furnace casthouses, we established the MACT floor as a 20 percent opacity limit based on the five sources subject to the most stringent existing State regulations or permit limits. Two casthouses are subject to a 15 percent opacity limit, and the next most stringent limit is 20 percent, which is applied to 22 of the 37 blast furnace casthouses.

Following the end of the comment period, in order to confirm the appropriateness of the proposed opacity limit, we obtained additional opacity data for operating blast furnace casthouses to supplement the limited data we had available at proposal. We now have opacity data for 25 of the 37 existing blast furnace casthouses, and the data range in coverage from a 1-hour test to several years of observations. (Although there were 39 blast furnace casthouses at proposal, two have subsequently shut down.) We closely examined the data that covered a reasonably long period of time (*e.g.*, at least 1 year to capture seasonal variations), which included 12 of the 25 casthouses for which we had data. We

believe it is important to account for seasonal variations and examine data covering 1 year or more to account for variability due to differences in ventilation rates, weather conditions, and changes in the process over time. We found that the casthouses with the lowest opacities were those with secondary capture and control systems. For some casthouses, most of the 6-minute averages were routinely below the proposed 20 percent limit with occasional readings that approached or exceeded 20 percent. The blast furnace casthouses at U.S. Steel (Gary) achieved the 20 percent opacity limit 99 to 100 percent of the time. One blast furnace casthouse had a maximum 6-minute average of 21 percent opacity, and another casthouse had a maximum of 20 percent opacity. At Ispat-Inland, the casthouses achieved 20 percent opacity 98 to 99.6 percent of the time. At LTV Steel, the casthouses achieved 20 percent opacity 99.5 to 99.8 percent of the time. These blast furnaces were achieving the 20 percent limit, but they were not demonstrably able to consistently achieve a level of performance more stringent than this limit. Consequently, the opacity data confirm that the 20 percent opacity limit based on the median value of the sources with the five most stringent emission limits is an accurate reflection of the MACT floor.

*Comment.* Eight commenters contend that the limits are not consistently achievable under the worst foreseeable conditions over time even by the casthouses used to establish the MACT floor. In support, the commenters claimed they had provided opacity data showing that the limits have not been consistently achieved by well-operated and maintained casthouses. Achievability of the opacity limit for blast furnace casthouses is of particular concern because the process is subject to infrequent but significant swings in emission rates. The commenters recommend that EPA collect and analyze all available opacity data from States, Regions, and industry and determine the standard based on achievability. They recommend using a statistically-derived limit based on a high confidence level (the 99.97th percentile) to avoid an unachievable standard that would result in many violations.

*Response.* Following proposal, in order to confirm the appropriateness of the proposed opacity limit, we collected additional opacity data and identified the best-performing sources in terms of low opacity. Our analysis considered all of the opacity data submitted by the commenters and data obtained from other sources. For the five best-performing blast furnace casthouses (*i.e.*, lowest opacities) with observations over at least 1 year, a 20 percent opacity limit was achieved for 99 to 99.8 percent of the time. We believe the data clearly show that an opacity limit of 20 percent represents what has been achieved by the best-performing sources and that it can be achieved on a continuing basis.

8. Opacity Standards for BOPF Shops

*Comment.* Eight commenters contend that the limits are not consistently achievable under the worst foreseeable conditions over time. They claim that opacity data submitted to EPA by the industry demonstrate that the limits are not consistently achieved by well-operated and maintained BOPF shops, and as a result, EPA must reevaluate the achievability of the proposed opacity standards.

*Response.* Following proposal, in order to confirm the appropriateness of the proposed 20 percent opacity limit, we obtained additional opacity data for operating BOPF shops to supplement the limited data we had available at proposal. We now have opacity data for 19 of the 23 existing BOPF shops ranging in coverage from a single 2-hour test to multiple tests covering several years of observations. Our analysis considered all of the opacity data submitted by the commenters and data obtained from other sources. We examined the data and found that the best-controlled BOPF shops were those with secondary capture and control systems. In contrast, several BOPF shops without secondary controls experienced frequent exceedances of the 20 percent opacity limit. A total of eight BOPF shops have capture systems for secondary emissions that are vented to baghouses. We re-evaluated the data to determine the appropriateness and achievability of the proposed 20 percent opacity limit. We focused on BOPF shops for which we had a reasonable amount of long-term data. Specifically, we examined opacity data only from shops for which we had 12 months or more of observations (*i.e.*, all seasons of the year), which included observations for 11 of the 23 existing shops. The five best-performing shops achieved the limit 99.5 to 99.98 percent of the time. These data clearly indicate that the best-performing units in the category achieve the proposed opacity limit (but do not achieve a more stringent level of control), and, therefore, that the State limits are a good proxy for actual best performance. Thus, we are confident that the proposed opacity limit of 20 percent is achievable and that it provides an accurate picture of the actual performance achieved by the best-performing sources.

Our analysis of the opacity data for BOPF shops indicated that opacity observations are routinely made over several consecutive steel production cycles. In the proposal, we had included a provision that the opacity observations during the performance test did not have to be consecutive. In today's final rule, we have removed the provision which allowed non-consecutive observations. This is consistent with the opacity data used to support the opacity limit and with the procedures routinely used to make opacity observations for BOPF.

9. Sinter Cooler Stack

*Comment.* Six commenters note that one of the plants used to calculate the MACT floor is permanently shut down. Consequently, the floor analysis does not reflect the SIP requirements for actual operating sources. In addition, EPA has not shown that the proposed standard is achievable by the best-performing sources under the foreseeable range of operating conditions.

*Response.* Our investigation into this comment indicates that all five of the sinter plants listed in Table B–11 of the BID are operating (Ispat-Inland at East Chicago, IN; WCI Steel at Youngstown, OH; Bethlehem Steel at Sparrows Point, MD; U.S. Steel at Gary, IN; and AK Steel at Middletown, OH). Because we had only limited test data, we based the MACT floor on the average of the top five sources subject to the most stringent existing State regulations or permit limits. One plant has a limit of 0.01 gr/dscf (for one-half of its cooler), three of the five best-performing plants are subject to a limit of 0.03 gr/dscf, and one plant has a lb/hr limit that is equivalent to about 0.05 gr/dscf. The average and median limit applied to the top five plants is 0.03 gr/dscf. Although our data are limited, they show that the proposed emission limit is achievable and has been achieved based on the available test results. Nationwide, baghouses are used at three plants, a cyclone at one plant, and three plants are uncontrolled. Consequently, the best-performing plants and the median of the top five would be a plant with a baghouse. A test at WCI Steel, which controls these emissions with a baghouse, ranged from 0.005 to 0.02 gr/dscf and averaged 0.009 gr/dscf. The results for WCI show significant variability in the run-to-run results, which range up to 0.02 gr/dscf. The test results indicate that the better-controlled plants can achieve the limit

of 0.03 gr/dscf; however, considering the high variability from run to run, the plant is not substantially overachieving the limit.

No commenters provided any evidence that the existing State limits were not being achieved on a continuing basis (*e.g.*, in the form of violation reports), and we have no evidence that any facility has been in violation of the existing State limits. Consequently, we believe the floor based on State limits represents a reasonably accurate picture of what the best-performing sources have and continue to achieve. For new sources, we chose a limit of 0.01 gr/dscf based on the most stringent State limit. The average test results for WCI Steel (0.009 gr/dscf) show that this limit is achievable by a properly-designed and operated baghouse.

10. PM Standard for Sinter Discharge End Control Device

*Comment.* According to one commenter, EPA claims it has PM test data from six plants, but asserts in the preamble that it has credible test data for only one plant and never explains why data for only one plant is credible. The EPA does not explain how this represents an accurate picture of the relevant best sources' actual performance, or how it knows that the best sources are not doing better than their permits require.

*Response.* The reference to test data in the BID is correct; however, use of the term ''test data'' in the BID was not correct. We had estimates of PM emissions from the discharge end from several plants based on emission factors that they supplied in a survey questionnaire. However, these estimates were not supported by the use of reference methods for sampling and analysis or substantiated by emission test reports. For units in this category, it is not feasible to use estimates based on typical emission factors to identify the level of control that a plant routinely achieves. Therefore, this information is of no practical value for purposes of identifying the best-performing sinter discharge ends. We found the only test data we could validate for the discharge end was for the EPA test conducted at WCI Steel. The results of this test support our conclusion that the existing State limits reasonably approximate actual emissions and performance. However, we have no indication or expectation that the best-performing plants are achieving a level of control more stringent than the proposed emission limit. Consequently, we based the floor on the most stringent State limits.

*Comment.* Seven commenters state that three of the nine sinter plants in the existing population are now shut down, including one of the five plants used to calculate the floor for the discharge end. The commenters assert that EPA must recalculate the floor to reflect only operating sources. Also, EPA must show that the standard is consistently achievable by the best-performing sources under the foreseeable range of operating conditions.

*Response.* We agree that one of the five best-performing plants (Wheeling-Pittsburgh Steel) used to determine the floor was shut down at the time of the floor analysis. We elected to re-calculate the floor and exclude this plant. We determined that the floor based on the average of the five best-performing sources remains the same (0.02 gr/dscf). One plant is subject to a limit of 0.01 gr/dscf, two plants are subject to a limit of 0.02 gr/dscf, one is subject to 0.03 gr/dscf, and the fifth plant has a mass rate limit that is equivalent to about 0.04 gr/dscf. The average and median value associated with the top five limits is 0.02 gr/dscf. We have detailed design information for the baghouses applied to the discharge end, and our engineering analysis of the design information, coupled with test data for baghouses in similar applications, indicates that these controls can achieve 0.02 gr/dscf under the foreseeable range of operating conditions. Although we have test data for only one baghouse, the test averaged 0.006 gr/dscf and further supports the achievability of the MACT floor. We based the MACT floor for new sources on the most stringent State limit of 0.01 gr/dscf. Again, the available test data indicate that this limit can be achieved by a properly-designed and operated baghouse.

11. PM Standard for BOPF Fugitive Emissions

*Comment.* One commenter stated that EPA does not explain how the floor determination represents an accurate picture of the relevant best sources' actual performance, or how it knows that the best sources are not doing better than their permits require.

*Response.* We have test data for only one baghouse applied to BOPF fugitive emissions, and because of the nature of the test, the results are not useful for determining the MACT floor. During the test, sampling was performed continuously over a 3-hour period, even when the furnace was not operating and when fugitive emissions were not occurring. Consequently, the reported concentrations for the baghouse outlet are unrepresentative of the concentrations that would be measured when fugitive emissions from charging and tapping are occurring. Because of the lack of data, we based the floor on existing State limits and have made no changes to the proposed emission limits. We chose 0.01 gr/dscf as the floor from the median of the five sources with the most stringent limits (one at 0.0052, one at 0.006, two at 0.01, and one at 0.012 gr/dscf). One unit is subject to the most stringent State limit of 0.0052 gr/dscf, and we selected this limit as the MACT floor for new sources. These limits are achieved by using a capture system vented to a baghouse, and these levels are consistent with the performance of well-designed and operated baghouses. We have no evidence that plants are violating their current limits, and we have no indication they are achieving a level of control more stringent than the identified State limits. This observation is consistent with an EPA design manual for baghouses which states that typical outlet concentrations for all applications range from 0.001 to 0.01 gr/dscf (depending primarily on the design parameters).

