



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
MONTGOMERY COUNTY

Street Address:

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

Mailing Address:
Lazarus Gov.
Center

Application No: 08-04131

DATE: 3/8/00

AE Staley Manufacturing
Jeffrey A. Seppa
5600 Brentlinger Drive
Dayton, OH 45414

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 \$800 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.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA
KY

RAPCA
IN

Miami Valley Reg Plan Com



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: To be entered upon final issuance

DRAFT PERMIT TO INSTALL 08-04131

Application Number: 08-04131
APS Premise Number: 0857041333
Permit Fee: **To be entered upon final issuance**
Name of Facility: AE Staley Manufacturing
Person to Contact: Jeffrey A. Seppa
Address: 5600 Brentlinger Drive
Dayton, OH 45414

Location of proposed air contaminant source(s) [emissions unit(s)]:

**5600 Brentlinger Drive
Dayton, Ohio, Ohio**

Description of proposed emissions unit(s):

Two temporary steam generators, 89 mmBtu/hr (total: 178 mmbtu/hr)capacity, burn #2 fuel oil or natural gas.

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

AE Staley Manufacturing

Facility ID: 0857041333

PTI Application: 08-04131

Issued: To be entered upon final issuance

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 emission limitations, operational restrictions, and control device operating parameter limitations, 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.11 below if no deviations occurred during the quarter.

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- 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

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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

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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.

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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 thirty (30) days after commencing operation of the source(s) covered by this permit.

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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 Related to Monitoring and Recordkeeping 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

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.

4. 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.

5. Termination of Permit To Install

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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.

6. 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 are inadequate 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 prove to be inadequate or cannot meet applicable standards.

7. 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.

8. 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).

9. Best Available Technology

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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.

10. 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.

11. 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**

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	11.74 TPY
NOx	64.2TPY
CO	41.42TPY
SO2	74.21 TPY
OC	5.0 TPY

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Facility ID: 0857041333

Emissions Unit ID: B003

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.

AE St:

PTI A

Emissions Unit ID: B003

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B003 - 89 mmBtu/hr #2 oil or natural gas steam generating unit	OAC 3745-17-10(B)(1) OAC rule 3745-17-07(A) OAC rule 3745-18-06(D) 40 CFR Part 60 Subpart Dc OAC rule 3745-31-05(D) OAC 3745-18-06(A) OAC 3745-31-05(A)(3)

AE St:

PTI A

Emissions Unit ID: B003

Issued: To be entered upon final issuance

Applicable Emissions Limitations/Control Measures	above Emissions from B003 and B004, combined shall not exceed:
0.020 pound of particulate emissions per mmBtu actual heat input See A.I.2.c	11.74 TPY PE, 64.20 TPY NO _x , 41.42 TPY CO, 74.21 TPY SO ₂ , and 5.00 TPY OC
0.50 pound of sulfur dioxide emissions per mmBtu actual heat input. See Section A.I.2.c., A.I.2.d	The above annual limits are based upon rolling 12-month summation
See Section A.II.2.	
See Section A.II.2.	
7.79 TPY particulate emissions	
74.21 TPY sulfur dioxides (SO ₂)	
12.72 lbs/hour and 55.71 TPY nitrogen oxides (NO _x)	
0.96 lbs/hour and 4.20 TPY organic compounds (OC)	
7.33 lbs/hour and 32.10 TPY carbon monoxide (CO)	
Visible particulate emissions shall not exceed 5% opacity, as a six minute average.	
Less stringent than specified above	
Less stringent than specified	

AE St:
PTI A

Emissions Unit ID: B003

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

2.a The hourly limitations were developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

2.b The PTI application for these two new natural gas/no. 2 oil boilers, identified as 0857041333 B003 and B004, states the installation and subsequent operation is to be temporary, operating in place of existing boilers natural gas/no.2 oil/used oil boilers 0857041333 B001 and B002 for maintenance and repair work. Except for start-up and shut-down, no more than two of the four boilers, i.e., B001, B002, B003, and B004, shall operate at the same time. The net change in emissions if both B003 and B004 are placed in operation and B001 and B002 are shut down are as follows:

<u>Pollutant</u>	<u>Units B003 and B004</u>	<u>New Emissions</u>	<u>Existing Emissions #</u>	<u>Contemporaneous Net Change</u>
		<u>Units B001 and B002</u>	<u>Increase # #</u>	
PM	11.74	13.30	2.19	+0.63 (TPY)
SO2	74.21	39.21		+35.00 (TPY)
CO	41.42	15.87		+25.55 (TPY)
OC	5.0	2.65		+2.35 (TPY)
NOx	64.2	29.21		+34.99 (TPY)

Based upon the actual average emissions emitted during the years 1998 and 1999.

OEPA issued February 3, 1999 air permit to install for this increase in emissions noted.

As a result of the net change in emissions, the proposed new source installation is not a major modification and the permittee has "netted out" of Federal Prevention of Significant Deterioration requirements.

2.c The limitations specified in this rule is also considered BAT for this emissions unit.

2.d NSPS Requirements

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental

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Emissions Unit ID: B003

Protection Agency, 40 CFR Part 60.

