

Final Action Recommendation on a Permit to Install

Public written comments are to be accepted at the appropriate DO/laa for a 30 day period following publication of the draft permit notice in the applicable newspaper. Please complete the following for all received comments:

This form and the accompanying final version of the PTI must be forwarded to the airpti@epa.state.oh.us within 30 days of the end of the comment period or receipt of record of a public meeting if one had been held.

Comments Received (Mark each row as appropriate with an 'X' and enter the appropriate information)

Add rows as applicable:

<input checked="" type="checkbox"/>	No Comments Received	
<input type="checkbox"/>	Enter Name of Commentor Here	Date Comment Received

Final Recommendation (Mark one row as appropriate):

<input checked="" type="checkbox"/>	Approval
<input type="checkbox"/>	Approval with Changes (Make changes on electronic copy of issued permit)
<input type="checkbox"/>	Denial - Enter Reason for Denial Here

Additional comments:

Synthetic Minor Determination and/or Netting Determination

Permit To Install 16-02433

A. Source Description

The Babcock and Wilcox Company was authorized in permit to install 16-02367 to construct an R&D facility in Summit County, Ohio. The facility will consist of a small boiler simulator that is essentially 6 MMBTU per hour boiler that will fire coal, natural gas, and No. 6 fuel oil. Now, B&W is proposing to add the capability to inject SO₂ directly into the small boiler simulator with this permit to install.

B. Facility Emissions and Attainment Status

While the small boiler simulator will be controlled with both a baghouse and scrubber system, there are no applicable federal requirements for them to be employed so the potential to emit from this source must be based upon uncontrolled emissions. The small boiler simulator's uncontrolled potential to emit is 175 tons of SO₂, which doesn't trigger PSD review but would subject the facility to become a major source for Title V permitting purposes.

C. Source Emissions

In order to avoid being classified as a major source for Title V, B&W proposes to employ a scrubber system and to limit itself to the following fuel restrictions:

- a. maximum coal sulfur content of 4%;
- b. maximum fuel oil sulfur content of 2%;
- c. 750 tons of coal per rolling 12-month period;
- d. 6,000 gallons of No. 6 fuel oil per rolling 12-month period;
- e. 3.6×10^6 scf of natural gas per rolling 12-month period; and
- f. 45 tons of SO₂ injected per rolling 12-month period.

With these restrictions in place the potential to emit of SO₂ would become 15.3 tons.

D. Conclusion

Adherence to all of the terms and condition of this permit will avoid B&W being classified as a major source.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
SUMMIT COUNTY**

CERTIFIED MAIL



Street Address:

Mailing Address:
Lazarus Gov.
Center

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

**Application No: 16-02433
Fac ID: 1677020156**

DATE: 1/26/2006

The Babcock and Wilcox Co
Lindsey Larson
1562 Beeson St
Alliance, OH 446012195

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$200** will be due. Please do not submit any payment now.

The Ohio EPA is urging 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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

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

CC: USEPA

ARAQMD

Akron Met Area Trans Study

WV

PA



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 16-02433

Application Number: 16-02433
Facility ID: 1677020156
Permit Fee: **To be entered upon final issuance**
Name of Facility: The Babcock and Wilcox Co
Person to Contact: Lindsey Larson
Address: 1562 Beeson St
Alliance, OH 446012195

Location of proposed air contaminant source(s) [emissions unit(s)]:
**180 S Van Buren Ave
Barberton, Ohio**

Description of proposed emissions unit(s):
Modification to B001, SO2 Injection for Scrubber Research. Replaces PTI 16-02367 Issued Final 11/26/2004.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

The Babcock and Wilcox Co
PTI Application: 16-02433
Issued: To be entered upon final issuance
Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 1677020156

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping 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 (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) 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. 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.)

3. 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.

4. Inspections and Information Requests

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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.

5. 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).

6. 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.