*B. What Surrogates Did We Use for HAP?*

1. PM for Metal HAP

*Comment.* One commenter contends that PM is not a valid surrogate for HAP metal compounds and that specific limits for individual metals should be established. In support, the commenter points to other rules where EPA has recognized that PM is not a valid surrogate for mercury, lead, and cadmium because of their volatility and that these emissions cannot necessarily be controlled merely by controlling PM emissions. Consequently, EPA cannot claim PM is a valid surrogate for metal HAP in the final rule or that setting standards for individual metals would ''. . . achieve little, if any, HAP emission reduction beyond what would be achieved using the surrogate pollutant approach based on total PM.'' Because EPA has already recognized that PM is not an adequate surrogate for mercury, lead, and cadmium, EPA must set individual emission standards for such HAP.

*Response.* We disagree with the commenter and believe that PM is a valid surrogate for the HAP metal compounds emitted from integrated iron and steel sources. The rationale in the preamble for the hazardous waste combustors (HWC) rule is unique to that source category and does not apply to the metal HAP emissions and controls in the integrated iron and steel industry.


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The preamble for the final HWC rule makes this point clearly:

> . . . However, for sources not burning hazardous waste and without a significant potential for extreme variability in metals feed rates, PM is an adequate surrogate for metal HAP (*e.g.*, for nonhazardous waste burning cement kilns).[1]

Hazardous waste combustors are unique and different from integrated iron and steel sources in several respects:

- They have significant levels of volatile and semi-volatile HAP metal compounds in the waste-derived fuels being burned,
- The feed rate of these metals can be highly variable, and
- The high temperatures in the combustion process can volatilize semi-volatile metals and form fine PM, which can be harder to control. In contrast, the raw materials used in iron and steel processes have relatively low levels of metal HAP, the level of metal HAP does not vary significantly as do the HAP metals in waste materials fed to HWC, and test data indicate that PM control devices effectively control the HAP metals from iron and steel processes.

A key parameter for the control of both semi-volatile and non-volatile metal compounds is the operating temperature of the air pollution control device that is applied. At temperatures of 200 to 400°F, the range typical of control devices applied to emissions from integrated iron and steel processes, any semi-volatile and non-volatile HAP metal compounds present would exist in the form of fine PM, and, therefore, will be controlled in direct relationship to PM.

Mercury is an exception because of its high volatility. However, we have no data that show any significant emissions of mercury from integrated iron and steel plants, and there is no reason to suspect its presence in any appreciable quantities in emissions from ironmaking and steelmaking. In the two sinter plant tests we conducted, we sampled and analyzed for mercury. The results showed only trace levels of mercury ($7 \times 10^{-7}$ to $2 \times 10^{-6}$ gr/dscf). Thus, we believe that mercury emissions from integrated iron and steel sources are negligible and that the performance of these units with respect to any trace levels of mercury can not be measurably improved. Moreover, no iron and steel plants operate an emissions control system that would further reduce these trace amounts of mercury emissions, or otherwise take any steps that would reduce such emissions. Because no units currently reduce mercury emissions from the integrated iron and steel industry, the MACT floor for mercury (for both new and existing sources) would be no reduction in emissions. Because the mercury concentrations are already so low, no technically feasible control technologies can be identified that could reduce these trace levels of mercury emissions. Therefore, no mercury emissions standards are proposed for integrated iron and steel sources.

2. Oil Content for Organic HAP

*Comment.* Two commenters urged us to establish emission standards for specific organic HAP, including dioxin, in lieu of the oil content limit. One commenter contends that the proposed rule should contain emission limits for the many organic HAP emitted from iron and steel plants, including dioxin, polycyclic organic matter, benzene, and toluene. The proposed operating requirement for sinter plants is not an emission standard and does not satisfy CAA requirements. Furthermore, regulations pursuant to section 112 of the CAA must include emission standards for each HAP emitted from an affected source category. The commenter adds that EPA provided no data in support of the proposed approach for controlling dioxin emissions. This commenter believes the proposed rule effectively ignores organic HAP in contradiction of CAA requirements because vapor phase organics are not removed by the fabric filters or wet scrubbers.

Several commenters contend that EPA has not met its requirements to show a correlation between the surrogate to be controlled and the object of control. Two commenters state that EPA has not provided sufficient data to demonstrate a correlation. Eight other commenters do not believe that there is a correlation to dioxin emissions or that control of the oil and grease would reduce HAP organic emissions. In support, they claim data from one plant (Bethlehem Steel, Sparrows Point) show no VOC increase in windbox emissions as oil content increases.

*Response.* The only available data regarding organic HAP emissions from these units are from two tests we conducted. These tests are insufficient to generate a meaningful characterization of emission control levels that can be achieved under varying process conditions over time, and there is no way to use this emissions test data to identify the best-performing plants. Moreover, the add-on emission controls used by units in the category (baghouses and venturi scrubbers) do not control vapor phase organic compounds. As a result, we believe that the best way to assess current levels of VOC emission control, and to limit such emissions is to rely upon existing methods of pollution prevention. Accordingly, we have established limits on the amount of organic HAP precursor material (specifically oil and grease) that may be in the sinter feed, in order to control emissions of organic compounds. Additionally, section 112(d)(2) of the CAA specifically allows EPA to establish MACT standards based on emission controls that rely on pollution prevention techniques.

We have added information to the docket from a European study that shows dioxin emissions are related to oil content-emissions increase as the oil content increases. We have also added information from two U.S. sinter plants that show VOC emissions increase as oil content increases, and the VOC contains volatile HAP such as benzene. In fact, plants in Indiana control VOC emissions by limiting the amount of oil in the sinter feed. Because the two are related, Indiana allows monitoring oil content as an alternative to VOC monitoring. In the past, sinter plants with baghouses have voluntarily limited oil content because the organic compounds that were emitted tend to condense and blind the bags as well as pose a fire hazard. We believe these studies conclusively show that oil content correlates with organic emissions.

An emission limit for individual organic compounds is not practical because the emission controls that are used do not effectively control all organic HAP. Conventional control systems used for organics, such as incineration or carbon adsorption, would not be practicable because they are ineffective at the very low concentration (parts per million levels) in the windbox exhaust stream. On the other hand, a limit on oil content effectively limits emissions of organic HAP, and control of oil content is a proven emission control measure. Consequently, in this instance, we believe that a limit on oil content is the only feasible way to ensure that all plants achieve the MACT level of control for organic HAP from the sinter plant windbox exhaust.

*C. Is a Risk Analysis Warranted?*

*Comment.* Seven commenters urge EPA to perform a risk assessment under section 112(d)(4) of the CAA for manganese to determine if HAP controls are necessary. Manganese is a health threshold pollutant, and there is little likelihood of chronic or widespread

[1] See Footnote 40 in preamble to the final HWC rule (64 FR 52846, September 30, 1999).


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exposure at concentrations above the threshold at iron and steel plants. The EPA conducted this analysis for the pulp and paper standards and decided not to regulate hydrogen chloride emissions. According to the commenters, risk-based standards under section 112(d)(4) would result in no standards, or less stringent and more cost effective standards.

*Response.* Section 112(d)(4) of the CAA provides EPA with authority, at its discretion, to develop risk-based standards for HAP ''. . . for which a health threshold has been established,'' provided that the standard achieves an ''ample margin of safety.'' Section 112(d)(4) says:

> [w]ith respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection.

As EPA has indicated in the past (*see* 63 FR 18754 and 67 FR 44713), we generally apply section 112(d)(4) of the CAA only to HAP that are not carcinogens because Congress clearly expected that carcinogens would be non-threshold pollutants. The legislative history further indicates that if EPA invokes this provision, it must assure that any emission standard results in ambient concentrations less than the health threshold, with an ample margin of safety, and that the standards must also be sufficient to protect against adverse environmental effects. (*See* S. Rep. No. 228, 101st Cong. at 171.) The EPA is not to consider cost in establishing a standard pursuant to section 112(d)(4).

Therefore, EPA believes it has the discretion under section 112(d)(4) of the CAA to develop risk-based standards for some categories emitting threshold pollutants, which may be less stringent than the corresponding floor-based MACT standard would be. Where EPA develops standards under this provision, we seek to ensure that emissions from every source in the category or subcategory are less than the threshold level to an individual exposed at the upper end of the exposure distribution. We believe that assuring protection to persons at the upper end of the exposure distribution is consistent with the ample margin of safety requirement in section 112(d)(4). (*See* 63 FR 18754 at 18768.)

However, the EPA emphasizes that use of section 112(d)(4) of the CAA authority is wholly discretionary. As the legislative history described above indicates, cases may arise in which other considerations dictate that the Agency should not invoke this authority to establish less stringent standards, despite the existence of a health effects threshold that is not jeopardized. For instance, EPA does not anticipate that it would set less stringent standards where evidence indicates a threat of significant or widespread environmental effects, although it may be shown that emissions from a particular source category do not approach or exceed a level requisite to protect public health with an ample margin of safety. The EPA may also elect not to set less stringent standards where the estimated health threshold for a contaminant is subject to large uncertainty. Thus, in considering appropriate uses of its discretionary authority under section 112(d)(4), EPA considers other factors in addition to health thresholds, including uncertainty and potential adverse environmental effects, as that phrase is defined in section 112(a)(7) of the CAA.

For several reasons, in this case, we have decided not to exercise our discretion to consider existing threshold levels for manganese in setting the emission standards for metal HAP compounds from integrated iron and steel facilities. This decision is appropriate because we have insufficient data about the nature and degree of public exposures to these emissions, including background exposure levels and other relevant factors, to meaningfully consider whether maximum exposures to manganese emissions from integrated iron and steel facilities would remain below the relevant threshold. In fact, it is clear that facilities in this source category emit significant quantities of manganese, totaling about 250 tpy. Because the commenters did not provide us with any of the detailed site-specific information that we would need to perform an adequate assessment of emissions and exposures, we have concluded that it would be inappropriate to consider the threshold nature of manganese in establishing MACT standards for the integrated iron and steel source category. Additionally, the commenters have supplied no information about the environmental impact of metal emissions from integrated iron and steel plants, and we have no data upon which we can rely for such an environmental assessment.

Moreover, even if we had access to more detailed data regarding emissions, exposures, and environmental impact, it is not clear whether consideration of the manganese health threshold would have any practical effect on the MACT standards established in today's final rule. In particular, emissions from integrated iron and steel plants include metal HAP besides manganese that are not threshold pollutants (including lead, nickel, and chromium compounds), and these pollutants are controlled using the same control technologies that reduce emissions of manganese. As with manganese, we have no data regarding maximum exposures or environmental impacts from such emissions at integrated iron and steel facilities, and we have no data specifically characterizing these metal emissions. These plants emit about 360 tpy of HAP metal compounds—including about 111 tpy of lead, nickel and chromium compounds. Certain lead, nickel and chromium compounds are listed as carcinogens and have no applicable human health threshold. For additional information, see our guidance document entitled ''Guidance on the Major Source Determination for Certain Hazardous Air Pollutants'' available on our Web site at *http://www.epa.gov//ttn/oarpg/t3/memoranda/agghapmem.pdf*.

Today's final rule controls all metal HAP emissions (including lead, nickel, and chromium) by using PM as a surrogate. Because we use PM as a surrogate, eliminating only one or some of the metal HAP from consideration would have little if any practical impact on the MACT standards. Consequently, we believe the MACT standards finalized today are appropriate and will reduce emissions of all HAP at integrated iron and steel plants to the levels currently being achieved by the best-performing facilities.