<u>Source Number</u>	<u>Description</u>	<u>NSPS regulation (Subpart)</u>
B003	89 mmBtu/hr #2 oil or natural gas steam generating unit	40 CFR Part 60 Subpart Dc
B004	89 mmBtu/hr #2 oil or natural gas steam generating unit	40 CFR Part 60 Subpart Dc

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Air Quality Modeling and Planning
P.O. Box 1049
Columbus, OH 43216-1049

and

Regional Air Pollution Control Agency
451 West Third Street
P. O. Box 972
Dayton, Ohio 45422

II. Operational Restrictions

1. The maximum sulfur content of the fuel oil burned in this emissions unit shall not exceed 0.5%, by weight.
2. The permittee shall burn only natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil in this emissions unit.
3. The maximum annual #2 fuel oil usage for emissions units B003 and B004, combined, shall not exceed 2,120,286 gallons based upon a rolling, 12-month summation of the No. 2 fuel oil usage rates.

To ensure enforceability during the first 12-calendar months of operation following issuance of this permit, the permittee shall not exceed the No. 2 fuel oil usage level specified in the following table for emissions units B003 and B004:

Month(s)	Maximum Allowable Cumulative No. 2 Fuel Oil Usage
1-2	457,920
1-3	915,840
1-4	1,373,660
1-5	1,831,680
1-6	2,120,286
1-7	2,120,286
1-8	2,120,286
1-9	2,120,286
1-10	2,120,286
1-11	2,120,286
1-12	2,120,286

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual No. 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the No. 2 fuel oil usage figures.

4. The maximum annual natural gas usage for emissions units B003 and B004, combined, shall not exceed 860 million cubic feet based upon a rolling, 12-month summation of the natural gas usage rated.

To ensure enforceability during the first 12-calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage level specified in the following table for emissions units B003 and B004:

AE St:

PTI A

Emissions Unit ID: B003

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Month(s)	Maximum Allowable Cumulative Natural Gas Usage
1	71,683,333.33
1-2	143,366,666.7
1-3	215,049,999.0
1-4	286,733,333.3
1-5	358,416,666.7
1-6	430,100,000.0
1-7	501,783,333.3
1-8	573,466,666.6
1-9	645,150,000.0
1-10	716,833,333.3
1-11	788,516,666.6
1-12	860,200,000.0

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage limitation shall be based upon a rolling, 12-month summation of the natural gas usage figures.

5. B003 and/or B004 shall only be placed in operation to accommodate repairs to existing permitted units B001 and B002.

III. Monitoring and/or Recordkeeping Requirements

1. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the oil supplier's analysis for sulfur content. The record keeping shall document that the fuel was sampled and analyzed in accordance with approved ASTM procedures.
2. The permittee shall maintain monthly records of the following information:
 - a. The natural gas and #2 fuel oil usage for each monthly.
 - b. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and #2 fuel oil usage figures.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative natural gas and #2 fuel oil usage for each calendar month.

3. For each day during which the permittee burns a fuel other than natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil, the permittee shall maintain a record of the type and quantity of

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Emissions Unit ID: B003

fuel burned in this emissions unit.

AE St:

PTI A

Emissions Unit ID: B003

Issued: To be entered upon final issuance**IV. Reporting Requirements**

1. The permittee shall submit quarterly reports of the fuel supplier certification to the Director (the appropriate Ohio EPA District Office or local air agency) which specify the following:
 - a. the name of the supplier; and
 - b. a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c which states that distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D396-78, "Standard Specification for Fuel Oils".
 - c. if no fuel oil is burned in this emissions unit during the calendar quarter, a statement to that effect shall be submitted.

These reports shall be submitted by January 31, April 30, July 31, and October 31 and shall cover the previous three calendar months.

2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil was burned in this emissions unit.
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month natural gas and no. 2. fuel oil limitations and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative 12-month natural gas and no. 2. fuel oil usage levels.
4. These reports as denoted in terms IV.2. and 3. are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
5. The permittee shall submit annual reports which identify any exceedances of the emission limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. 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):

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AE St:

PTI A

Emissions Unit ID: B003

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- a. Emission Limitation -
0.020 pound of particulate emissions (PE) per mmBtu actual heat input

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Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.0872 mm cu ft/hour) by the emission factor of 1.9 lbs PE/mm cu ft as specified in AP-42 Chapter 1.4-2 (7/98) and dividing by the maximum hourly heat input capacity of the emissions unit (89.0 mmBtu/hour). When burning number two fuel oil, compliance shall be determined by multiplying the maximum hourly fuel oil burning capacity of the emissions unit (636 gallons/hour) by the emission factor of 2 lbs PE/1000 gallons as specified in AP-42 Chapter 1.3-1 (9/98) and dividing by the maximum hourly heat input capacity of the emissions unit (89.0 mmBtu/hour).

- b. Emission Limitation -
fuel oil sulfur content of 0.5% by weight

Applicable Compliance Method -

Compliance shall be based upon the fuel oil supplier's analysis as specified in A.III.1.

- c. Emission Limitation -
7.79 TPY Particulate Emissions (PE)

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 1.9 lbs PE/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 2 lbs PE/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual particulate emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- d. Emission Limitation -
74.21 TPY SO₂

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 0.6 lb SO₂/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 71 lbs SO₂/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);

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- iii. the annual SO₂ emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

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- e. Emission Limitation -
12.72 lbs/hour NO_x

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (100 lbs NO_x/mm cu ft) as specified in AP-42 Chapter 1.4-1 (2/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (20 lbs NO_x/1000 gallons) as specified in AP-42 Chapter 1.3-1 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- f. Emission Limitation -
55.71 TPY NO_x

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 100 lbs NO_x/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 20 lbs NO_x/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual NO_x emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- g. Emission Limitation -
0.96 lb/hour OC