7. 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.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation

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or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

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This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this

**The B
PTI A**

Emissions Unit ID: **B001**

Issued: To be entered upon final issuance

permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. 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. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM/PM-10	3.29
SO ₂	15.3
OC	0.23
NO _x	39.5
CO	7.88

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B001 - Small Boiler Simulator, 6 million Btu per hour coal, natural gas, and No. 6 fuel oil fired R&D boiler controlled with a baghouse and a dry and wet scrubber - modification - addition of SO2 and air injection system	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-17-07(A)</p> <p>OAC rule 3745-17-10(B)</p> <p>OAC rule 3745-17-10(C)</p> <p>OAC rule 3745-21-07(B)</p>

OAC rule 3745-21-08(B)

OAC rule 3745-23-06(B)

OAC rule 3745-35-07(B)(1)(to avoid Title V requirements).

Applicable Emissions
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A), 3745-17-10(B), 3745-21-07(B), 3745-21-08(B), 3745-23-06(B), and 3745-35-07(B).

When burning a combination of natural gas, No. 6 fuel oil, and/or coal, particulate emissions (PE) shall not exceed 0.125 lb/MMBTU of actual heat input, 0.75 lb/hr, and 3.29 tons per year.

Nitrogen oxides (NOx) emissions shall not exceed 1.5 lbs/MMBTU of actual heat input, 9.0 lbs/hr, and 39.5 tons per year.

Sulfur dioxide (SO2) emissions shall not exceed 3.33 lbs/MMBTU of actual heat input and 20 lbs/hr, when firing oil.

Carbon monoxide (CO) emissions shall not exceed 0.3 lb/MMBTU of actual heat input, 1.8 lbs/hr, and 7.88 tons per year.

Organic compound (OC) emissions shall not exceed 0.01 lb/MMBTU of actual heat input, 0.06 lb/hr, and 0.26 ton per

year.

See A.2.a and A.2.c below.

The visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

When burning natural gas exclusively, PE shall not exceed 0.020 lb/MMBTU of actual heat input.

When burning a combination of natural gas, No. 6 fuel oil, and/or coal, the PE limitation specified in this rule is less stringent than the PE P/PM-10 limitation established pursuant to OAC rule 3745-31-05(A)(3).

See A.2.b below.

See A.2.b below.

See A.2.b below.

The coal sulfur content shall not exceed 4.0%, by weight

The No. 6 fuel oil sulfur content shall not exceed 2.0%, by weight.

The permittee shall burn no more than 750 tons of coal in this emission unit per rolling, 12-month period.

**The B
PTI A**Emissions Unit ID: **B001****Issued: To be entered upon final issuance**

The permittee shall burn no more than 6,000 gallons of No. 6 fuel oil in this emission unit per rolling, 12-month period.

The permittee shall burn no more than 3.6×10^6 scf of natural gas in this emission unit per rolling, 12-month period.

The permittee shall inject no more than 45 tons of SO₂ in this emissions unit per rolling, 12-month period.

The SO₂ emissions shall not exceed 15.3 tons per rolling, 12-month period.

The maximum SO₂ emission rate, when burning coal or injecting SO₂, shall not exceed 12.0 lbs/hr.

2. Additional Terms and Conditions

- 2.a** The hourly emission limitations are based upon the emissions unit's restricted potential to emit and, therefore, no additional monitoring, record keeping, or reporting requirements are necessary to demonstrate compliance with these emission limitations.
- 2.b** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 and 3745-21-07(B), respectively, by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to

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PTI A**Emissions Unit ID: **B001****Issued: To be entered upon final issuance**

Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rules 3745-21-07(B) and 3745-23-06(B) by committing to comply with best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 16-02433.

- 2.c** The permittee shall employ low-NOx burners (or cyclone firing, when necessary) to control the NOx emissions from this emissions unit.

B. Operational Restrictions

1. In order to avoid the applicability of the federal Title V permitting for SO₂, the permittee shall restrict the use of the fuels burned in this emissions unit and the amount of SO₂ injected in this emissions unit, in accordance with the following formula summed over time:

(X cu. ft natural gas burned/rolling, 12-month period) x (0.6 lb SO₂ / 10⁶ cu ft of natural gas) +

(Y gallons of No. 6 fuel oil/rolling, 12-month period) x ((157*(S) lb SO₂ / 10³ gallon of fuel oil) + (number of hours of operation while burning coal/rolling, 12-month period) x (12 lbs SO₂/hr) + (number of hours of operation while injecting SO₂/rolling, 12-month period) x (12 lbs SO₂/hr) < or = (30,600 lbs SO₂ / rolling, 12-month period).