### *D. How Did We Revise the Emission Limitations?*

#### 1. Sinter Cooler Emissions

*Comment.* Seven commenters explain that some exhaust systems on the sinter plant discharge end are designed to capture emissions at the point where sinter is loaded onto the sinter cooler and portions of the sinter cooler itself. In situations where cooler emissions are exhausted in part or in whole to the discharge end control system, the commenters request that the cooler stack emissions standard of 0.03 gr/dscf (for existing facilities) apply to the discharge end baghouse.

*Response.* We disagree and have written the final rule to clarify that the limit of 0.02 gr/dscf for the discharge end applies even when other emissions are ducted to the control device. The most effective technology for controlling emissions from the discharge end is a baghouse, and a properly-designed and operated baghouse can achieve 0.02 gr/dscf on a continuing basis. An emission limit of 0.03 gr/dscf is too high to be representative of the MACT floor, and

does not reflect what is currently achieved by the five best-performing sources.

*2. Sinter Plant Oil Content Requirement*

*Comment.* Sinter plants in Maryland and Indiana already must comply with rules that regulate the oil and grease content for the sinter plant raw material blend. The rules limit VOC emissions to no more than 0.25 lb/ton of sinter (except Indiana allows 0.36 lb/ton during non-ozone season). Maryland requires VOC testing and Indiana provides the option of VOC testing or sampling for oil content. Seven commenters recommend VOC testing as an option in the final rule because most plants in these states already use them; some comments also suggest a 30-day rolling average for VOC.

*Response.* We reviewed data submitted by two plants that showed VOC emissions correlated with oil content. LTV Steel (now owned by International Steel Group) performed simultaneous testing of oil content and VOC emissions, correlated the results, and showed that an oil content of 0.024 percent was equivalent to the State VOC limit of 0.25 lb/ton of sinter. As a result, the State allowed them to use alternative monitoring procedures. Based on our review of the data, we believe that maintaining the VOC at a level of 0.2 lb/ton or lower will ensure that the operating limit of 0.02 percent oil is maintained. Consequently, we have written the final rule to include an alternative emission limitation for VOC of 0.2 lb/ton of sinter. A plant electing the alternative limit is required to measure VOC emissions (total gaseous nonmethane organics as carbon) in source emissions using EPA Method 25 in 40 CFR part 60, appendix A (or a previously approved method). As with the oil content, the VOC limit is based on a 30-day rolling average. The 30-day average provides additional flexibility because it allows an occasional high daily value to be averaged with lower values on other days to achieve compliance. We believe the 30-day average accounts for day-to-day variability and enhances the achievability of the limit.

3. ESP Operating Limit

*Comment.* For plants required to use COMS to monitor ESP, the proposed rule establishes an enforceable operating limit based on the opacity observed during the initial performance test. Eight commenters argue that COMS data should not be used for compliance determinations because of measurement uncertainties and unreliability. They point to the recognized limitation for measuring opacity below 10 percent and provide supporting data comparing COMS measurements in ESP stacks to EPA Method 9 data. Like the steel pickling MACT standard, COMS data should be used only to indicate if the ESP is operating properly and to institute corrective action as appropriate; subsequent EPA Method 9 observations may be appropriate in the event of a high number of measured excursions. These commenters also object to the operating limit for ESP equipped with COMS because EPA has not demonstrated a correlation between opacity and PM emissions from BOPF controlled by ESP to support using opacity as a surrogate for PM. A COMS opacity reading that is above that observed during a performance test does not necessarily indicate an exceedance because the high reading could have been caused by water vapor or another interference. The commenters believe EPA has not demonstrated that the tiny amount of data collected during the initial performance test would be representative of the opacity performance of ESP over the full range of foreseeable operating conditions. Thirty 6-minute averages taken over a 3-hour period will not adequately characterize the range of 87,600 6-minute averages generated over an entire year. Thus, EPA has not demonstrated that a limit set in this manner would be consistently achievable by well-operated and maintained equipment under the most adverse operating conditions over time.

*Response.* We believe that opacity is well established as a surrogate for PM. However, we understand the concerns of the commenters with respect to variability and have written the procedures in the final rule for determining the COMS operating limit to account for variability. The opacity operating limit is based on measurement of 6-minute averages during the performance test, and then calculating the 99 percent upper confidence limit on the mean of a normal distribution of the average opacity values. This statistical approach will account for normal variability and still provide assurance that the ESP is operating properly.

4. Operating Limits for Capture Systems

*Comment.* Nine commenters believe that an enforceable range of operating limits applicable under all operating conditions cannot be determined from the initial performance test for damper systems. Fixed damper positions for one set of operating conditions are not appropriate due to varying simultaneous operations, normal process variations, and seasonable variations. The final rule should allow sources to specify multiple operating scenarios or ranges of operation in the operation and maintenance plan and require plants to meet the values in the plan rather than those set in the initial performance test. Eight of these commenters also recommend that the final rule include an alternative allowing continuous monitoring of fan amperage, like the provisions included in the proposed standards for coke plants.

*Response.* We investigated this issue further, and based on the additional information we received, we agree that fixed damper settings are not practicable or desirable in many cases. For example, damper settings may need to be changed in the BOPF shop depending on the operations underway at the time, such as hot metal transfer, desulfurization, charging, oxygen blowing, and tapping. We have written the final rule to provide flexibility and have modeled it after the MACT standard for primary copper smelters. The owner or operator must specify in the operation and maintenance plan the damper settings that will be used under different operating scenarios and for seasonal variations. These damper settings must be checked once per day. We have also added fan amperage as an acceptable alternative, consistent with the MACT standards for coke ovens and for primary copper smelters.

*E. How Did We Revise the Performance Test Requirements?*

1. Overlapping Cycles

*Comment.* Some plants have the capability of overlapping cycles of two separate furnaces (*e.g.*, they may blow one furnace while another is being tapped). It appears that EPA's database is comprised of tests conducted on single furnaces. For this reason, seven commenters ask EPA to clarify that testing of primary emissions from BOPF is to be conducted during the steel production cycle of a single furnace. Other shop operations may be suspended during the testing. This approach is consistent with the manner in which the data were collected.

*Response.* We specify in the final rule exactly when owners or operators must test primary emissions from BOPF. For closed hood BOPF, plants must sample only during the primary oxygen blow. For open hood BOPF, plants must sample during the steel production cycle. We clarified that the steel production cycle begins when scrap is charged to the furnace and ends 3 minutes after the slag is emptied from the vessel. These requirements are

consistent with the way the emission test data were collected. We do not agree that testing should be performed under conditions that do not represent normal operations, such as suspending certain shop operations. The provisions in 40 CFR 63.7(e) apply and require that sampling be conducted under conditions that are based on representative performance (*i.e.*, performance based on normal operating conditions of the affected source).

2. Testing Multiple Stacks

*Comment.* Eight commenters believe it is impractical and burdensome to require simultaneous tests of multiple stacks or vents for a control device (*e.g.*, baghouse with eight modules, each with its own fan and stack). Successive testing of each stack or vent could be more manageable, but still has excessive costs. One commenter estimates 42 days of testing could be needed at one plant if each stack and vent must be tested. For these reasons, the proposed rule should be revised to allow for performance tests of a representative exhaust flow where control devices with multiple stacks are used.

*Response.* We agree and believe that because of the site-specific nature of this problem, decisions should be made on a case-by-case basis by the applicable permitting authority. We have written the final rule such that a source may conduct a representative sampling of stacks subject to the approval of the permitting authority when there are more than three stacks associated with a process.

*F. How Did We Revise the Cost Estimates and Economic Impact Analysis?*

*Comment.* Several commenters stated that we significantly underestimated the cost of the proposed rule. At proposal, we estimated a capital cost of $34 million. The commenters said that the total capital cost was in the range of $270 to $320 million. Their estimate includes the cost of controls for plants not included in EPA's estimate as well as higher estimates of the cost for controls and monitoring in general.

*Response.* Following proposal and the receipt of comments, we contacted facilities to discuss the details of their cost estimates. Some facilities provided the details and basis of their estimates, and we incorporated them into our revised estimates. Other plants did not provide details or documentation; consequently, we developed our best estimate of potential costs for these facilities. In addition, we collected opacity data for most of the operating plants. We used these data to identify plants that may need to install capture and control systems in the blast furnace casthouse or BOPF shop to meet the 20 percent opacity limit. Our revised capital cost estimate increased to $93 million.

*Comment:* Eight commenters urge EPA to update it's economic impact analysis to represent current economic conditions of the steel industry and the cumulative effect of all other pending environmental regulatory requirements facing the industry during the same time period.

*Response:* We agree with the commenters and have performed a revised economic impact analysis. The revised analysis attempts to account for the factors mentioned in the comment. At proposal, we estimated domestic production from integrated steel mills would decline by 3,100 tons, and operating profits were expected to decrease by $5.2 million annually. With our revised analysis, we estimate domestic production from integrated mills will decline by 73,000 tons, and operating profits will decrease by $13 million per year. A complete copy of the economic impact analysis is available in the docket.

## IV. Summary of Environmental, Energy, and Economic Impacts

*A. What Are the Air Emission Impacts?*

The installation of new controls and upgrades will result in reductions in emissions of metal HAP and PM. We estimate that five new capture and control systems for the blast furnace casthouses will reduce these emissions by 90 percent, a reduction of 14 tpy of HAP and 2,100 tpy of PM. The new BOPF scrubbers at one plant and upgrades at two others will result in a 50 percent reduction in emissions, 5 tpy of HAP and 350 tpy of PM. Six new capture and control systems for fugitive emissions from BOPF shops will result in a 90 percent reduction in emissions, 48 tpy of HAP and 3,300 tpy of PM.

Most plants currently operate air pollution control equipment sufficient to meet the final rule requirements. We expect the standard to reduce metal HAP emissions from plants that will need to install or upgrade controls by 67 tpy and PM emissions by 5,800 tpy. Nationwide emissions of metal HAP and PM from integrated iron and steel plants will be reduced by nearly 20 percent from current levels.

*B. What Are the Cost Impacts?*

The nationwide capital and annual costs of new and upgraded capture and control systems are estimated at $93 million and $15 million/yr, respectively. The total nationwide annual costs (including monitoring and recordkeeping) are about $16 million/yr. These costs are based on a new primary control system (high-pressure drop venturi scrubbers) for one BOPF shop, upgraded primary controls at two others, six new capture and control systems for fugitive BOPF emissions, and five new capture and control systems for blast furnace casthouses. In addition, the estimate includes a capital cost of $0.9 million and a total annual cost of $1 million for monitoring, reporting, and recordkeeping.

*C. What Are the Economic Impacts?*

We conducted a detailed economic impact analysis to determine the impacts of the final rule on both the industry and the U.S. market for steel mill products. We estimate the economic impacts in both areas to be negligible. We project the price of steel mill products, in aggregate, to increase by less than 0.1 percent with domestic production from integrated mills declining by 73,100 short tons. This decline in production at affected integrated mills is somewhat offset by increases at nonintegrated domestic steel producers (15,800 short tons) and foreign imports (49,500 short tons). In terms of industry impacts, the integrated steel producers are projected to experience a slight decrease in operating profits of $13 million annually, which reflects increased costs of compliance and associated reductions in revenues from producing final steel mill products. In addition, we don't foresee any individual integrated facility being in jeopardy of closure as a result of implementing the rule.