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (11.0 lbs OC/mm cu ft) as specified in AP-42 Chapter 1.4-2 (7/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (0.252 lb OC/1000 gallons) as specified in AP-42 Chapter 1.3-3 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- h. Emission Limitation -
4.20 TPY OC

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be

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determined by:

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- i. multiplying the total natural gas burned for the calendar year by the emission factor of 11.0 lbs OC/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 0.252 lb OC/1000 gallons, as specified in AP-42 Chapter 1.3-3 (9/98);
- iii. the annual OC emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- i. Emission Limitation -
7.33 lb/hour CO

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (84 lbs CO/mm cu ft) as specified in AP-42 Chapter 1.4-1 (2/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (5 lbs CO/1000 gallons) as specified in AP-42 Chapter 1.3-1 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- j. Emission Limitation -
32.10 TPY CO

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 84 lbs/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 5 lbs/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual CO emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- k. Emission Limitation -
5% opacity, as a 6-minute average

Applicable Compliance Method-

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the tests and procedures specified in USEPA Reference Method 9.

- l. Emission Limitation-

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11.74 TPY Particulate Emissions for B003 and B004, combined

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Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2. of B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 1.9 lbs PE/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 2 lbs PE/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual particulate emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton

- m. Emission Limitation-
64.2 TPY NO_x for B003 and B004, combined

Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2. of B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 100 lbs NO_x/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 20 lbs NO_x/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual NO_x emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton

- n. Emission Limitation-
41.42 TPY CO for B003 and B004, combined

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. of B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 84 lbs/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 5 lbs/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual CO emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- o. Emission Limitation-
74.21 TPY Sulfur Dioxides (SO₂) for B003 and B004, combined

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Emissions Unit ID: B003

Issued: To be entered upon final issuance

Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2. of B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 0.6 lb SO₂/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 71 lbs SO₂/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual SO₂ emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- p. Emission Limitation-
5.0 TPY OC for B003 and B004, combined

Applicable Compliance Method

Compliance shall be based upon record keeping as specified in A.III.2. for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 11.0 lbs OC/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 0.252 lb OC/1000 gallons, as specified in AP-42 Chapter 1.3-3 (9/98);
- iii. the annual OC emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

VI. Miscellaneous Requirements

None.

AE St:

PTI A

Emissions Unit ID: B003

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B003 - 89 mmBtu/hr #2 oil or natural gas steam generating unit		

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.

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Emissions Unit ID: B004

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

- 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>	
B004 - 89 mmBtu/hr #2 oil or natural gas steam generating unit	OAC 3745-17-10(B)(1)	OAC rule 3745-18-06(D)
	40 CFR Part 60 Subpart Dc	OAC rule 3745-31-05(D)
	OAC 3745-18-06(A)	
	OAC 3745-31-05(A)(3)	
	OAC rule 3745-17-07(A)	

AE St:

PTI A

Emissions Unit ID: B004

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Applicable Emissions Limitations/Control Measures	above Emissions from B003 and B004, combined shall not exceed:
0.020 pound of particulate emissions per mmBtu actual heat input See A.I.2.c	11.74 TPY PE, 64.20 TPY NO _x , 41.42 TPY CO, 74.21 TPY SO ₂ , and
0.50 pound of sulfur dioxide emissions per mmBtu actual heat input. See Section A.I.2.c., A.I.2.d	The above annual limits are based upon rolling 12-month summation
See Section A.II.2.	
See Section A.II.2.	
7.79 TPY particulate emissions	
74.21 TPY sulfur dioxides (SO ₂)	
12.72 lbs/hour and 55.71 TPY nitrogen oxides (NO _x)	
0.96 lbs/hour and 4.20 TPY organic compounds (OC)	
7.33 lbs/hour and 32.10 TPY carbon monoxide (CO)	
Visible particulate emissions shall not exceed 5% opacity, as a six minute average.	
Less stringent than specified above	
Less stringent than specified	

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Emissions Unit ID: B004

Issued: To be entered upon final issuance**2. Additional Terms and Conditions**

2.a The hourly limitations were developed for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

2.b The PTI application for these two new natural gas/no. 2 oil boilers, identified as 0857041333 B003 and B004, states the installation and subsequent operation is to be temporary, operating in place of existing boilers natural gas/no.2 oil/used oil boilers 0857041333 B001 and B002 for maintenance and repair work. Except for start-up and shut-down, no more than two of the four boilers, i.e., B001, B002, B003, and B004, shall operate at the same time. The net change in emissions if both B003 and B004 are placed in operation and B001 and B002 are shut down are as follows:

<u>Pollutant</u>	<u>New Emissions</u>	<u>Existing Emissions #</u>	<u>Contemporaneous</u>	
	<u>Units B003 and B004</u>	<u>Units B001 and B002</u>	<u>Increase # #</u>	<u>Net Change</u>
PM	11.74	13.30	2.19	+0.63 (TPY)
SO2	74.21	39.21		+35.00 (TPY)
CO	41.42	15.87		+25.55 (TPY)
OC	5.0	2.65		+2.35 (TPY)
NOx	64.2	29.21		+34.99 (TPY)

Based upon the actual average emissions emitted during the years 1998 and 1999.

OEPA issued February 3, 1999 air permit to install for this increase in emissions noted.

As a result of the net change in emissions, the proposed new source installation is not a major modification and the permittee has "netted out" of Federal Prevention of Significant Deterioration requirements.

2.c The limitations specified in this rule is also considered BAT for this emissions unit.