Where:

S is the percent sulfur by weight, as an average value for the month

X is the cubic feet of natural gas burned per rolling, 12-month period

Y is the number of gallons of No. 6 fuel oil burned per rolling, 12-month period

The emission factors in the above equations are taken from the applicable tables in USEPA document AP-42, Chapter 1, Section 1.3 (revised 9/98) and Section 1.4 (revised 7/98).

Should more accurate SO₂ emission factors be developed through emission testing or fuel analyses, the permittee shall use them, provided the new emission factors are

Emissions Unit ID: B001

mutually agreeable to the Ohio EPA, Akron RAQMD, and the permittee.

In addition, during the first 12 calendar months of operation following the issuance of Permit to Install 16-02433, the permittee shall not exceed the limitations for the amount of fuel burned or the amount of SO₂ injected, as specified in the following table:

Month	Maximum Allowable Coal Burned (tons)	Maximum Allowable Injected SO ₂ (tons)	Maximum Allowable No. 6 Fuel Oil Burned (gallons)	Maximum Allowable Natural Gas Burned (scf)
1	125	7.5	1000	6.0 x 10 ⁵
1 - 2	125	7.5	1000	6.0 x 10 ⁵
1 - 3	250	15.0	2000	1.2 x 10 ⁶
1 - 4	250	15.0	2000	1.2 x 10 ⁶
1 - 5	375	22.5	3000	1.8 x 10 ⁶
1 - 6	375	22.5	3000	1.8 x 10 ⁶
1 - 7	500	30.0	4000	2.4 x 10 ⁶
1 - 8	500	30.0	4000	2.4 x 10 ⁶
1 - 9	625	37.5	5000	3.0 x 10 ⁶
1 - 10	625	37.5	5000	3.0 x 10 ⁶
1 - 11	750	45	6000	3.6 x 10 ⁶
1 - 12	750	45	6000	3.6 x 10 ⁶

After the first 12 calendar months of operation following the issuance of Permit to Install 16-02433, compliance with the annual limitation of the amount of fuels burned and SO₂ injected shall be based upon rolling, 12-month summations of the fuels burned and SO₂ injected.

2. The pressure drop across the baghouse serving this emissions unit shall be maintained within the range of 2 - 25 inches of water while the emissions unit is in operation and burning coal or No. 6 fuel oil. If only natural gas is being combusted, use of the baghouse is not necessary. This restriction does not apply during periods of startup, shutdown, and bag pulsing.
3. While the emissions unit is in operation and burning coal or injecting SO₂, a scrubber (wet or dry type) shall be employed to control SO₂ emissions as necessary to ensure that SO₂ emissions do not exceed 12.0 lbs/hr.

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PTI A**Emissions Unit ID: **B001****Issued: To be entered upon final issuance**

4. The permittee shall not combust any fuels in this emissions unit while SO₂ is being injected.
5. The permittee shall only burn natural gas, No. 6 fuel oil, coal or a combination of these fuels in this emissions unit.

[The use of other fuels will require the permittee to apply for and obtain either a temporary exemption from the director or a permit to install modification.]

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation and burning coal or No. 6 fuel oil. 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.
2. The permittee shall operate and maintain a continuous SO₂ monitoring device and recorder which measures and records the SO₂ emission rate in the exhaust gases from the wet or dry scrubber when the wet or dry scrubber and the emissions unit are in operation. The SO₂ monitoring device and recorder 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 each day:

- a. a log of the downtime for the capture (collection) system, SO₂ control device, and monitoring equipment, when the associated emissions unit was in operation; and
 - b. the average hourly SO₂ emission rate in the exhaust gases from the stack during each of the 8 3-hour blocks of time during the day.
3. For each shipment of oil received for burning in this emissions unit, the permittee shall 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, or may be represented by single or multiple pipeline deliveries from the same supplier's batch,

Emissions Unit ID: **B001**

and the quality of the oil for those loads or pipeline deliveries 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 D129, D240, and D4294), or equivalent methods as approved by the Director.

The permittee shall maintain records of the oil burned in this emissions unit in accordance with either Alternative 1 or Alternative 2 described below.

a. Alternative 1:

For each shipment of 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.

b. Alternative 2:

The permittee shall collect a representative grab sample of oil that is burned in this emissions unit for each day when the emissions unit is in operation. If additional fuel 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 fuel oil burned in this emissions unit. A representative grab sample of oil does not need to be collected on days 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).)