Based on the market analysis, the annual costs to society of today's final rule are projected to be $15.4 million. As a result of slightly higher prices for steel mill products, the final consumers of these products will incur an additional $6.2 million annually. Profits at integrated steel mills are expected to decline by $13 million annually because of directly incurred control costs and reduced product revenues, while nonintegrated steel mills that compete in these markets and are unaffected by today's rule will experience an increase in profits of $2.2 million. Similarly, foreign steel producers will also experience an increase in profits of $1.7 million due to the slightly higher prices and increases in imports to the U.S. market. For more information, consult the economic impact analysis supporting the proposed rule.


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*D. What Are the Non-Air Health, Environmental, and Energy Impacts?*

Implementation of the rule will result in a small increase in solid waste-3,200 tpy of sludge and 5,500 tpy of dust. The energy increase is estimated at 24,000 megawatt-hours per year, primarily due to the energy requirements of new venturi scrubbers.

**V. Statutory and Executive Order Reviews**

*A. Executive Order 12866: Regulatory Planning and Review*

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is ''significant'' and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that the final rule is not a ''significant regulatory action'' under the terms of Executive Order 12866, and is, therefore, not subject to OMB review.

*B. Paperwork Reduction Act*

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An information collection request (ICR) document has been prepared by EPA (ICR No. 2003.02), and a copy may be obtained from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division (2822T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. A copy also may be downloaded off the Internet at *http://www.epa.gov/icr.* The information requirements are not enforceable until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to NESHAP. These recordkeeping and reporting requirements are specifically authorized by section 112 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies in 40 CFR part 2, subpart B.

The final rule requires applicable one-time notifications required by the General Provisions for each affected source. As required by the NESHAP General Provisions, all plants must prepare and operate by a startup, shutdown, and malfunction plan. Plants also are required to prepare an operation and maintenance plan for capture systems and control devices subject to operating limits. Records are required to demonstrate continuous compliance with the monitoring, operation, and maintenance requirements for capture systems, control devices, and monitoring systems. Semiannual compliance reports also are required. These reports must describe any deviation from the standards, any period a continuous monitoring system was out-of-control, or any startup, shutdown, or malfunction event where actions taken to respond were inconsistent with startup, shutdown, and malfunction plan. If no deviation or other event occurred, only a summary report is required. Consistent with the General Provisions, if actions taken in response to a startup, shutdown, or malfunction event are not consistent with the plan, an immediate report must be submitted within 2 days of the event with a letter report 7 days later.

The annual public reporting and recordkeeping burden for this collection of information averaged over the first 3 years after May 20, 2003 is estimated to total 4,772 labor hours per year at a total annual cost of $347,115, including labor, capital, and operation and maintenance. Total capital costs associated with the monitoring equipment is estimated at $885,000. The total annualized cost of the monitoring equipment is estimated at $126,000. This estimate includes the capital, operating, and maintenance costs associated with the installation and operation of the monitoring equipment.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to a collection of information; search existing data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

*C. Regulatory Flexibility Act*

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: (1) A small business according to the U.S. Small Business Administration (SBA) size standards for NAICS code 33111 (Iron and Steel Mills) of 1,000 or fewer employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities. Based on the SBA size category for this source category, no small businesses are subject to the final rule and its requirements.

*D. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may

result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final rule contains no Federal mandate (under the regulatory provisions of the UMRA) for State, local, or tribal governments. The EPA has determined that the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector of $100 million or more in any one year. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. The EPA has also determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus, today's final rule is not subject to the requirements of section 203 of the UMRA.

*E. Executive Order 13132: Federalism*

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected facilities are owned or operated by State governments. Thus, Executive Order 13132 does not apply to the final rule.

*F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.''

The final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own facilities subject to the NESHAP. Thus, Executive Order 13175 does not apply to the final rule.

*G. Executive Order 13045: Protection of Children From Environmental Health & Safety Risks*

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant,'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on control technology and not on health or safety risks.

*H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use*

The final rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer Advancement Act*

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; 15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in their regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. Therefore, the EPA conducted a search to identify potentially applicable voluntary consensus standards. However, we identified no such standards as alternatives to EPA Methods 2F, 2G, 5D, 9 and OSW 846 Method 9071B, and none were brought to our attention in comments.

The Agency identified ASTM D4536–96, ''Test Method for High Volume Sampling for Solid Particulate Matter and Determination of Particle Emissions,'' as being potentially applicable and proposed it as an alternative to Method 5 or 17 for testing positive pressure fabric filters. However, this standard has been replaced by ASTM D6331–98, ''Standard Test Method for Determination of Mass Concentration of Particulate Matter from Stationary Sources at Low Concentrations (Manual Gravimetric Method).'' We have decided not to use ASTM D6331 in the final rule. The use of this voluntary consensus standard would be impractical or inconsistent with applicable law because it is not similar enough to replace ASTM D4536–96.


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The search for emissions measurement procedures identified 16 other voluntary consensus standards. The EPA has not adopted these standards as alternatives in the final rule because they are impractical or still under development. Our search and review results are available in the docket.

*J. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule in the **Federal Register**. The final rule is not a ''major rule'' as defined by 5 U.S.C. 804(2).

**List of Subjects in 40 CFR Part 63**

Environmental protection, Air pollution control, Hazardous substances, Incorporation by reference, Reporting and recordkeeping requirements.

Dated: February 28, 2003.

**Christine Todd Whitman,**

*Administrator.*

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

## PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401, *et seq.*

## Subpart A—[Amended]

■ 2. Section 63.14 is amended by adding a new paragraph (k) to read as follows:

### § 63.14 Incorporation by reference.

* * * * *

(k) The following material may be obtained from U.S. EPA, Office of Solid Waste (5305W), 1200 Pennsylvania Avenue, NW., Washington, DC 20460:

(1) Method 9071B, ''n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples,'' (Revision 2, April 1998) as published in EPA Publication SW–846: ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.'' The incorporation by reference of Method 9071B is approved for Section 63.7824(e) of Subpart FFFFF of this part.

■ 3. Part 63 is amended by adding subpart FFFFF to read as follows:

## Subpart FFFFF—National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities

Sec.

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## Subpart FFFFF—National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities

### What This Subpart Covers

#### § 63.7780 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for integrated iron and steel manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations and operation and maintenance requirements in this subpart.

#### § 63.7781 Am I subject to this subpart?

You are subject to this subpart if you own or operate an integrated iron and steel manufacturing facility that is (or is part of) a major source of hazardous air pollutants (HAP) emissions. Your integrated iron and steel manufacturing facility is a major source of HAP if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

#### § 63.7782 What parts of my plant does this subpart cover?

(a) This subpart applies to each new and existing affected source at your integrated iron and steel manufacturing facility.

(b) The affected sources are each new or existing sinter plant, blast furnace, and basic oxygen process furnace (BOPF) shop at your integrated iron and steel manufacturing facility.

(c) This subpart covers emissions from the sinter plant windbox exhaust, discharge end, and sinter cooler; the blast furnace casthouse; and the BOPF shop including each individual BOPF and shop ancillary operations (hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy).

(d) A sinter plant, blast furnace, or BOPF shop at your integrated iron and steel manufacturing facility is existing if you commenced construction or reconstruction of the affected source before July 13, 2001.

(e) A sinter plant, blast furnace, or BOPF shop at your integrated iron and steel manufacturing facility is new if you commence construction or reconstruction of the affected source on or after July 13, 2001. An affected source is reconstructed if it meets the definition of reconstruction in § 63.2.

### § 63.7783 When do I have to comply with this subpart?

(a) If you have an existing affected source, you must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to you no later than May 22, 2006.

(b) If you have a new affected source and its initial startup date is on or before May 20, 2003, then you must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to you by May 20, 2003.

(c) If you have a new affected source and its initial startup date is after May 20, 2003, you must comply with each emission limitation and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(d) If your integrated iron and steel manufacturing facility is not a major source and becomes a major source of HAP, the following compliance dates apply to you.

(1) Any portion of the existing integrated iron and steel manufacturing facility that becomes a new affected source or a new reconstructed source must be in compliance with this subpart upon startup.

(2) All other parts of the integrated iron and steel manufacturing facility must be in compliance with this subpart no later than 2 years after it becomes a major source.

(e) You must meet the notification and schedule requirements in § 63.7840. Several of these notifications must be submitted before the compliance date for your affected source.

## Emission Limitations

### § 63.7790 What emission limitations must I meet?

(a) You must meet each emission limit and opacity limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit for capture systems and control devices in paragraphs (b)(1) through (3) of this section that applies to you.

(1) You must operate each capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse or to secondary emissions from a BOPF at or above the lowest value or settings established for the operating limits in your operation and maintenance plan;

(2) For each venturi scrubber applied to meet any particulate emission limit in Table 1 to this subpart, you must maintain the hourly average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial performance test.

(3) For each electrostatic precipitator applied to emissions from a BOPF, you must maintain the average opacity of emissions for each 6-minute period at or below the site-specific opacity value corresponding to the 99 percent upper confidence limit on the mean of a normal distribution of average opacity values established during the initial performance test.

(c) An owner or operator who uses an air pollution control device other than a baghouse, venturi scrubber, or electrostatic precipitator must submit a description of the device; test results collected in accordance with § 63.7822 verifying the performance of the device for reducing emissions of particulate matter to the atmosphere to the levels required by this subpart; a copy of the operation and maintenance plan required in § 63.7800(b); and appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emission limitation(s). The monitoring plan identifying the operating parameters to be monitored is subject to approval by the Administrator.

(d) For each sinter plant, you must either:

(1) Maintain the 30-day rolling average oil content of the feedstock at or below 0.02 percent; or

(2) Maintain the 30-day rolling average of volatile organic compound emissions from the windbox exhaust stream at or below 0.2 lb/ton of sinter.

## Operation and Maintenance Requirements

### § 63.7800 What are my operation and maintenance requirements?

(a) As required by § 63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture system or control device subject to an operating limit in § 63.7790(b). Each plan must address the elements in paragraphs (b)(1) through (5) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (*e.g.*, pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (*e.g.*, presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan also must include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

(2) Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(3) Operating limits for each capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse, or to secondary emissions from a BOPF. You must establish the operating limits according to the requirements in paragraphs (b)(3)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and the damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to, volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure.

(ii) For each operating limit parameter selected in paragraph (b)(3)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate.

(iii) Include documentation in your plan to support your selection of the operating limits established for the capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of § 63.7830(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(4) Corrective action procedures for bag leak detection systems. In the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions may include, but are not limited to:

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repair the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions; and

(5) Procedures for determining and recording the daily sinter plant production rate in tons per hour.

## General Compliance Requirements

### § 63.7810 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction as defined in § 63.2.

(b) During the period between the compliance date specified for your affected source in § 63.7783 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3).

## Initial Compliance Requirements

### § 63.7820 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct a performance test to demonstrate initial compliance with each emission and opacity limit in Table 1 to this subpart that applies to you. You must also conduct a performance test to demonstrate initial compliance with the 30-day rolling average operating limit for the oil content of the sinter plant feedstock in § 63.7790(d)(1) or alternative limit for volatile organic compound emissions from the sinter plant windbox exhaust stream in § 63.7790(d)(2). You must conduct the performance tests within 180 calendar days after the compliance date that is specified in § 63.7783 for your affected source and report the results in your notification of compliance status.

(b) For each operation and maintenance requirement that applies to you where initial compliance is not demonstrated using a performance test or opacity observation, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified for your affected source in § 63.7783.