2.d NSPS Requirements

The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

Source Source

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<u>Number</u>	<u>Description</u>	<u>NSPS regulation (Subpart)</u>
B003	89 mmBtu/hr #2 oil or natural gas steam generating unit	40 CFR Part 60 Subpart Dc
B004	89 mmBtu/hr #2 oil or natural gas steam generating unit	40 CFR Part 60 Subpart Dc

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Air Quality Modeling and Planning
P.O. Box 1049
Columbus, OH 43216-1049

and

AE St:

PTI A

Emissions Unit ID: B004

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Regional Air Pollution Control Agency
 451 West Third Street
 P. O. Box 972
 Dayton, Ohio 45422

II. Operational Restrictions

1. The maximum sulfur content of the fuel oil burned in this emissions unit shall not exceed 0.5%, by weight.
2. The permittee shall burn only natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil in this emissions unit.
3. The maximum annual #2 fuel oil usage for emissions units B003 and B004, combined, shall not exceed 2,120,286 gallons based upon a rolling, 12-month summation of the No. 2 fuel oil usage rates.

To ensure enforceability during the first 12-calendar months of operation following issuance of this permit, the permittee shall not exceed the No. 2 fuel oil usage level specified in the following table for emissions units B003 and B004:

Month(s)	Maximum Allowable Cumulative No. 2 Fuel Oil Usage
1-2	457,920
1-3	915,840
1-4	1,373,660
1-5	1,831,680
1-6	2,120,286
1-7	2,120,286
1-8	2,120,286
1-9	2,120,286
1-10	2,120,286
1-11	2,120,286
1-12	2,120,286

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual No. 2 fuel oil usage limitation shall be based upon a rolling, 12-month summation of the No. 2 fuel oil usage figures.

4. The maximum annual natural gas usage for emissions units B003 and B004, combined, shall not exceed 860 million cubic feet based upon a rolling, 12-month summation of the natural gas usage

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rated.

To ensure enforceability during the first 12-calendar months of operation following issuance of this permit, the permittee shall not exceed the natural gas usage level specified in the following table for emissions units B003 and B004:

Month(s)	Maximum Allowable Cumulative Natural Gas Usage
1	71,683,333.33
1-2	143,366,666.7
1-3	215,049,999.0
1-4	286,733,333.3
1-5	358,416,666.7
1-6	430,100,000.0
1-7	501,783,333.3
1-8	573,466,666.6
1-9	645,150,000.0
1-10	716,833,333.3
1-11	788,516,666.6
1-12	860,200,000.0

After the first 12 calendar months of operation following issuance of this permit, compliance with the annual natural gas usage limitation shall be based upon a rolling, 12-month summation of the natural gas usage figures.

5. B003 and/or B004 shall only be placed in operation to accommodate repairs to existing permitted units B001 and B002.

III. Monitoring and/or Recordkeeping Requirements

1. For each shipment of oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the oil supplier's analysis for sulfur content. The record keeping shall document that the fuel was sampled and analyzed in accordance with approved ASTM procedures.
2. The permittee shall maintain monthly records of the following information:
 - a. The natural gas and #2 fuel oil usage for each monthly.
 - b. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the natural gas and #2 fuel oil usage figures.

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Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative natural gas and #2 fuel oil usage for each calendar month.

3. For each day during which the permittee burns a fuel other than natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil, 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 reports of the fuel supplier certification to the Director (the appropriate Ohio EPA District Office or local air agency) which specify the following:
 - a. the name of the supplier; and
 - b. a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c which states that distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D396-78, "Standard Specification for Fuel Oils".
 - c. if no fuel oil is burned in this emissions unit during the calendar quarter, a statement to that effect shall be submitted.

These reports shall be submitted by January 31, April 30, July 31, and October 31 and shall cover the previous three calendar months.

2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas, having a heat content greater than 950 Btu per standard cubic foot and a sulfur content less than 0.6 pound per million standard cubic feet, and/or number two fuel oil was burned in this emissions unit.
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month natural gas and no. 2. fuel oil limitations and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative 12-month natural gas and no. 2. fuel oil usage levels.
4. These reports as denoted in terms IV.2. and 3. are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(1).
5. The permittee shall submit annual reports which identify any exceedances of the emission limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year

V. Testing Requirements

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1. 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 -
0.020 pound of particulate emissions (PE) per mmBtu actual heat input

Applicable Compliance Method -
When burning natural gas, compliance shall be determined by multiplying the maximum hourly gas burning capacity of the emissions unit (0.0872 mm cu ft/hour) by the emission factor of 1.9 lbs PE/mm cu ft as specified in AP-42 Chapter 1.4-2 (7/98) and dividing by the maximum hourly heat input capacity of the emissions unit (89.0 mmBtu/hour). When burning number two fuel oil, compliance shall be determined by multiplying the maximum hourly fuel oil burning capacity of the emissions unit (636 gallons/hour) by the emission factor of 2 lbs PE/1000 gallons as specified in AP-42 Chapter 1.3-1 (9/98) and dividing by the maximum hourly heat input capacity of the emissions unit (89.0 mmBtu/hour).
 - b. Emission Limitation -
fuel oil sulfur content of 0.5% by weight

Applicable Compliance Method -
Compliance shall be based upon the fuel oil supplier's analysis as specified in A.III.1.
 - c. Emission Limitation -
7.79 TPY Particulate Emissions (PE)

Applicable Compliance Method -
Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:
 - i. multiplying the total natural gas burned for the calendar year by the emission factor of 1.9 lbs PE/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
 - ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 2 lbs PE/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
 - iii. the annual particulate emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.
 - d. Emission Limitation -
74.21 TPY SO₂

