State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
TRUMBULL COUNTY

Street Address: Mailing Address: Lazarus Gov. Center
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329

Application No: 02-17383

DATE: 7/17/2003

ISG Warren
Doug Hayes
2234 Main Ave
Warren, OH 44482

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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 within thirty (30) days after the notice of the Directors 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. 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

Sincerely,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: **USEPA** **NEDO**

FINAL PERMIT TO INSTALL 02-17383

Application Number:	02-17383
APS Premise Number:	0278000648
Permit Fee:	**$0**
Name of Facility:	ISG Warren
Person to Contact:	Doug Hayes
Address:	2234 Main Ave Warren, OH 44482

Location of proposed air contaminant source(s) [emissions unit(s)]:
2234 Main St
Warren, Ohio

Description of proposed emissions unit(s):
Modification of terms to address fuel usage.

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

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, 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.

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, 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.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable <u>emission limitations</u>, <u>operational restrictions</u>, <u>and control device operating parameter limitations</u>, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written 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. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

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 are true, accurate, and complete.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to 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"), the permittee shall comply with the requirement to register such a plan.

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.

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.

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. 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.

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. The permittee shall pay all applicable Permit To Install fees

within 30 days after the issuance of this Permit To Install.

8. 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.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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 ORC section 3704.08.

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.

10. Permit To Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this 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 source(s) covered by this permit.

11. 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.

12. 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.

B. State Only Enforceable 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 of state-only enforceable 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 state-only required 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. Permit Transfers

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.

4. 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 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.

5. 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.

6. 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.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. 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.

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

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.

C. 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

Pollutant	Tons Per Year
NOx	65.8 tpy
SO2	78.8 tpy
CO	36.0 tpy
VOC	2.4 tpy
PE	8.8 tpy

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements
B001 - 99.9 mmBtu/hr natural gas/coke oven gas fired boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-10(B)(1)
The requirements of this permit supersede those requirements identified in Permit to Install number 02-4401 issued on July 20, 1989.	OAC rule 3745-17-07(A)
	40 CFR, Part 60, Subpart Dc

Applicable Emissions Limitations/Control Measures	
Sulfur dioxide emissions shall not exceed 0.18 pound per mmBtu actual heat input on a daily average basis. See Section A.I.2.a below.	Particulate emissions shall not exceed 0.020 pound per mmBtu actual heat input.
Sulfur dioxide emissions shall not exceed 78.8 tons per year. See Section A.I.2.b below.	Except as otherwise specified in paragraphs (A)(1) to (A)(3) of OAC rule 3745-17-07, visible particulate emissions from the boiler stack shall not exceed twenty percent opacity as a six-minute average.
NOx emissions shall not exceed 0.15 pound per mmBtu actual heat input.	See Section A.III.1 of these terms and conditions.
NOx emissions shall not exceed 65.8 tons per year. See Section A.I.2.c below.	
CO emissions shall not exceed 0.083 pound per mmBtu actual heat input.	
CO emissions shall not exceed 36.0 tons per year.	
VOC emissions shall not exceed 0.0054 lb/mmBtu actual heat input.	
VOC emissions shall not exceed 2.4 tons per year.	
Particulate emissions shall not exceed 8.8 tons per year.	

2. Additional Terms and Conditions

2.a To ensure ongoing compliance with the sulfur dioxide emission limitation of 0.18 lb/mmBtu actual heat input, the permittee shall burn in this emissions unit coke oven gas with a daily average concentration of H2S less than 35 grains per 100 dry standard cubic feet, unless the permittee demonstrates through calculations that during periods when coke oven gas containing greater than 35 grains per 100 dry standard cubic feet is burned, the sulfur dioxide emission rate is less than 0.18 lb/mmBtu actual heat input on a daily average basis due to the combustion of natural gas.

2.b The annual emission limitation for sulfur dioxide of 78.8 tons per year is based on potential sulfur dioxide emissions from burning coke oven gas with a maximum allowable H2S content of 35 grains per 100 dscf. Maximum potential sulfur dioxide emissions from burning natural gas are 0.30 tons per year. The allowable sulfur dioxide emissions from burning coke oven gas do not represent an increase in facility-wide sulfur dioxide emissions since any coke oven gas that is not burned in emissions units at this facility or an adjacent integrated steel mill is flared at this facility. Therefore, the facility is not subject to Prevention of Significant Deterioration (PSD) review.

2.c The annual emission limitation for NOx of 65.8 tons per year is based on potential NOx emissions from burning coke oven gas. Maximum potential NOx emissions from burning natural gas are 39.0 tons per year. The allowable NOx emissions from burning coke oven gas do not represent an increase in facility-wide NOx emissions since any coke oven gas that is not burned in emissions units at this facility or an adjacent integrated steel mill is flared at this facility. Therefore, the facility is not subject to Prevention of Significant Deterioration (PSD) review.