(c) If you commenced construction or reconstruction between July 13, 2001 and May 20, 2003, you must demonstrate initial compliance with either the proposed emission limit or the promulgated emission limit no later than November 17, 2003 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) If you commenced construction or reconstruction between July 13, 2001 and May 20, 2003, and you chose to comply with the proposed emission limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limit by November 17, 2006, or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

### § 63.7821 When must I conduct subsequent performance tests?

You must conduct subsequent performance tests to demonstrate compliance with all applicable PM and opacity limits in Table 1 to this subpart no less frequently than twice (at mid-term and renewal) during each term of your title V operating permit. For sources without a title V operating permit, you must conduct subsequent performance tests every 2.5 years.

### § 63.7822 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?

(a) You must conduct each performance test that applies to your affected source according to the requirements in § 63.7(e)(1) and the conditions detailed in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emission limit for particulate matter in Table 1 to this subpart, follow the test methods and procedures in paragraphs (b)(1) and (2) of this section.

(1) Determine the concentration of particulate matter according to the following test methods in appendix A to part 60 of this chapter:

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5D, or 17, as applicable, to determine the concentration of particulate matter (front half filterable catch only).

(2) Collect a minimum sample volume of 60 dry standard cubic feet (dscf) of gas during each particulate matter test run. Three valid test runs are needed to comprise a performance test.

(c) For each sinter plant windbox exhaust stream, you must complete the requirements of paragraphs (c)(1) and (2) of this section:

(1) Follow the procedures in your operation and maintenance plan for measuring and recording the sinter production rate for each test run in tons per hour; and

(2) Compute the process-weighted mass emissions ($E_p$) for each test run using Equation 1 of this section as follows:

$$E_p = \frac{C \times Q}{P \times K} \qquad \text{(Eq. 1)}$$

Where:

$E_p$ = Process-weighted mass emissions of particulate matter, lb/ton;

C = Concentration of particulate matter, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of stack gas, dry standard cubic foot per hour (dscf/hr);

P = Production rate of sinter during the test run, tons/hr; and

K = Conversion factor, 7,000 grains per pound (gr/lb).

(d) If you apply two or more control devices in parallel to emissions from a sinter plant discharge end or a BOPF, compute the average flow-weighted concentration for each test run using Equation 2 of this section as follows:

$$C_W = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \qquad \text{(Eq. 2)}$$

Where:

$C_w$ = Flow-weighted concentration, gr/dscf;

$C_i$ = Concentration of particulate matter from exhaust stream ''i'', gr/dscf; and

$Q_i$ = Volumetric flow rate of effluent gas from exhaust stream ''i'', dry standard cubic foot per minute (dscfm).

(e) For a control device applied to emissions from a blast furnace casthouse, sample for an integral number of furnace tapping operations sufficient to obtain at least 1 hour of sampling for each test run.

(f) For a primary emission control device applied to emissions from a BOPF with a closed hood system, sample only during the primary oxygen blow and do not sample during any subsequent reblows. Continue sampling for each run for an integral number of primary oxygen blows.

(g) For a primary emission control system applied to emissions from a BOPF with an open hood system and for a control device applied solely to secondary emissions from a BOPF, you must complete the requirements of paragraphs (g)(1) and (2) of this section:

(1) Sample only during the steel production cycle. Conduct sampling under conditions that are representative of normal operation. Record the start and end time of each steel production cycle and each period of abnormal operation; and

(2) Sample for an integral number of steel production cycles. The steel production cycle begins when the scrap is charged to the furnace and ends 3 minutes after the slag is emptied from the vessel into the slag pot.

(h) For a control device applied to emissions from BOPF shop ancillary operations (hot metal transfer, skimming, desulfurization, or ladle metallurgy), sample only when the operation(s) is being conducted.

(i) Subject to approval by the permitting authority, you may conduct representative sampling of stacks when there are more than three stacks associated with a process.

### § 63.7823 What test methods and other procedures must I use to demonstrate initial compliance with the opacity limits?

(a) You must conduct each performance test that applies to your affected source according to the requirements in § 63.7(h)(5) and the conditions detailed in paragraphs (b) through (d) of this section.

(b) You must conduct each visible emissions performance test such that the opacity observations overlap with the performance test for particulate matter.

(c) To determine compliance with the applicable opacity limit in Table 1 to this subpart for a sinter plant discharge end or a blast furnace casthouse:

(1) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter.

(2) Obtain a minimum of 30 6-minute block averages. For a blast furnace casthouse, make observations during tapping of the furnace. Tapping begins when the furnace is opened, usually by creating a hole near the bottom of the furnace, and ends when the hole is plugged.

(d) To determine compliance with the applicable opacity limit in Table 1 to this subpart for BOPF shops:

(1) For an existing BOPF shop:

(i) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter except as specified in paragraphs (d)(1)(ii) and (iii) of this section.

(ii) Instead of procedures in section 2.4 of Method 9 in appendix A to part 60 of this chapter, record observations to the nearest 5 percent at 15-second intervals for at least three steel production cycles.

(iii) Instead of procedures in section 2.5 of Method 9 in appendix A to part 60 of this chapter, determine the 3-minute block average opacity from the average of 12 consecutive observations recorded at 15-second intervals.

(2) For a new BOPF shop housing a bottom-blown BOPF:

(i) Using a certified observer, determine the opacity of emissions according to Method 9 in appendix A to part 60 of this chapter.

(ii) Determine the highest and second highest sets of 6-minute block average opacities for each steel production cycle.

(3) For a new BOPF shop housing a top-blown BOPF:

(i) Determine the opacity of emissions according to the requirements for an existing BOPF shop in paragraphs (d)(1)(i) through (iii) of this section.

(ii) Determine the highest and second highest sets of 3-minute block average opacities for each steel production cycle.

(4) Opacity observations must cover the entire steel production cycle and must be made for at least three cycles. The steel production cycle begins when the scrap is charged to the furnace and ends 3 minutes after the slag is emptied from the vessel into the slag pot.

(5) Determine and record the starting and stopping times of the steel production cycle.

### § 63.7824 What test methods and other procedures must I use to establish and demonstrate initial compliance with operating limits?

(a) For each capture system subject to an operating limit in § 63.7790(b)(1), you must certify that the system operated during the performance test at the site-specific operating limits established in your operation and maintenance plan using the procedures in paragraphs (a)(1) through (4) of this section.

(1) Concurrent with all opacity observations, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements specified in § 63.7830(a).

(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each opacity observation period segment.

(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(4) Certify in your performance test report that during all observation period segments, the capture system was operating at the values or settings established in your capture system operation and maintenance plan.

(b) For a venturi scrubber subject to operating limits for pressure drop and scrubber water flow rate in

§ 63.7790(b)(2), you must establish site-specific operating limits according to the procedures in paragraphs (b)(1) and (2) of this section.

(1) Using the continuous parameter monitoring system (CPMS) required in § 63.7830(c), measure and record the pressure drop and scrubber water flow rate during each run of the particulate matter performance test.

(2) Compute and record the hourly average pressure drop and scrubber water flow rate for each individual test run. Your operating limits are the lowest average pressure drop and scrubber water flow rate value in any of the three runs that meet the applicable emission limit.

(c) For an electrostatic precipitator subject to the operating limit in § 63.7790(b)(3) for opacity, you must establish a site-specific operating limit according to the procedures in paragraphs (c)(1) through (3) of this section.

(1) Using the continuous opacity monitoring system (COMS) required in § 63.7830(d), measure and record the opacity of emissions from each control device stack during each run of the particulate matter performance test.

(2) Compute and record the 6-minute block average opacity from 36 or more data points equally spaced over each 6-minute period during the test runs.

(3) Determine, based on the 6-minute block averages, the opacity value corresponding to the 99 percent upper confidence limit on the mean of a normal distribution of average opacity values.

(d) You may change the operating limits for a capture system, venturi scrubber, or electrostatic precipitator if you meet the requirements in paragraphs (d)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emission limitation in Table 1 to this subpart.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (c) of this section for a control device or capture system.

(e) For each sinter plant subject to the operating limit for the oil content of the sinter plant feedstock in § 63.7790(d)(1), you must demonstrate initial compliance according to the procedures in paragraphs (e)(1) through (3) of this section.

(1) Sample the feedstock at least three times a day (once every 8 hours), composite the three samples each day, and analyze the composited samples using Method 9071B, ''n-Hexane Extractable Material(HEM) for Sludge, Sediment, and Solid Samples,'' (Revision 2, April 1998). Method 9071B is incorporated by reference (see § 63.14) and is published in EPA Publication SW–846 ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.'' Record the sampling date and time, oil content values, and sinter produced (tons/day).

(2) Continue the sampling and analysis procedure for 30 consecutive days.

(3) Each day, compute and record the 30-day rolling average using that day's value and the 29 previous daily values.

(f) To demonstrate initial compliance with the alternative operating limit for volatile organic compound emissions from the sinter plant windbox exhaust stream in § 63.7790(d)(2), follow the test methods and procedures in paragraphs (f)(1) through (5) of this section.

(1) Determine the volatile organic compound emissions according to the following test methods in appendix A to part 60 of this chapter:

(i) Method 1 to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 25 to determine the mass concentration of volatile organic compound emissions (total gaseous nonmethane organics as carbon) from the sinter plant windbox exhaust stream stack.

(2) Determine volatile organic compound (VOC) emissions every 24 hours (from at least three samples taken at 8-hour intervals) using Method 25 in 40 CFR part 60, appendix A. Record the sampling date and time, sampling results, and sinter produced (tons/day).

(3) Compute the process-weighted mass emissions ($E_v$) each day using Equation 1 of this section as follows:

$$E_v = \frac{M_C \times Q}{35.31 \times 454{,}000 \times K} \qquad \text{(Eq. 1)}$$

Where:

$E_v$ = Process-weighted mass emissions of volatile organic compounds, lb/ton;

$M_c$ = Average concentration of total gaseous nonmethane organics as carbon by Method 25 (40 CFR part 60, appendix A), milligrams per dry standard cubic meters (mg/dscm) for each day;

Q = Volumetric flow rate of stack gas, dscf/hr;

35.31 = Conversion factor (dscf/dscm);

454,000 = Conversion factor (mg/lb); and

K = Daily production rate of sinter, tons/hr.

(4) Continue the sampling and analysis procedure in paragraphs (f)(1) through (3) of this section for 30 consecutive days.

(5) Compute and record the 30-day rolling average of VOC emissions for each operating day.

(g) You may use an alternative test method to determine the oil content of the sinter plant feedstock or the volatile organic compound emissions from the sinter plant windbox exhaust stack if you have already demonstrated the equivalency of the alternative method for a specific plant and have received previous approval from the applicable permitting authority.

### § 63.7825 How do I demonstrate initial compliance with the emission limitations that apply to me?

(a) For each affected source subject to an emission or opacity limit in Table 1 to this subpart, you have demonstrated initial compliance if:

(1) You meet the conditions in Table 2 to this subpart; and

(2) For each capture system subject to the operating limit in § 63.7790(b)(1), you have established appropriate site-specific operating limit(s) and have a record of the operating parameter data measured during the performance test in accordance with § 63.7824(a)(1).

(3) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.7790(b)(2), you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with § 63.7824(b); and

(4) For each electrostatic precipitator subject to the opacity operating limit in § 63.7790(b)(3), you have established an appropriate site-specific operating limit and have a record of the opacity measurements made during the performance test in accordance with § 63.7824(c).