Applicable Compliance Method -

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Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 0.6 lb SO₂/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 71 lbs SO₂/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual SO₂ emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

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- e. Emission Limitation -
20% opacity, as a six-minute average

Applicable Compliance Method -

Compliance with this visible emission limitation is presumed based on the use of natural gas and number two fuel oil. If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the methods and procedures

- f. Emission Limitation -
12.72 lbs/hour NO_x

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (100 lbs NO_x/mm cu ft) as specified in AP-42 Chapter 1.4-1 (2/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (20 lbs NO_x/1000 gallons) as specified in AP-42 Chapter 1.3-1 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- g. Emission Limitation -
55.71 TPY NO_x

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 100 lbs NO_x/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 20 lbs NO_x/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual NO_x emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- h. Emission Limitation -
0.96 lb/hour OC

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (11.0 lbs OC/mm cu ft) as specified in AP-42 Chapter 1.4-2 (7/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions

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unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (0.252 lb OC/1000 gallons) as specified in AP-42 Chapter 1.3-3 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- i. Emission Limitation -
4.20 TPY OC

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 11.0 lbs OC/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 0.252 lb OC/1000 gallons, as specified in AP-42 Chapter 1.3-3 (9/98);
- iii. the annual OC emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- j. Emission Limitation -
7.33 lb/hour CO

Applicable Compliance Method -

When burning natural gas, compliance shall be determined by multiplying the emission factor for natural gas (84 lbs CO/mm cu ft) as specified in AP-42 Chapter 1.4-1 (2/98), by the maximum hourly gas burning capacity (0.0872 mm cu ft/hour) of the emissions unit. When burning fuel oil, compliance shall be determined by multiplying the emission factor for fuel oil (5 lbs CO/1000 gallons) as specified in AP-42 Chapter 1.3-1 (9/98), by the maximum hourly fuel burning capacity (636 gallons/hour) of the emissions unit.

- k. Emission Limitation -
32.10 TPY CO

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 84 lbs/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 5 lbs/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual CO emissions shall be the sum of (i) and (ii), divided by 2,000 pounds

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per ton.

1. Emission Limitation -
5% opacity, as a 6-minute average

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Applicable Compliance Method-

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(1) using the tests and procedures specified in USEPA Reference Method 9.

- m. Emission Limitation-
11.74 TPY Particulate Emissions for B003 and B004, combined

Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2 for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 1.9 lbs PE/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 2 lbs PE/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual particulate emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton

- n. Emission Limitation-
64.2 TPY NO_x for B003 and B004, combined

Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2 for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 100 lbs NO_x/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 20 lbs NO_x/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual NO_x emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton

- o. Emission Limitation-
41.42 TPY CO for B003 and B004, combined

Applicable Compliance Method -

Compliance shall be based upon record keeping as specified in A.III.2. for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor

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- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 84 lbs/mm cu ft, as specified in AP-42 Chapter 1.4-1 (2/98);
- iii. multiplying the total fuel oil burned for the calendar year by the emission factor of 5 lbs/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual CO emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- p. Emission Limitation-
74.21 TPY Sulfur Dioxides (SO₂) for B003 and B004, combined

Applicable Compliance Method-

Compliance shall be based upon record keeping as specified in A.III.2 for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 0.6 lb SO₂/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 71 lbs SO₂/1000 gallons, as specified in AP-42 Chapter 1.3-1 (9/98);
- iii. the annual SO₂ emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

- q. Emission Limitation-
5.00 TPY OC for B003 and B004, combined

Applicable Compliance Method

Compliance shall be based upon record keeping as specified in A.III.2. for B003 and B004 and shall be determined by:

- i. multiplying the total natural gas burned for the calendar year by the emission factor of 11.0 lbs OC/mm cu ft, as specified in AP-42 Chapter 1.4-2 (7/98);
- ii. multiplying the total fuel oil burned for the calendar year by the emission factor of 0.252 lb OC/1000 gallons, as specified in AP-42 Chapter 1.3-3 (9/98);
- iii. the annual OC emissions shall be the sum of (i) and (ii), divided by 2,000 pounds per ton.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B004 - 89 mmBtu/hr #2 oil or natural gas steam generating unit		

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.

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AE St:

PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: B004

NEW SOURCE REVIEW FORM B

PTI Number: 08-04131

Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Two temporary steam generators, 89 mmBtu/hr (total: 178 mmbtu/hr)capacity, burn #2 fuel oil or natural gas. CITY/TWP Dayton, Ohio

Emissions Unit ID: B004

SIC CODE 2869 SCC CODE 10200602 10200502 EMISSIONS UNIT ID B003

EMISSIONS UNIT DESCRIPTION 89 mmBtu/hr #2 oil or natural gas steam generating unit, temporary unit

DATE INSTALLED Waiting for PTI

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Table with 6 columns: Pollutants, Air Quality Description, Actual Emissions Rate (Short Term Rate, Tons Per Year), PTI Allowable (Short Term Rate, Tons Per Year). Rows include Particulate Matter, PM10, Sulfur Dioxide, Organic Compounds, Nitrogen Oxides, Carbon Monoxide, Lead, and Other: Air Toxics.