4. The permittee shall collect or require the coal supplier to collect a representative grab sample of each shipment of coal that is received for burning in this emissions unit. A representative sample is obtained by taking several discrete samples from various

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locations of the coal pile. The discrete samples are combined to form a composite. The composite is then analyzed for ash content (percent), sulfur content (percent), and heat content (Btu/pound of coal). The analytical methods for ash content, sulfur content, and heat content shall be: ASTM method D3174, Ash in the Analysis of Coal and Coke; ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; and ASTM method D2015, Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, ASTM method D3286, Gross Calorific Value of Coal and Coke by the Isothermal Bomb Calorimeter, or ASTM method D5865, Standard Test Method for Gross Calorific Value of Coal and Coke, respectively. Alternative, equivalent methods may be used upon written approval by the appropriate Ohio EPA District Office or local air agency.

5. For each shipment of coal received for burning in this emissions unit, the permittee shall maintain records of the total quantity of coal received and the permittee's or coal supplier's analyses for ash content, sulfur content, and heat content.
6. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the quantity of coal burned, in tons;
 - b. the quantity of No. 6 fuel oil burned, in gallons;
 - c. the quantity of natural gas burned, in cubic feet;
 - d. the quantity of SO₂ injected, in tons;
 - e. the number of hours of operation while burning coal;
 - f. the number of hours while injecting SO₂;
 - g. the rolling, 12-month amount of coal burned, in tons;
 - h. the rolling 12-month amount of fuel oil burned, in gallons;
 - i. the rolling 12-month amount of natural gas burned, in scf;
 - j. the rolling 12-month amount of SO₂ injected, in tons; and
 - k. the rolling, 12-month SO₂ emission rate, in tons, calculated in accordance with

Emissions Unit ID: **B001**

the calculation methodology outlined in Section B.1 of this permit.

Also, during the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative coal, fuel oil, and natural gas usage rates and SO₂ injection quantities for each calendar month.

7. When burning coal or No. 6 fuel oil, 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.
8. For each day during which the permittee burns a fuel other than natural gas, No. 6 fuel oil or coal, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
9. The permittee shall maintain monthly records of all instances during which any fuel was combusted in this emissions unit while SO₂ is injected.

D. 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.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all 3-hour blocks of time during which the average hourly SO₂ emission rate in the exhaust gases from the dry or wet scrubber exceeded 12 pounds. .
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the rolling, 12-month coal usage restriction of 750 tons;

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- b. the rolling, 12-month no. 6 fuel oil usage restriction of 6,000 gallons;
 - c. the rolling, 12-month natural gas usage restriction of 3.6 mm cu. ft;
 - d. the rolling, 12-month SO₂ injection limitation of 45 tons;
 - e. the rolling, 12-month SO₂ emission limitation of 15.3 tons; and
 - f. the maximum allowable cumulative coal usage, SO₂ injection, No. 6 fuel oil usage, and natural gas usage rates as specified in Section B.1 of this permit.
4. The permittee shall submit quarterly deviation (excursion) reports that identify all instances during which any fuel was combusted in this emissions unit while SO₂ was injected.
 5. The permittee shall notify the Director (the Akron RAQMD) in writing of any record which shows a deviation of the allowable fuel oil sulfur content based upon the calculated sulfur content from Section C.3 above. The notification shall include a copy of such record and shall be sent to the Director (the Akron RAQMD) within 45 days after the deviation occurs.
 6. The permittee shall submit, on a quarterly basis, copies of the permittee's or coal supplier's analyses (wet and/or dry) for each shipment of coal which is received for burning in this emissions unit. The permittee or coal supplier's analyses shall document the ash content (percent), sulfur content (percent), and heat content (Btu/pound) of each shipment of coal. The following information shall also be included with the copies of the permittee's or coal supplier's analyses:
 - a. the total quantity of coal received in each shipment (tons);
 - b. the weighted* average ash content (percent) of the coal received during each calendar month;
 - c. the weighted* average sulfur content (percent) of the coal received during each calendar month;
 - d. the weighted* average heat content (Btu/pound) of the coal received during each calendar month; and
 - e. the weighted* average sulfur dioxide emissions rate (pounds sulfur

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dioxide/MMBTU actual heat input) from the coal received each calendar month as calculated in accordance with OAC rule 3745-18-04(F)(1).