(b) For each existing or new sinter plant subject to the operating limit in § 63.7790(d)(1), you have demonstrated initial compliance if the 30-day rolling average of the oil content of the feedstock, measured during the initial performance test in accordance with § 63.7824(e) is no more than 0.02

percent or the volatile organic compound emissions from the sinter plant windbox exhaust stream, measured during the initial performance test in accordance with § 63.7824(f), is no more than 0.2 lb/ton of sinter produced.

(c) For each emission limitation that applies to you, you must submit a notification of compliance status according to § 63.7840(e).

### § 63.7826 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For a capture system applied to emissions from a sinter plant discharge end or blast furnace casthouse or to secondary emissions from a BOPF, you have demonstrated initial compliance if you meet all of the conditions in paragraphs (a)(1) through (4) of this section.

(1) Prepared the capture system operation and maintenance plan according to the requirements of § 63.7800(b), including monthly inspection procedures and detailed descriptions of the operating parameter(s) selected to monitor the capture system;

(2) Certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan;

(3) Submitted a notification of compliance status according to the requirements in § 63.7840(e), including a copy of the capture system operation and maintenance plan and your certification that you will operate the capture system at the values or settings established for the operating limits in that plan; and

(4) Prepared a site-specific monitoring plan according to the requirements in § 63.7831(a).

(b) For each control device subject to operating limits in § 63.7790(b)(2) or (3), you have demonstrated initial compliance if you meet all the conditions in paragraphs (b)(1) through (3) of this section.

(1) Prepared the control device operation and maintenance plan according to the requirements of § 63.7800(b), including a preventative maintenance schedule and, if applicable, detailed descriptions of the procedures you use for corrective action for baghouses;

(2) Submitted a notification of compliance status according to the requirements in § 63.7840(e), including a copy of the operation and maintenance plan; and

(3) Prepared a site-specific monitoring plan according to the requirements in § 63.7831(a).

## Continuous Compliance Requirements

### § 63.7830 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in § 63.7790(b)(1) established in your capture system operation and maintenance plan, you must install, operate, and maintain a CPMS according to the requirements in § 63.7831(e) and the requirements in paragraphs (a)(1) through (3) of this section.

(1) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(2) If you use a flow measurement device to monitor the operating limit parameter for a sinter plant discharge end or blast furnace casthouse, you must monitor the hourly average rate (*e.g.*, the hourly average actual volumetric flow rate through each separately ducted hood, the average hourly total volumetric flow rate at the inlet to the control device) according to the requirements in § 63.7832.

(3) If you use a flow measurement device to monitor the operating limit parameter for a capture system applied to secondary emissions from a BOPF, you must monitor the average rate for each steel production cycle (*e.g.*, the average actual volumetric flow rate through each separately ducted hood for each steel production cycle, the average total volumetric flow rate at the inlet to the control device for each steel production cycle) according to the requirements in § 63.7832.

(b) For each baghouse applied to meet any particulate emission limit in Table 1 of this subpart, you must install, operate, and maintain a bag leak detection system according to § 63.7831(f), monitor the relative change in particulate matter loadings according to the requirements in § 63.7832, and conduct inspections at their specified frequencies according to the requirements in paragraphs (b)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or laying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(c) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.7790(b)(2), you must install, operate, and maintain CPMS according to the requirements in § 63.7831(g) and monitor the hourly average pressure drop and water flow rate according to the requirements in § 63.7832.

(d) For each electrostatic precipitator subject to the opacity operating limit in § 63.7790(b)(3), you must install, operate, and maintain a COMS according to the requirements in § 63.7831(h) and monitor the 6-minute average opacity of emissions exiting each control device stack according to the requirements in § 63.7832.

(e) For each sinter plant subject to the operating limit in § 63.7790(d), you must either:

(1) Compute and record the 30-day rolling average of the oil content of the feedstock for each operating day using the procedures in § 63.7824(e); or

(2) Compute and record the 30-day rolling average of volatile organic compound emissions (lbs/ton of sinter) for each operating day using the procedures in § 63.7824(f).

### § 63.7831 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each CPMS required in § 63.7830, you must develop and make available for inspection upon request by the permitting authority a site-specific monitoring plan that addresses the requirements in paragraphs (a)(1) through (6) of this section.

(1) Installation of the CPMS sampling probe or other interface at a

measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);

(2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system;

(3) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations);

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of §§ 63.8(c)(1), (c)(3), (c)(4)(ii), (c)(7), and (c)(8);

(5) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(6) Ongoing recordkeeping and reporting procedures in accordance the general requirements of §§ 63.10(c), (e)(1), and (e)(2)(i).

(b) Unless otherwise specified, each CPMS must:

(1) Complete a minimum of one cycle of operation for each successive 15-minute period and collect a minimum of three of the required four data points to constitute a valid hour of data;

(2) Provide valid hourly data for at least 95 percent of every averaging period; and

(3) Determine and record the hourly average of all recorded readings.

(c) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(d) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

(e) For each capture system subject to an operating limit in § 63.7790(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a) through (d) of this section.

(f) For each baghouse applied to meet any particulate emission limit in Table 1 of this subpart, you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (f)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The system must provide output of relative changes in particulate matter loadings.

(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel.

(4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, ''Fabric Filter Bag Leak Detection Guidance,'' EPA–454/R–98–015, September 1997. You may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.

(5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time.

(6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible official certifies, in writing, that the baghouse has been inspected and found to be in good operating condition.

(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(g) For each venturi scrubber subject to operating limits in § 63.7790(b)(2) for pressure drop and scrubber water flow rate, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a) through (d) of this section.

(h) For each electrostatic precipitator subject to the opacity operating limit in § 63.7790(b)(3), you must install, operate, and maintain each COMS according to the requirements in paragraphs (h)(1) through (4) of this section.

(1) You must install, operate, and maintain each COMS according to Performance Specification 1 in 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each COMS according to § 63.8 and Performance Specification 1 in appendix B to 40 CFR part 60.

(3) Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) COMS data must be reduced as specified in § 63.8(g)(2).

**§ 63.7832 How do I monitor and collect data to demonstrate continuous compliance?**

(a) Except for monitoring malfunctions, out-of-control periods as specified in § 63.8(c)(7), associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times an affected source is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**§ 63.7833 How do I demonstrate continuous compliance with the emission limitations that apply to me?**

(a) You must demonstrate continuous compliance for each affected source subject to an emission or opacity limit in § 63.7790(a) by meeting the requirements in Table 3 to this subpart.

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in § 63.7790(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitor the capture system according to the requirements in § 63.7830(a) and collect, reduce, and record the monitoring data for each of the operating limit parameters according to the applicable requirements of this subpart;

(c) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (c)(1) and (2) of this section:

(1) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective action(s) taken, and the date on which corrective action was completed.

(2) Inspecting and maintaining each baghouse according to the requirements in § 63.7831(f) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in § 63.7831(f)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(d) For each venturi scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.7790(b)(2), you must demonstrate continuous compliance by completing the requirements of paragraphs (d)(1) through (3) of this section:

(1) Maintaining the hourly average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Operating and maintaining each venturi scrubber CPMS according to § 63.7831(g) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to § 63.7831(b) and recording all information needed to document conformance with these requirements.

(e) For each electrostatic precipitator subject to the site-specific opacity operating limit in § 63.7790(b)(3), you must demonstrate continuous compliance by completing the requirements of paragraphs (e)(1) and (2) of this section:

(1) Maintaining the average opacity of emissions for each 6-minute period no higher than the site-specific limit established during the initial or subsequent performance test; and

(2) Operating and maintaining each COMS and reducing the COMS data according to § 63.7831(h).

(f) For each new or existing sinter plant subject to the operating limit in § 63.7790(d), you must demonstrate continuous compliance by either:

(1) For the sinter plant feedstock oil content operating limit in § 63.7790(d)(1),

(i) Computing and recording the 30-day rolling average of the percent oil content for each operating day according to the performance test procedures in § 63.7824(e);

(ii) Recording the sampling date and time, oil content values, and sinter produced (tons/day); and

(iii) Maintaining the 30-day rolling average oil content of the feedstock no higher than 0.02 percent.

(2) For the volatile organic compound operating limit in § 63.7790(d)(2),

(i) Computing and recording the 30-day rolling average of volatile organic compound emissions for each operating day according to the performance test procedures in § 63.7824(f);

(ii) Recording the sampling date and time, sampling values, and sinter produced (tons/day); and

(iii) Maintaining the 30-day rolling average of volatile organic compound emissions no higher than 0.2 lb/ton of sinter produced.

### § 63.7834 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device subject to an operating limit in § 63.7790(b), you must demonstrate continuous compliance with the operation and maintenance requirements in § 63.7800(b) by meeting the requirements of paragraphs (a)(1) through (3) of this section:

(1) Making monthly inspections of capture systems and initiating corrective action according to § 63.7800(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance according to § 63.7800(b)(2) and recording all information needed to document conformance with these requirements; and

(3) Initiating and completing corrective action for a bag leak detection system alarm according to § 63.7800(b)(4) and recording all information needed to document conformance with these requirements.

(b) You must maintain a current copy of the operation and maintenance plan required in § 63.7800(b) onsite and available for inspection upon request. You must keep the plans for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

### § 63.7835 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations.* You must report each instance in which you did not meet each emission limitation in § 63.7790 that applies to you. This includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each operation and maintenance requirement in § 63.7800 that applies to you. These instances are deviations from the emission limitations and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements in § 63.7841.

(b) *Startups, shutdowns, and malfunctions.* During periods of startup, shutdown, and malfunction, you must operate in accordance with your startup, shutdown, and malfunction plan.

(1) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan.

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

## Notifications, Reports, and Records

### § 63.7840 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in § 63.9(b)(2), if you startup your affected source before May 20, 2003, you must submit your initial notification no later than September 17, 2003.

(c) As specified in § 63.9(b)(3), if you start your new affected source on or after May 20, 2003, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(e) If you are required to conduct a performance test, opacity observation, or other initial compliance demonstration, you must submit a notification of compliance status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

**§ 63.7841 What reports must I submit and when?**

(a) *Compliance report due dates.* Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.7783 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your source in § 63.7783.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a)(1) through (4) of this section.

(b) *Compliance report contents.* Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in §§ 63.7833 and 63.7834 that apply to you, a statement that there were no deviations from the emission limitations or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including a CPMS, COMS, or continuous emission monitoring system (CEMS) was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.

(7) For each deviation from an emission limitation in § 63.7790 that occurs at an affected source where you are not using a continuous monitoring system (including a CPMS, COMS, or CEMS) to comply with an emission limitation in this subpart, the compliance report must contain the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a continuous monitoring system (including a CPMS or COMS) to comply with the emission limitation in this subpart, you must include the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(8)(i) through (xi) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control as specified in § 63.8(c)(7), including the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) *Immediate startup, shutdown, and malfunction report.* If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in § 63.10(d)(5)(ii).

(d) *Part 70 monitoring report.* If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

**§ 63.7842 What records must I keep?**

(a) You must keep the following records:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of

compliance status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests, performance evaluations, and opacity observations as required in § 63.10(b)(2)(viii).

(b) For each COMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Monitoring data for a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (that is, superceded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required in § 63.6(h)(6) for visual observations.

(d) You must keep the records required in §§ 63.7833 and 63.7834 to show continuous compliance with each emission limitation and operation and maintenance requirement that applies to you.