APPLICABLE FEDERAL RULES:

NSPS? 40 CFR 60 NESHAP? PSD? OFFSET POLICY? Yes Subpart Dc

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination: Emission Offset, 5% visible emissions, compliance with OAC and NSPS, use of natural gas and #2 fuel oil.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? X YES NO

IDENTIFY THE AIR CONTAMINANTS:

4 NEW SOURCE REVIEW FORM B

PTI Number: 08-04131 Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Citric Acid Plant

CITY/TWP Davton. Ohio

Emissions Unit ID: B004

SIC CODE 2869 SCC CODE 10200602 10200502 EMISSIONS UNIT ID B004

EMISSIONS UNIT DESCRIPTION 89 mmBtu/hr #2 oil or natural gas steam generating unit, temporary unit

DATE INSTALLED waiting for PTI

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	lb/mmBtu			.020 lb/mmBtu	10.76
PM ₁₀					
Sulfur Dioxide	lb/mmBtu			0.5 lb/mmBtu	74.21
Organic Compounds	Pounds per hour			0.96	4.47
Nitrogen Oxides	Pounds per hour			12.72	59.42
Carbon Monoxide	Pounds per hour			7.33	37.4
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? 40 CFR 60

NESHAP?

PSD?

OFFSET POLICY? Yes

subpart Dc

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Emission Offset, 5% visible emissions, compliance with OAC and NSPS, use of natural gas and #2 fuel oil.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES NO

IDENTIFY THE AIR CONTAMINANTS:

48 NEW SOURCE REVIEW FORM B

PTI Number: 08-04131

Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Citric Acid Plant

CITY/TWP Davton, Ohio

Emissions Unit ID: B004

Please describe any hard copy information is being submitted with this recommendation (Please send hard copy information to Pam McGraner, DAPC Central Office - Air Quality Modeling and Planning):

NONE

Please provide any additional permit specific notes as you deem necessary:

NONE

Permit To Install Synthetic Minor Write-Up

Introduction: A.E. Staley is a Title V facility. The facility is currently permitted to emit 271 tons per year sulfur dioxide from B001 and B002. A.E. Staley requires steam generation during the shut-down, repair and maintenance of B001 and B002. A.E. Staley wants to install two "rental" boilers to use for steam generation. The rental boilers each have a capacity of 89 mmBtu/hr. Potential emissions from these boilers will be limited so PSD thresholds are not exceeded. The emissions will be limited by fuel usage. The allowable emissions are based on 35 ton per year increase over the average actual emissions over the past two years. The only other increase over the past five years is a PTI, issued February 3, 1999 (2.19 TPY particulates).

Source Description: A.E. Staley is a citric acid plant and operates two existing boilers (B001 and B002). B001 may be fired with natural gas and #2 oil, B002 may be fired with used oil, natural gas, or #2 oil. The rental boilers will be permitted to fire only #2 oil and natural gas. The new boilers each have a capacity of 89 mmBtu/hr.

Facility Emissions: The Title V permit for emissions units B001 and B002 each include an allowable SO₂ emission rate of 271 tons/yr. Average actual emissions for 1998 and 1999, for both boilers, include the following:

NO_x: 29.21 ton/yr SO₂: 39.21 ton/yr CO 15.87 ton/yr
PE: 13.30 ton/yr = 13.30 TPY OC: 2.65 ton/yr

A.E. Staley has agreed to restrict the fuel usage in B003 and B004 to limit the increase of emissions, above the previous two year average, to less than PSD thresholds.

The allowable emission rate for B003 and B004 is equal to 0.5 lb/mmBtu (NSPS). Fuel oil usage will be restricted to 2,120,286 gallons/day (total for both boilers). This oil restriction will limit SO₂ emissions to 74.21 ton/yr which is 35 ton/yr above the actual emissions over the past two years (39.21 + 35 = 74.21 TPY). To limit NO_x emissions, natural gas usage will be limited to 8.602 X 10⁸ cubic feet (both boilers). The capacity of each boiler is 7.644 X 10⁸ cubic feet. The NO_x emissions will be limited to 35 ton/yr above the 98/99 average or 29.21 ton/yr + 64.21 TPY. The burning of 2,120,286 gallons/yr fuel oil will emit 21.20 TPY NO_x and the burning of 8.602 X 10⁸ cubic feet natural gas will emit 43.01 TPY NO_x.

Permitted emissions for B003 and B004 combined, are as follows:
PE:11.74 TPY SO₂: 74.21 TPY CO: 41.42 TPY OC 5.0 TPY Nox: 64.2 TPY

Conclusion:

With the fuel usage restrictions and the appropriate federally enforceable terms and conditions listed in the

NEW SOURCE REVIEW FORM B

PTI Number: 08-04131

Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Citric Acid Plant

CITY/TWP Davton, Ohio

Emissions Unit ID: B004

draft permit, the applicant with the installation of B003 and B004 will avoid PSD requirements and thereby not be classified as a major stationary source pursuant to federal PSD regulations.

NSR DISCUSSION

A.E. Staley plans to install two rental steam generating units to provide steam during the maintenance of B001 and B002. These are temporary units. The input capacity of each boiler is 89 mmBtu/hr. This PTI has been structured to limit the emissions from these two new units to 35 tons above the average emission quantities (for NOx and SO2) over the last two years. Fuel oil usage is restricted to maintain emissions of SO2 to 74.21 ton/yr. Nitrogen oxide emissions have been limited to 64.21 ton/yr. Since A.E. Staley is a Title V facility, the terms and conditions are written in a state/federal format. Hourly allowables are based on maximum hourly fuel usages for each unit, applicable OAC and NSPS regulations. The emissions limitations also avoid PSD requirements and a major emission status for these units.