*In proportion to the quantity of coal received in each shipment during the calendar month.

These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the coal shipments received during the previous calendar quarters.

7. The permittee shall submit quarterly written reports which (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 and/or 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, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.
8. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, No. 6 fuel oil or coal was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
9. The permittee shall submit quarterly summaries that include a log of the downtime for the capture (collection) system, SO₂ control device, and monitoring equipment, when the associated emissions unit was in operation. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.
10. The quarterly deviation reports shall be submitted as specified in General Term and Condition A.2 of this permit.

E. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

The emission testing shall be conducted within 3 months of start-up, unless an extension is approved by Ohio EPA or the Akron RAQMD.
2. The emission testing shall be conducted to demonstrate compliance with the hourly emission limitations for SO₂ and PE/PM-10 when burning 4.0% sulfur coal.

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3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):
 - a. for PE , Methods 1- 5 of 40 CFR Part 60, Appendix A, and
 - b. for SO₂, Methods 1 - 4 and 6 of 40 CFR Part 60, Appendix A .

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

4. 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 Akron RAQMD.
5. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Akron RAQMD. 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 Akron RAQMD's refusal to accept the results of the emission test(s).

Personnel from the Akron RAQMD 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 Akron RAQMD 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 Akron RAQMD.

6. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation

When burning natural gas exclusively, the PE/PM-10 emissions shall not exceed 0.02 lb/MMBTU of actual heat input.

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Applicable Compliance Method

Compliance with the allowable PE/PM-10 limitation may be determined by multiplying the maximum hourly natural gas usage rate (mm cu. ft/hr) by the emission factor of 1.9 lbs PE/mm cu. ft of natural gas [from AP-42, Section 1.4, Table 1.4-2 (revised 7/98)], and then dividing by the maximum heat input capacity to the emissions unit (MMBTU/hr).

If required, the permittee shall demonstrate compliance with the allowable PE limitation in accordance with Methods 1 - 5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation

PE shall not exceed 0.125 lb/MMBTU of actual heat input, 0.75 lb/hr, and 3.29 tons/yr, when burning 4.0% sulfur coal.

Applicable Compliance Method

Compliance with the allowable hourly and lb/MMBTU PE limitations above shall be based on the results of emission testing conducted in accordance with Methods 1 - 5 of 40 CR Part 60, Appendix A.

As long as compliance with the hourly limitation is maintained, compliance with the annual limitation shall be ensured (the annual limitation was determined by multiplying the hourly limitation by 8760, and then dividing by 2000 lbs/ton).

c. Emission Limitation

NOx emissions shall not exceed 1.5 lbs/MMBTU of actual heat input, 9.0 lbs/hr, and 39.5 tons/yr.

Applicable Compliance Method

If required, compliance with the hourly and lb/MMBTU NOx emission limitations above shall be determined based on the results of emission testing conducted in accordance with Test Methods 1 through 4, and 7 of 40 CFR Part 60, Appendix A.

As long as compliance with the hourly limitation is maintained, compliance with the annual limitation shall be ensured (the annual limitation was determined by multiplying the hourly limitation by 8760, and then dividing by 2000 lbs/ton).

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d. Emission Limitation

SO₂ emissions shall not exceed 3.33 lbs/MMBTU of actual heat input, 20 lbs/hr, when burning No. 6 fuel oil, and 12.0 lbs/hr, when burning coal or injecting SO₂.

Applicable Compliance Method

shall be demonstrated based on the When burning coal or injecting SO₂, compliance with the hourly allowable SO₂ emission limitation of 12 lbs/hr results of emission testing conducted in accordance with Methods 1 - 4 and 6 of 40 CFR Part 60, Appendix A.

When burning no. 6 fuel oil, compliance with the lb/MMBTU allowable SO₂ emission limitation may be determined based on multiplying the maximum hourly no. 6 fuel oil usage rate (gallons/hr) by the appropriate emission factor (lb SO₂/10³ gallon), from AP-42, Chapter 1, Section 1.3 (revised 9/98), and then dividing by the maximum hourly heat input capacity to the emissions unit (MMBTU/hr).