### § 63.7843 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to § 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

## Other Requirements and Information

### § 63.7850 What parts of the General Provisions apply to me?

Table 4 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

### § 63.7851 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternative opacity emission limits in Table 1 to this subpart under § 63.6(h)(9).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90, except for approval of an alternative method for the oil content of the sinter plant feedstock or volatile organic compound measurements for the sinter plant windbox exhaust stream stack as provided in § 63.7824(g).

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

### § 63.7852 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows.

*Bag leak detection system* means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on tribroelectric, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

*Basic oxygen process furnace* means any refractory-lined vessel in which high-purity oxygen is blown under pressure through a bath of molten iron, scrap metal, and fluxes to produce steel. This definition includes both top and bottom blown furnaces, but does not include argon oxygen decarburization furnaces.

*Basic oxygen process furnace shop* means the place where steelmaking operations that begin with the transfer of molten iron (hot metal) from the torpedo car and end prior to casting the molten steel, including hot metal transfer, desulfurization, slag skimming, refining in a basic oxygen process furnace, and ladle metallurgy occur.

*Basic oxygen process furnace shop ancillary operations* means the processes where hot metal transfer, hot metal desulfurization, slag skimming, and ladle metallurgy occur.

*Blast furnace* means a furnace used for the production of molten iron from iron ore and other iron bearing materials.

*Bottom-blown furnace* means any basic oxygen process furnace in which oxygen and other combustion gases are introduced into the bath of molten iron through tuyeres in the bottom of the vessel or through tuyeres in the bottom and sides of the vessel.

*Casthouse* means the building or structure that encloses the bottom portion of a blast furnace where the hot metal and slag are tapped from the furnace.

*Certified observer* means a visible emission observer certified to perform EPA Method 9 opacity observations.

*Desulfurization* means the process in which reagents such as magnesium, soda ash, and lime are injected into the hot metal, usually with dry air or nitrogen, to remove sulfur.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation (including operating limits) or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Discharge end* means the place where those operations conducted within the sinter plant starting at the discharge of the sintering machine's traveling grate including (but not limited to) hot sinter crushing, screening, and transfer operations occur.

*Emission limitation* means any emission limit, opacity limit, or operating limit.

*Hot metal transfer station* means the location in a basic oxygen process furnace shop where molten iron (hot

metal) is transferred from a torpedo car or hot metal car used to transport hot metal from the blast furnace casthouse to a holding vessel or ladle in the basic oxygen process furnace shop. This location also is known as the reladling station or ladle transfer station.

*Integrated iron and steel manufacturing facility* means an establishment engaged in the production of steel from iron ore.

*Ladle metallurgy* means a secondary steelmaking process that is performed typically in a ladle after initial refining in a basic oxygen process furnace to adjust or amend the chemical and/or mechanical properties of steel.

*Primary emissions* means particulate matter emissions from the basic oxygen process furnace generated during the steel production cycle which are captured and treated in the furnace's primary emission control system.

*Primary emission control system* means the combination of equipment used for the capture and collection of primary emissions (*e.g.*, an open hood capture system used in conjunction with an electrostatic precipitator or a closed hood system used in conjunction with a scrubber).

*Primary oxygen blow* means the period in the steel production cycle of a basic oxygen process furnace during which oxygen is blown through the molten iron bath by means of a lance inserted from the top of the vessel (top-blown) or through tuyeres in the bottom and/or sides of the vessel (bottom-blown).

*Responsible official* means responsible official as defined in § 63.2.

*Secondary emissions* means particulate matter emissions that are not controlled by a primary emission control system, including emissions that escape from open and closed hoods, lance hole openings, and gaps or tears in ductwork to the primary emission control system.

*Secondary emission control system* means the combination of equipment used for the capture and collection of secondary emissions from a basic oxygen process furnace.

*Sinter cooler* means the apparatus used to cool the hot sinter product that is transferred from the discharge end through contact with large volumes of induced or forced draft air.

*Sinter plant* means the machine used to produce a fused clinker-like aggregate or sinter of fine iron-bearing materials suited for use in a blast furnace. The machine is composed of a continuous traveling grate that conveys a bed of ore fines and other finely divided iron-bearing material and fuel (typically coke breeze), a burner at the feed end of the grate for ignition, and a series of downdraft windboxes along the length of the strand to support downdraft combustion and heat sufficient to produce a fused sinter product.

*Skimming station* means the locations inside a basic oxygen process furnace shop where slag is removed from the top of the molten metal bath.

*Steel production cycle* means the operations conducted within the basic oxygen process furnace shop that are required to produce each batch of steel. The following operations are included: scrap charging, preheating (when done), hot metal charging, primary oxygen blowing, sampling, (vessel turndown and turnup), additional oxygen blowing (when done), tapping, and deslagging. The steel production cycle begins when the scrap is charged to the furnace and ends after the slag is emptied from the vessel into the slag pot.

*Top-blown furnace* means any basic oxygen process furnace in which oxygen is introduced into the bath of molten iron by means of an oxygen lance inserted from the top of the vessel.

*Windboxes* means the compartments that provide for a controlled distribution of downdraft combustion air as it is drawn through the sinter bed of a sinter plant to make the fused sinter product.

**Tables to Subpart FFFFF of Part 63**

TABLE 1 TO SUBPART FFFFF OF PART 63.—EMISSION AND OPACITY LIMITS

[As required in § 63.7790(a), you must comply with each applicable emission and opacity limit in the following table]

| For . . . | You must comply with each of the following . . . |
|---|---|
| 1. Each windbox exhaust stream at an existing sinter plant. | You must not cause to be discharged to the atmosphere any gases that contain particulate matter in excess of 0.4 lb/ton of product sinter. |
| 2. Each windbox exhaust stream at a new sinter plant. | You must not cause to be discharged to the atmosphere any gases that contain particulate matter in excess of 0.3 lb/ton of product sinter. |
| 3. Each discharge end at an existing sinter plant | a. You must not cause to be discharged to the atmosphere any gases that exit from one or more control devices that contain, on a flow-weighted basis, particulate matter in excess of 0.02 gr/dscf [1]; and<br>b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the building or structure housing the discharge end that exhibit opacity greater than 20 percent (6-minute average). |
| 4. Each discharge end at a new sinter plant ..... | a. You must not cause to be discharged to the atmosphere any gases that exit from one or more control devices that contain, on a flow weighted basis, particulate matter in excess of 0.01 gr/dscf; and<br>b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the building or structure housing the discharge end that exhibit opacity greater than 10 percent (6-minute average). |
| 5. Each sinter cooler stack at an existing sinter plant. | You must not cause to be discharged to the atmosphere any gases that contain particulate matter in excess of 0.03 gr/dscf. |
| 6. Each sinter cooler stack at a new sinter plant .. | You must not cause to be discharged to the atmosphere any gases that contain particulate matter in excess of 0.01 gr/dscf. |
| 7. Each casthouse at an existing blast furnace ..... | a. You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf; and<br>b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the casthouse or structure housing the blast furnace that exhibit opacity greater than 20 percent (6-minute average). |
| 8. Each casthouse at a new blast furnace ..... | a. You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.003 gr/dscf; and<br>b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the casthouse or structure housing the blast furnace that exhibit opacity greater than 15 percent (6-minute average). |

TABLE 1 TO SUBPART FFFFF OF PART 63.—EMISSION AND OPACITY LIMITS—Continued

[As required in § 63.7790(a), you must comply with each applicable emission and opacity limit in the following table]

| For . . . | You must comply with each of the following . . . |
|---|---|
| 9. Each BOPF at a new or existing shop | a. You must not cause to be discharged to the atmosphere any gases that exit from a primary emission control system for a BOPF with a closed hood system at a new or existing BOPF shop that contain, on a flow-weighted basis, particulate matter in excess of 0.03 gr/dscf during the primary oxygen blow [2];<br>b. You must not cause to be discharged to the atmosphere any gases that exit from a primary emission control system for a BOPF with an open hood system that contain, on a flow-weighted basis, particulate matter in excess of 0.02 gr/dscf during the steel production cycle for an existing BOPF shop or 0.01 gr/dscf during the steel production cycle for a new BOPF shop [2]; and<br>c. You must not cause to be discharged to the atmosphere any gases that exit from a control device used solely for the collection of secondary emissions from the BOPF that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.0052 gr/dscf for a new BOPF shop. |
| 10. Each hot metal transfer, skimming, and desulfurization operation at a new or existing BOPF shop. | You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.003 gr/dscf for a new BOPF shop. |
| 11. Each ladle metallurgy operation at a new or existing BOPF shop. | You must not cause to be discharged to the atmosphere any gases that exit from a control device that contain particulate matter in excess of 0.01 gr/dscf for an existing BOPF shop or 0.004 gr/dscf for a new BOPF shop. |
| 12. Each roof monitoring at an existing BOPF shop. | You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the BOPF shop or any other building housing the BOPF or BOPF shop operation that exhibit opacity greater than 20 percent (3-minute average). |
| 13. Each roof monitor at a new BOPF shop | a. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the BOPF shop or other building housing a bottom-blown BOPF or BOPF shop operations that exhibit opacity (for any set of 6-minute averages) greater than 10 percent, except that one 6-minute period not to exceed 20 percent may occur once per steel production cycle; or<br>b. You must not cause to be discharged to the atmosphere any secondary emissions that exit any opening in the BOPF shop or other building housing a top-blown BOPF or BOPF shop operations that exhibit opacity (for any set of 3-minute averages) greater than 10 percent, except that one 3-minute period greater than 10 percent but less than 20 percent may occur once per steel production cycle. |

[1] This limit applies if the cooler is vented to the same control device as the discharge end.
[2] This limit applies to control devices operated in parallel for a single BOPF during the oxygen blow.

TABLE 2 TO SUBPART FFFFF OF PART 63.—INITIAL COMPLIANCE WITH EMISSION AND OPACITY LIMITS

[As required in § 63.7825(a)(1), you must demonstrate initial compliance with the emission and opacity limits according to the following table]

| For . . . | You have demonstrated initial compliance if . . . |
|---|---|
| 1. Each windbox exhaust stream at an existing sinter plant. | The process-weighted mass rate of particulate matter from a windbox exhaust stream, measured according to the performance test procedures in § 63.7822(c), did not exceed 0.4 lb/ton of product sinter. |
| 2. Each windbox exhaust stream at a new sinter plant. | The process-weighted mass rate of particulate matter from a windbox exhaust stream, measured according to the performance test procedures in § 63.7822(c), did not exceed 0.3 lb/ton of product sinter. |
| 3. Each discharge end at an existing sinter plant | a. The flow-weighted average concentration of particulate matter from one or more control devices applied to emissions from a discharge end, measured according to the performance test procedures in § 63.7822(d), did not exceed 0.02 gr/dscf; and<br>b. The opacity of secondary emissions from each discharge end, determined according to the performance test procedures in § 63.7823(c), did not exceed 20 percent (6-minute average). |
| 4. Each discharge end at a new sinter plant | a. The flow-weighted average concentration of particulate matter from one or more control devices applied to emissions from a discharge end, measured according to the performance test procedures in § 63.7822(d), did not exceed 0.01 gr/dscf; and<br>b. The opacity of secondary emissions from each discharge end, determined according to the performance test procedures in § 63.7823(c), did not exceed 10 percent (6-minute average). |
| 5. Each sinter cooler stack at an existing sinter plant. | The average concentration of particulate matter from a sinter cooler stack, measured according to the performance test procedures in § 63.7822(b), did not exceed 0.03 gr/dscf. |
| 6. Each sinter cooler stack at a new sinter plant | The average concentration of particulate matter from a sinter cooler stack, measured according to the performance test procedures in § 63.7822(b), did not exceed 0.01 gr/dscf. |
| 7. Each casthouse at an existing blast furnace | a. The average concentration of particulate matter from a control device applied to emissions from a casthouse, measured according to the performance test procedures in § 63.7822(e), did not exceed 0.01 gr/dscf; and<br>b. The opacity of secondary emissions from each casthouse, determined according to the performance test procedures in § 63.7823(c), did not exceed 20 percent (6-minute average). |