CALCULATIONS

A.E. Staley Manufacturing Company

The facility use of #2 fuel oil must be limited to avoid PSD for SO2. The emissions are also to be limited to the current level of emissions. (A.E.Staley will be shutting down B001 and B002 when B003 and B004 are in operation.) The emissions of B001 and B002 were determined and averaged (over 1998 and 1999). In addition, a PTI was issued to A.E. Staley for a citric acid tank on February 3, 1999 which included allowable emissions of 2.19 TPY PM.

NO x: 29.21 TPY

TOC: 2.65 TPY

PE: 13.30TPY

SO2: 39.21 TPY

CO:15.87 TPY

Allowable emission rate for SO2 (NSPS) 0.5 lb/mmBtu
 $(0.5 \text{ lb/mmBtu})(140 \text{ mmBtu}/1000 \text{ gallons})(\text{gallons}/\text{yr}) = 39.21 \text{ TPY}$ (average 98/99) + 35TPY (allowable increase to avoid PSD) = 74.21 (148420 lbs/day)
 gallons of oil which may be burned =2,120,286 gallons/yr

NOx will also be emitted when burning fuel oil. To determine the amount of NOx emitted:

Emission factor = 20 lbs/1000 gallon
 $(2120286 \text{ gallons}/\text{yr})(20 \text{ lbs}/1000 \text{ gallons}) = 21.20 \text{ TPY}$

To maintain emissions at no more than 35 TPY above current level, 64.21 TPY - 21.20 TPY or 43.01 TPY NOx may be emitted from the burning of natural gas. $(\text{Cubic feet})(100 \text{ lb}/10^6 \text{ cubic feet}) = 86020 \text{ lbs}/\text{yr}$
 Cubic feet of gas which may be burned to maintain emissions of NOx at current level = $8.602 \times 10^8 \text{ cu.ft.}$ (total for both boilers)

Capacity of each boiler will only allow $87,255 \text{ cubic feet}/\text{hr}$ to be burned $\times 8760 = 7.644 \times 10^8 \text{ cu.ft.}$

50 NEW SOURCE REVIEW FORM B

PTI Number: 08-04131

Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Citric Acid Plant

CITY/TWP Davton, Ohio

Emissions Unit ID: B004

Emissions from Natural Gas:**Particulate Emissions (PE):**

Maximum hourly gas usage (for each boiler):
 $(89 \text{ mmBtu/hr})(\text{cubic feet}/1020 \text{ Btu}) = 87,255 \text{ cubic feet/hour}$
 $(87,255 \text{ cubic feet/hour})(1.9 \text{ lb}/10^6 \text{ cubic feet}) = .17 \text{ lb/hr}$
 Allowable: $(.020 \text{ lb/mmBtu})(89 \text{ mmBtu/hr}) = 1.78 \text{ lbs/hr}$
 Annual usage of gas(for both boilers) shall not exceed 860200000 cubic feet
 $\# \text{ hr operation} = 860.02 \text{ mm cu ft/yr} / .087255 \text{ mmcu feet/hr} = 9856.39 \text{ hr/yr}$
 $9856.39 \text{ hr/yr} \times 1.78 \text{ lb/hr} = 8.77 \text{ ton/yr (both boilers)}$
 Each boiler: $8760 \text{ hr/yr} \times 1.78 \text{ lb/hr} = 7.79 \text{ ton/yr}$
 Actual: $(860200000 \text{ cubic feet/yr})(1.9 / 10^6 \text{ cubic feet}) = 0.82 \text{ TPY (for both boilers)}$
 Each boiler: $(7.644 \times 10^8 \text{ cu. ft})(1.9 \times 10^6 \text{ cubic feet}) = 0.73 \text{ TPY}$

SO2

Maximum hourly gas usage = 87,255 cubic feet/hour
 $(87,255 \text{ cubic feet/hour})(.6 \text{ lb}/10^6 \text{ cubic feet}) = .05 \text{ lb/hr}$
 Annual gas usage shall not exceed $860 \times 10^6 \text{ cubic feet}$
 $(860 \times 10^6 \text{ cubic feet})(.6 \text{ lb}/10^6 \text{ cubic feet}) = .26 \text{ TPY}$
 Each boiler: $(7.644 \times 10^8)(.6 \text{ lb}/10^6 \text{ cubic feet}) = .23 \text{ TPY}$

TOC

Maximum hourly gas usage = 87,255 cubic feet/hour
 $(87,255 \text{ cubic feet/hour})(11 \text{ lb}/10^6 \text{ cubic feet}) = .96 \text{ lb/hr}$
 Annual gas usage shall not exceed $860 \times 10^6 \text{ cubic feet}$
 $(860 \times 10^6 \text{ cubic feet})(11 \text{ lb}/10^6 \text{ cubic feet}) = 4.73 \text{ TPY}$
 Each boiler: $(7.644 \times 10^8)(11 \text{ lb}/10^6 \text{ cubic feet}) = 4.20 \text{ TPY}$

NOx

Maximum hourly gas usage = 87,255 cubic feet/hour
 $(87,255 \text{ cubic feet/hour})(100 \text{ lb}/10^6 \text{ cubic feet}) = 8.72 \text{ lb/hr}$
 Annual gas usage shall not exceed $860 \times 10^6 \text{ cubic feet}$
 $(860 \times 10^6 \text{ cubic feet})(100 \text{ lb}/10^6 \text{ cubic feet}) = 43.0 \text{ TPY}$
 Each boiler: $(7.644 \times 10^8)(100/10^6 \text{ cubic feet}) = 38.2 \text{ TPY}$