When burning no. 6 fuel oil, compliance with the hourly allowable SO₂ emission limitation may be determined based on multiplying the maximum hourly no. 6 fuel oil usage rate (gallons/hr) by the appropriate emission factor (lb SO₂/10³ gallon), from AP-42, Chapter 1, Section 1.3 (revised 9/98).

If required, when burning no. 6 fuel oil, compliance with the hourly and lb/MMBTU allowable SO₂ emission limitations shall be based on the results of emission testing conducted in accordance with Test Methods 1 through 4, and 6 of 40 CFR Part 60, Appendix A.

e. Emission Limitation

CO emissions shall not exceed 0.3 lb/MMBTU of actual heat input, 1.8 lbs/hr, and 7.88 tons/yr.

Applicable Compliance Method

If required, compliance with the lb/MMBTU and hourly allowable CO emission limitations shall be determined based on the results of emission testing conducted in accordance with Test Methods 1 through 4, and 10 of 40 CFR Part 60, Appendix A.

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As long as compliance with the hourly limitation is maintained, compliance with the annual limitation shall be ensured (the annual limitation was determined by multiplying the hourly limitation by 8760, and then dividing by 2000 lbs/ton).

f. Emission Limitation

OC emissions shall not exceed 0.01 lb/MMBTU of actual heat input, 0.06 lb/hr, and 0.26 ton/yr.

Applicable Compliance Method

If required, compliance with the lb/MMBTU and hourly allowable OC emission limitations shall be determined based on the results of emission testing conducted in accordance with Test Methods 1 through 4, and 18 or 25/25A of 40 CFR Part 60, Appendix A.

As long as compliance with the hourly limitation is maintained, compliance with the annual limitation shall be ensured (the annual limitation was determined by multiplying the hourly limitation by 8760, and then dividing by 2000 lbs/ton).

g. Emission Limitation

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method

Compliance with the visible PE limitation above shall be demonstrated based on visible emissions evaluations conducted in accordance with OAC rule 3745-17-03(B)(1).

[No visible emission observations are specifically required to demonstrate compliance with the visible PE limitations but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).]

h. Operational Restriction

Coal sulfur content shall not exceed 4.0%, by weight
No. 6 fuel oil sulfur content shall not exceed 2% by weight.

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Applicable Compliance Method

Compliance with the allowable sulfur content limitations above shall be demonstrated based on the record keeping requirements established in Section C of this permit.

i Operational Restriction

The permittee shall burn no more than 750 tons of coal in this emissions unit per rolling, 12-month period.

Applicable Compliance Method

Compliance shall be demonstrated through the record keeping requirements established in Section C.6 of this permit.

j Operational Restriction

The permittee shall burn no more than 6,000 gallons of No. 6 fuel oil in this emissions unit per rolling, 12-month period.

Applicable Compliance Method

Compliance shall be demonstrated through the record keeping requirements established in Section C.6 of this permit.

k Operational restriction

The permittee shall burn no more than 3.6×10^6 scf of natural gas in this emissions unit per rolling, 12-month period.

Applicable Compliance Method

Compliance shall be demonstrated through the record keeping requirements established in Section C.6 of this permit.

l Emission Limitation

SO₂ emissions shall not exceed 15.3 tons per rolling, 12-month period.

Applicable Compliance Method

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Compliance with the annual allowable SO₂ emission limitation above shall be demonstrated based on the monitoring and record keeping requirements established in Section C.6 of this permit.

m Operational restriction

The permittee shall inject no more than 45 tons of SO₂ in this emission unit per rolling, 12-month period.

Applicable Compliance Method

Compliance shall be demonstrated through the record keeping requirements established in Section C.6 of this permit.

n. Operational restrictions

during the first 12 calendar months of operation following the issuance of this permit, the monthly cumulative coal, no. 6 fuel oil, and natural gas usage rates and SO₂ injection quantities as established in Section B.1

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Applicable Compliance Method

Compliance shall be demonstrated through the record keeping requirements established in Section C.6 of this permit.

F. Miscellaneous Requirements

1. The terms and conditions in this Permit to Install shall supersede all the air pollution control requirements for this emissions unit contains in Permit to Install 16-02367 as issued final on November 26, 2004.