TABLE 2 TO SUBPART FFFFF OF PART 63.—INITIAL COMPLIANCE WITH EMISSION AND OPACITY LIMITS—Continued

[As required in § 63.7825(a)(1), you must demonstrate initial compliance with the emission and opacity limits according to the following table]

| For . . . | You have demonstrated initial compliance if . . . |
|---|---|
| 8. Each casthouse at a new blast furnace | a. The average concentration of particulate matter from a control device applied to emissions from a casthouse, measured according to the performance test procedures in § 63.7822(e), did not exceed 0.003 gr/dscf; and<br>b. The opacity of secondary emissions from each casthouse, determined according to the performance test procedures in § 63.7823(c), did not exceed 15 percent (6-minute average). |
| 9. Each BOPF at a new or existing BOPF shop | a. The average concentration of particulate matter from a primary emission control system applied to emissions from a BOPF with a closed hood system, measured according to the performance test procedures in § 63.7822(f), did not exceed 0.03 gr/dscf for a new or existing BOPF shop;<br>b. The average concentration of particulate matter from a primary emission control system applied to emissions from a BOPF with an open hood system, measured according to the performance test procedures in § 63.7822(g), did not exceed 0.02 gr/dscf for an existing BOPF shop or 0.01 gr/dscf for a new BOPF shop; and<br>c. The average concentration of particulate matter from a control device applied solely to secondary emissions from a BOPF, measured according to the performance test procedures in § 63.7822(g), did not exceed 0.01 gr/dscf for an existing BOPF shop or 0.0052 gr/dscf for a new BOPF shop. |
| 10. Each hot metal transfer skimming, and desulfurization at a new or existing BOPF shop. | The average concentration of particulate matter from a control device applied to emissions from hot metal transfer, skimming, or desulfurization, measured according to the performance test procedures in § 63.7822(h), did not exceed 0.01 gr/dscf for an existing BOPF shop or 0.003 gr/dscf for a new BOPF shop. |
| 11. Each ladle metallurgy operation at a new or existing BOPF shop. | The average concentration of particulate matter from a control device applied to emissions from a ladle metallurgy operation, measured according to the performance test procedures in § 63.7822(h), did not exceed 0.01 gr/dscf for an existing BOPF shop or 0.004 gr/dscf for a new BOPF shop. |
| 12. Each roof monitor at an existing BOPF shop | The opacity of secondary emissions from each BOPF shop, determined according to the performance test procedures in § 63.7823(d), did not exceed 20 percent (3-minute average). |
| 13. Each roof monitor at a new BOPF shop | a. The opacity of the highest set of 6-minute averages from each BOPF shop housing a bottom-blown BOPF, determined according to the performance test procedures in § 63.7823(d), did not exceed 20 percent and the second highest set of 6-minute averages did not exceed 10 percent; or<br>b. The opacity of the highest set of 3-minute averages from each BOPF shop housing a top-blown BOPF, determined according to the performance test procedures in § 63.7823(d), did not exceed 20 percent and the second highest set of 3-minute averages did not exceed 10 percent. |

TABLE 3 TO SUBPART FFFFF OF PART 63.—CONTINUOUS COMPLIANCE WITH EMISSION AND OPACITY LIMITS

[As required in § 63.7833(a), you must demonstrate continuous compliance with the emission and opacity limits according to the following table]

| For . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| 1. Each windbox exhaust stream at an existing sinter plant. | a. Maintaining emissions of particulate matter at or below 0.4 lb/ton of product sinter; and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 2. Each windbox exhaust stream at a new sinter plant. | a. Maintaining emissions of particulate matter at or below 0.3 lb/ton of product sinter; and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 3. Each discharge end at an existing sinter plant | a. Maintaining emissions of particulate matter from one or more control devices at or below 0.02 gr/dscf; and<br>b. Maintaining the opacity of secondary emissions that exit any opening in the building or structure housing the discharge end at or below 20 percent (6-minute average); and<br>c. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 4. Each discharge end at a new sinter plant | a. Maintaining emissions of particulate matter from one or more control devices at or below 0.01 gr/dscf;<br>b. Maintaining the opacity of secondary emissions that exit any opening in the building or structure housing the discharge end at or below 10 percent (6-minute average); and<br>c. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 5. Each sinter cooler stack at an existing sinter plant. | a. Maintaining emissions of particulate matter at or below 0.03 gr/dscf; and<br>b. Conducting subsequent performance sinter plant tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 6. Each sinter cooler stack at a new sinter plant | a. Maintaining emissions of particulate matter at or below 0.01 gr/dscf; and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 7. Each casthouse at an existing blast furnace | a. Maintaining emissions of particulate matter from a control device at or below 0.01 gr/dscf; |

TABLE 3 TO SUBPART FFFFF OF PART 63.—CONTINUOUS COMPLIANCE WITH EMISSION AND OPACITY LIMITS—Continued

[As required in § 63.7833(a), you must demonstrate continuous compliance with the emission and opacity limits according to the following table]

| For . . . | You must demonstrate continuous compliance by . . . |
|---|---|
| | b. Maintaining the opacity of secondary emissions that exit any opening in the casthouse or structure housing the blast furnace at or below 20 percent (6-minute average); and<br>c. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 8. Each casthouse at a new blast furnace | a. Maintaining emissions of particulate matter from a control device at or below 0.003 gr/dscf;<br>b. Maintaining the opacity of secondary emissions that exit any opening in the casthouse or building housing the casthouse at or below 15 percent (6-minute average); and<br>c. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 9. Each BOPF at a new or existing BOPF shop | a. Maintaining emissions of particulate matter from the primary emission control system for a BOPF with a closed hood system at or below 0.03 gr/dscf;<br>b. Maintaining emissions of particulate matter from the primary emission control system for a BOPF with an open hood system at or below 0.02 gr/dscf for an existing BOPF shop or 0.01 gr/dscf for a new BOPF shop;<br>c. Maintaining emissions of particulate matter from a control device applied solely to secondary emissions from a BOPF at or below 0.01 gr/dscf for an existing BOPF shop or 0.0052 gr/dscf for a new BOPF shop; and<br>d. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 10. Each hot metal transfer, skimming, and desulfurization operation at a new or existing BOPF shop. | a. Maintaining emissions of particulate matter from a control device at or below 0.01 gr/dscf at an existing BOPF or 0.003 gr/dscf for a new BOPF; and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 11. Each ladle metallurgy operation at a new or existing BOPF shop. | a. Maintaining emissions of particulate matter from a control device at or below 0.01 gr/dscf at an existing BOPF shop or 0.004 gr/dscf for a new BOPF shop; and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 12. Each roof monitor at an existing BOPF shop | a. Maintaining the opacity of secondary emissions that exit any opening in the BOPF shop or other building housing the BOPF or shop operation at or below 20 percent (3-minute average); and<br>b. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |
| 13. Each roof monitor at a new BOPF shop | a. Maintaining the opacity (for any set of 6-minute averages) of secondary emissions that exit any opening in the BOPF shop or other building housing a bottom-blown BOPF or shop operation at or below 10 percent, except that one 6-minute period greater than 10 percent but no more than 20 percent may occur once per steel production cycle;<br>b. Maintaining the opacity (for any set of 3-minute averages) of secondary emissions that exit any opening in the BOPF shop or other building housing a top-blown BOPF or shop operation at or below 10 percent, except that one 3-minute period greater than 10 percent but less than 20 percent may occur once per steel production cycle; and<br>c. Conducting subsequent performance tests at least twice during each term of your title V operating permit (at midterm and renewal). |

TABLE 4 TO SUBPART FFFFF OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART FFFFF

[As required in § 63.7850, you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) shown in the following table]

| Citation | Subject | Applies to Subpart FFFFF | Explanation |
|---|---|---|---|
| § 63.1 | Applicability | Yes. | |
| § 63.2 | Definitions | Yes. | |
| § 63.3 | Units and Abbreviations | Yes. | |
| § 63.4 | Prohibited Activities | Yes. | |
| § 63.5 | Construction/Reconstruction | Yes. | |
| § 63.6(a), (b), (c), (d), (e), (f), (g), (h)(2)(ii)–(h)(9). | Compliance with Standards and Maintenance Requirements. | Yes. | |
| § 63.6(h)(2)(i) | Determining Compliance with Opacity and VE Standards. | No | Subpart FFFFF specifies Method 9 in appendix A to part 60 of this chapter to comply with roof monitor opacity limits. |
| § 63.7(a)(1)–(2) | Applicability and Performance Test Dates. | No | Subpart FFFFF and specifies performance test applicability and dates. |
| § 63.7(a)(3), (b), (c)–(h) | Performance Testing Requirements | Yes. | |
| § 63.8(a)(1)–(a)(3), (b), (c)(1)–(3), (c)(4)(i)–(e), (c)(7)–(8), (f)(1)–(5), (g)(1)–(4). | Monitoring Requirements | Yes | CMS requirements in § 63.8(c)(4) (i)–(ii), (c)(5) and (6), (d), and (e) apply only to COMS for electrostatic precipitators. |

Attachment III Attachment III Attachment III

TABLE 4 TO SUBPART FFFFF OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART FFFFF—Continued

[As required in § 63.7850, you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) shown in the following table]

| Citation | Subject | Applies to Subpart FFFFF | Explanation |
|---|---|---|---|
| § 63.8(a)(4) | Additional Monitoring Requirements for Control Devices in § 63.11. | No | Subpart FFFFF does not require flares. |
| § 63.8(c)(4) | Continuous Monitoring System Requirements. | No | Subpart FFFFF specifies requirements for operation of CMS. |
| § 63.8(f)(6) | RATA Alternative | No. | |
| § 63.9 | Notification Requirements | Yes | Additional notifications for CMS in § 63.9(g) apply to COMS for electrostatic precipitators. |
| § 63.9(g)(5) | DATA Reduction | No | Subpart FFFFF specifies data reduction requirements. |
| § 63.10(a), (b)(1)–(2)(xii), (b)(2)(xiv), (b)(3), (c)(1)–(6), (c)(9)–(15), (d), (e)(1)–(2), (e)(4), (f). | Recordkeeping and Reporting Requirements. | Yes | Additional records for CMS in § 63.10(c) (1)–(6), (9)–(15), and reports in § 63.10(d)(1)–(2) apply only to COMS for electrostatic precipitators. |
| § 63.10(b)(2)(xiii) | CMS Records for RATA Alternative | No. | |
| § 63.10(c)(7)–(8) | Records of Excess Emissions and Parameter Monitoring Exceedances for CMS. | No | Subpart FFFFF specifies record requirements. |
| § 63.11 | Control Device Requirements | No | Subpart FFFFF does not require flares. |
| § 63.12 | State Authority and Delegations | Yes. | |
| § 63.13–§ 63.15 | Addresses, Incorporation by Reference, Availability of Information. | Yes. | |

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