Pb

Maximum hourly gas usage = 87,255 cubic feet/hour
 $(87,255 \text{ cubic feet/hour})(.0005 \text{ lb}/10^6 \text{ cubic feet}) = 0.00004 \text{ lb/hr}$
 Annual gas usage shall not exceed $860 \times 10^6 \text{ cubic feet}$
 $(860 \times 10^6 \text{ cubic feet})(.0005 \text{ lb}/10^6 \text{ cubic feet}) = 0.0002 \text{ TPY}$

CO

$(84 \text{ lb}/10^6 \text{ cubic feet})(87,255 \text{ cubic feet/hour}) = 7.33 \text{ lb/hr}$
 Annual gas usage shall not exceed $860 \times 10^6 \text{ cubic feet}$
 $(860 \times 10^6 \text{ cubic feet})(84 \text{ lb}/10^6 \text{ cubic feet}) = 36.12 \text{ TPY}$
 Each boiler: $(7.644 \times 10^8)(84 \text{ lbs}/10^6 \text{ cubic feet}) = 32.10 \text{ TPY}$

5 **NEW SC**

PTI Num

FACILITY

FACILITY DESCRIPTION

Citric Acid Plant

Emissions Unit ID: B004

CITY/TWP Dayton, Ohio

Emissions From #2 Fuel Oil

Maximum amount of fuel oil burned/hr (for each boiler):

$(89 \text{ mmBtu/hr})(1000 \text{ gallons}/140 \text{ mmBtu}) = 636 \text{ gallons/hr}$

Annual fuel usage for both boilers shall not exceed (to limit SO₂) :2120286 gallons/yr

$636 \text{ gallons/hr} \times 8760 \text{ hr/yr} = 5571360 \text{ gallons/yr}$ (for each boiler exceeds fuel usage for both boilers)

PE

$(636 \text{ gallons/hr})(2 \text{ lb}/1000 \text{ gallons}) = 1.27 \text{ lbs/hr}$

$(2 \text{ lb}/1000 \text{ gallons})(2120286 \text{ gallons/yr}) = 2.12 \text{ TPY}$ (for both boilers)

Allowable = 1.78 lbs/hr (OAC rule) $0.20 \text{ lb}/\text{mmBtu} \times 89 \text{ mmBtu/hr}$

$140 \text{ mmBtu}/1000 \text{ gallons} = 3335 \text{ hrs of operation} \times 1.78 \text{ lbs/hr} = 2.97 \text{ TPY}$

SO₂

$(636 \text{ gallons/hr})(71 \text{ lbs}/1000 \text{ gallons}) = 45.16 \text{ lbs/hr}$ (Actual based on AP-42)(fuel analysis is required to maintain emissions at NSPS levels)

(Allowable emissions = $.5 \text{ lb SO}_2/\text{mmBtu})(89 \text{ mmBtu/hr}) = 44.5 \text{ lb/hr}$ (NSPS)

Amount of fuel used =2120286 gallons/yr, fuel rating = 140 mmBtu/1000 gallons

$(140 \text{ mmBtu}/1000 \text{ gallons})(2120286 \text{ gallons/yr}) = 296840.04 \text{ mmBtu/yr}$

$(296840.04 \text{ mmBtu/yr})(.5 \text{ lb SO}_2/\text{mmBtu}) = 78420.5 \text{ lb/yr} = 74.21 \text{ TPY}$

TOC

$(.252 \text{ lb}/1000 \text{ gallons})(636 \text{ gallons/hr}) = .16 \text{ lb/hr}$

$(2120286 \text{ gallons/yr})(.252 \text{ lb}/1000 \text{ gallons}) = .267 \text{ TPY}$

NO_x

$(636 \text{ gallons/hr})(20 \text{ lbs}/1000 \text{ gallons}) = 12.72 \text{ lbs/hr}$

$(2120286 \text{ gallons/yr})(20 \text{ lb}/1000 \text{ gallons}) = 21.20 \text{ TPY}$

CO

$(636 \text{ gallons/hr})(5 \text{ lbs}/1000 \text{ gallons}) = 3.18 \text{ lbs/hr}$

$(2120286 \text{ gallons/yr})(5 \text{ lbs}/1000 \text{ gallons}) = 5.30 \text{ TPY}$

Permit allowable emissions for **each** boiler are based on the maximum hourly calculated value for each parameter listed above. Each boiler may be burning natural gas or oil at any time. The permitted hourly emissions for each boiler are:

52 NEW SOURCE REVIEW FORM B

PTI Number: 08-04131 Facility ID: 0857041333

FACILITY NAME A.E. Staley Manufacturing

FACILITY DESCRIPTION Citric Acid Plant CITY/TWP Davton. Ohio

Emissions Unit ID: B004

PE: 1.78 lbs/hr; SO2: 44.5 lbs/hr; TOC: 0.96 lb/hr; NOx:12.72 lbs/hr; CO: 7.33 lbs/hr

The annual emission limitations for each boiler are based on the burning of 2120286 gallon of fuel oil/year and 764.4 X 10^6 cubic feet of natural gas. Based on these fuel usages, the emissions shall not exceed the following:

SO2: 74.21 TPY NOx 59.42 TPY CO 37.4 TPY PE:10.76 TPY OC 4.47 TPY

The annual emission limitations for both boilers are based on the burning of 2120286 gallon of fuel oil/year and 860 x 10^6 cubic feet of natural gas:

SO2: 74.21 TPY NO x: 64.2 TPY CO: 41.42 TPY PE: 11.74 OC: 5.0

Please fill in the following for this permit:

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	11.74 TPY
NOx	64.2TPY
CO	41.42TPY
SO2	74.21 TPY
OC	5.0 TPY