II. Operational Restrictions

1. The permittee shall burn only natural gas and/or coke oven gas in this emissions unit.

2. The total heat input to this emissions unit shall not exceed 99.9 mmBtu/hr as demonstrated by the record keeping in Section A.III.1.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records of the following information for this emissions unit:

   a. the natural gas usage per month (cubic feet);

   b. the coke oven gas usage per month (cubic feet);

   c. the total heat input per month (mmBtu);

   d. the hours of operation per month; and

   e. the average hourly heat input for the month (c/d).

2. The permittee shall maintain records of all data necessary to determine the daily average H2S content of the coke oven gas obtained by the continuous sulfur dioxide and total reduced sulfur monitoring systems required for the desulfurization plant (emissions unit P002).

3. For each day during which the permittee burns a fuel other than natural gas 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 each 24-hour block of time during which the concentration of hydrogen sulfide in the coke oven gas burned in this emissions unit exceeded 35 grains per 100 dscf of coke oven gas produced, and the actual hydrogen sulfide content for each such day. For each 24-hour period that exceeded 35 grains per 100 dscf, the permittee may provide calculations that demonstrate that during that 24-hour period the sulfur dioxide emission rate did not exceed 0.18 lb/mmBtu actual heat input. If the permittee makes this demonstration for any 24-hour period, the exceedance of the 35 grains per 100 dscf limitation shall not be considered a deviation of the additional restriction in Section A.I.2.a.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each period of time

during which a fuel other than natural gas or coke oven gas is burned in this emissions unit.

3. The permittee shall submit annual reports that specify the total particulate, VOC, CO, NOx, and SO2 emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year.

4. The permittee shall submit deviation (excursion) reports that identify each period of time when the total heat input to this emissions unit exceeds 99.9 mmBtu/hr. These reports shall be submitted within thirty (30) days after the deviation(s) occurs.

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:

   a. Emission Limitation:

      Particulate emissions shall not exceed 0.020 pound per mmBtu actual heat input.

      Applicable Compliance Method:

      i. To determine the particulate emission rate from burning natural gas, the following equation shall be used:

         E (lb/mmBtu) = (1.9 lbs/mmscf) x (1 scf/1020 Btu) = 0.0019 lb/mmBtu

         Where:

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

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

         1 scf/1020 Btu = the heat value of 1 scf of natural gas.

      ii. To determine the particulate emission rate from burning coke oven gas, the following equation shall be used:

         E (lb/mmBtu) = 6.2 lbs/mmcf x 1 scf/532 Btu = 0.012 lb/mmBtu

Where:

E = particulate emission rate from burning coke oven gas, in lb/mmBtu;

6.2 lbs/mmcf = emission factor from FIRES 6.23, SCC #10200707, External Combustion Boilers, Industrial, Process Gas, Coke Oven Gas; and

1 scf/532 Btu = the heat value of 1 scf of coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission limitation while burning coke oven gas 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).

b. Emission Limitation:

Except as otherwise specified in paragraphs (A)(1) to (A)(3) of OAC rule 3745-17-07, visible particulate emissions from the boiler stack shall not exceed twenty 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).

c. Emission Limitation:

Sulfur dioxide emissions shall not exceed 0.18 pound per mmBtu actual heat input on a daily average basis.

Applicable Compliance Method:

i. To determine the sulfur dioxide emission rate from burning natural gas, the following equation shall be used:

E (lb/mmBtu) = (0.6 lb/mm scf) x (1 scf/1020 Btu) = 0.00059 lb/mmBtu

Where:

E = sulfur dioxide emission rate from burning natural gas, in lb/mmBtu;

0.6 lb/mm scf = emission factor for sulfur dioxide from burning natural gas from

AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98; and

1 scf/1020 Btu = the heat value of 1 scf of natural gas.

ii. To determine the sulfur dioxide emission rate from burning coke oven gas, the following equation shall be used:

E (lb/mmBtu) = H2S content x (1 lb/7000 grains) x (64 SO2/34 H2S) x (1 scf/532 Btu) x 1,000,000/1 mm

Where:

E = sulfur dioxide emission rate from burning coke oven gas, in lb/mmBtu;

H2S content = grains of H2S in 100 scf of coke oven gas obtained from monitoring data in Section III.2 of these terms and conditions;

1 lb/7000 grains = conversion of grains to pounds;

64 SO2/34 H2S = the ratio of grams per mole of SO2 to mole of H2S;

1 scf/532 Btu = the heat value of 1 scf of coke oven gas; and

1,000,000/1 mm = conversion to mm.

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

d. Emission Limitation:

Sulfur dioxide emissions shall not exceed 78.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the short term emission limitation is maintained [the annual emission limitation was calculated by multiplying the short term emission limitation by the maximum capacity of the emissions unit (99.9 mmBtu/hr), multiplying that number by the maximum operating hours (8760 hrs/yr), and dividing by 2000 to convert to tons].

e. Emission Limitation:

NOx emissions shall not exceed 0.15 pound per mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the NOx emission rate from burning natural gas, the permittee shall use an emission factor of 0.0892 lb/mmBtu which was provided by the permittee based upon on-site emission testing. The provided emission factor is higher than the emission factor found in AP-42, Table 1.4-1, for NOx.

ii. To determine the NOx emission rate from burning coke oven gas, the following equation shall be used:

E (lb/mmBtu) = (80 lbs/mm scf) x (1 scf/532 Btu) = 0.15 lb/mmBtu

Where:

E = NOx emission rate from burning coke oven gas, in lb/mmBtu;

80 lbs/mm scf = emission factor for NOx from burning coke oven gas from FIRES 6.23, SCC #10200707, External Combustion Boilers, Industrial, Process Gas, Coke Oven Gas; and

1 scf/532 Btu = the heat value of 1 scf of coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission rate while burning coke oven gas in accordance with 40 CFR Part 60, Appendix A, Method 7E.

f. Emission Limitation:

NOx emissions shall not exceed 65.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the short term emission limitation is maintained [the annual emission limitation was calculated by multiplying the short term emission limitation by the maximum capacity of the emissions unit (99.9 mmBtu/hr), multiplying that number by the maximum operating hours (8760 hrs/yr), and dividing by 2000 to convert to tons].

g. Emission Limitation:

CO emissions shall not exceed 0.083 pound per mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the CO emission rate from burning natural gas, the following equation shall be used:

E (lb/mmBtu) = (84 lbs/mm scf) x (1 scf/1020 Btu) = 0.083 lb/mmBtu

Where:

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

84 lbs/mm scf = emission factor for CO from burning natural gas from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-1, 7/98; and

1 scf/1020 Btu = the heat value of 1 scf of natural gas.

ii. To determine the CO emission rate from burning coke oven gas, the following equation shall be used:

E (lb/mmBtu) = (18.4 lbs/mm scf) x (1 scf/532 Btu) = 0.035 lb/mmBtu

Where:

E = CO emission rate from burning coke oven gas, in lb/mmBtu;

18.4 lbs/mm scf = emission factor for CO from burning coke oven gas from FIRES 6.23, SCC #10200707, External Combustion Boilers, Industrial, Process Gas, Coke Oven Gas; and

1 scf/532 Btu = the heat value of 1 scf of coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission rate while burning natural gas in accordance with 40 CFR Part 60, Appendix A, Methods 10, 10A, and 10B.

h. Emission Limitation:

CO emissions shall not exceed 36.0 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the short term emission limitation is maintained [the annual emission limitation was calculated by multiplying the short term emission limitation by the maximum capacity of the emissions unit (99.9 mmBtu/hr), multiplying that number by the maximum operating hours (8760 hrs/yr), and dividing by 2000 to convert to tons].

i. Emission Limitation:

VOC emissions shall not exceed 0.0054 lb/mmBtu actual heat input.

Applicable Compliance Method:

i. To determine the VOC emission rate from burning natural gas, the following equation shall be used:

E (lb/mmBtu) = (5.5 lbs/mm scf) x (1 scf/1020 Btu) = 0.0054 lb/mmBtu

Where:

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

5.5 lbs/mm scf = emission factor for VOC from burning natural gas from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98; and

1 scf/1020 Btu = the heat value of 1 scf of natural gas.

ii. To determine the VOC emission rate from burning coke oven gas, the following equation shall be used:

E (lb/mmBtu) = (2.8 lbs/mm scf) x (1 scf/532 Btu) = 0.0053 lb/mmBtu

Where:

E = VOC emission rate from burning coke oven gas, in lb/mmBtu;

2.8 lbs/mm scf = emission factor for VOC from burning coke oven gas from FIRES 6.23, SCC #10200707, External Combustion Boilers, Industrial, Process Gas, Coke Oven Gas; and

1 scf/532 Btu = the heat value of 1 scf of coke oven gas.

iii. If required, the permittee shall demonstrate compliance with this emission rate while burning natural gas in accordance with 40 CFR Part 60, Appendix A, Methods 18, 25, or 25A.

j. Emission Limitation:

VOC emissions shall not exceed 2.4 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the short term emission limitation is maintained [the annual emission limitation was calculated by multiplying the short term emission limitation by the maximum capacity of the emissions unit (99.9 mmBtu/hr), multiplying that number by the maximum operating hours (8760 hrs/yr), and dividing by 2000 to convert to tons].

k. Emission Limitation:

Particulate emissions shall not exceed 8.8 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation is shown as long as compliance with the short term emission limitation is maintained [the annual emission limitation was calculated by multiplying the short term emission limitation by the maximum capacity of the emissions unit (99.9 mmBtu/hr), multiplying that number by the maximum operating hours (8760 hrs/yr), and dividing by 2000 to convert to tons].

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

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 Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None