State of Ohio Environmental Protection Agency

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

Street Address:
122 S. Front Street
Lazarus Gov. Center **TELE:** (614) 644-3020 **FAX:** (614) 644-2329
Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 15-01449

DATE: 7/17/2001

Greif Brothers Corp - Massillon Mill
William Shew
PO Box 675 9420 Warmington St
Massillon, OH 446480675

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
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

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

CC: **USEPA** **Canton LAA**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 7/17/2001**
Terms and Conditions	**Effective Date: 7/17/2001**

FINAL PERMIT TO INSTALL 15-01449

Application Number:	15-01449
APS Premise Number:	1576000431
Permit Fee:	**$800**
Name of Facility:	Greif Brothers Corp - Massillon Mill
Person to Contact:	William Shew
Address:	PO Box 675 9420 Warmington St Massillon, OH 446480675

Location of proposed air contaminant source(s) [emissions unit(s)]:
9420 Warmington Road SW
Massillon, **Ohio**

Description of proposed emissions unit(s):
Chapter 31 modification of PTI 15-1251 issued 1/8/97 to increase the NOx, SO2, and CO hourly and annual allowables.

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. 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 information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

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

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

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

10. Public Disclosure

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

11. Applicability

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).

12. Best Available Technology

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

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

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

14. Construction Compliance Certification

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

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

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

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

Pollutant	Tons Per Year
CO	53.04
VOC	1.99
NOx	99.29

Emissions Unit ID: **P003**

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - 66.5 MMBTU/hr (70.1 gigajoules/hr.), natural gas fired, stationary gas turbine. The gas turbine drives a 6.5 MW generator. P003 is also the front part of a combined cycle steam generating system. The exhaust from the stationary gas turbine feeds the supplemental duct burner or is exhausted from the bypass stack. The supplemental duct burner is part of a steam generating unit, emissions unit B008.	OAC rule 3745-31-05(A)(3)	5.18 lbs/hr CO 22.69 TPY CO 16.4 lbs/hr NO_x 71.83 TPY NO_x See Special Term and Condition A.2a.
	OAC rule 3745-35-07(B)	Synthetic Minor Limits See Operational Restriction B.2.
	OAC rule 3745-17-07(A)(1)	The opacity of emissions from any stack shall not exceed 20%, as a 6-minute average, except for 6 consecutive minutes in any hour when opacities up to 60%, as a 6-minute average, are permitted.
This PTI is a modification of PTI 15-1251 issued 1/8/97 and supersedes PTI 15-1251. This PTI allows an increase in the NOx allowables, a decrease in the CO allowables, the removal of the PM and VOC hourly and annual mass emission limitations and other minor changes.	OAC rule 3745-17-11(B)(4)	Less than 0.040 lb PM per MMBTU actual heat input.
	OAC rule 3745-18-06(F)	The requirements of this rule are less stringent than the 40 CFR Part 60, Subpart GG requirements.
	40 CFR Part 60, Subpart GG	No more than 200 PPMv NO_x at 15% oxygen and dry basis from the bypass stack. No fuel which contains greater than

0.8% by weight sulfur shall be burnt in this stationary gas turbine. No more than 150 PPMv SO_2 at 15% oxygen and dry basis from the bypass stack.

2. Additional Terms and Conditions

2.a Additional OAC rule 3745-31-05(A)(3) requirements:

i. Natural gas shall be the only fuel utilized to fire the turbine; and,

ii. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-11(B)(4) and compliance with the requirements of 40 CFR Part 60, Subpart GG.

B. Operational Restrictions

1. The low NOx combustor and control system shall be operated at all times that the turbine is being operated.

2. This facility shall not operate emissions units B005, B006, and B007 when emissions unit P003 is operating separately or in combination with B008.

C. Monitoring and/or Recordkeeping Requirements

1. In accordance with 40 CFR 60.334, this facility shall be subject to the following custom fuel sampling schedule:

a. monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel being fired;

b. sulfur monitoring shall be performed according to the following custom fuel sampling schedule by either the facility, a service contractor retained by the facility, or the fuel vendor;

i. analysis for fuel sulfur content of the natural gas shall be conducted using the methods listed for gaseous fuels in 40 CFR 60.335 (d);

ii. for the first six months of operation, the sulfur monitoring shall be performed two times a month. If this monitoring shows little variability in the fuel sulfur content,

and indicates consistent compliance with 40 CFR 60.333, sample analysis for fuel sulfur content shall be conducted once per quarter for six quarters;

iii. if, after the monitoring required in the above paragraph is completed and the fuel sulfur content shows little variability, and, the fuel sulfur content calculated as sulfur dioxide, indicates consistent compliance with the sulfur dioxide emission limits specified in 40 CFR 60.333, fuel sample analysis shall be conducted twice per year, each year, during the first and third quarters of the year;

iv. should any fuel sulfur analysis as required in the above paragraphs (B) and (C) indicate noncompliance with 40 CFR 60.333, this facility shall notify the City of Canton Health Department, Air Pollution Control Division, in writing of such excess emissions within fourteen days of the non-compliant analysis report. The custom fuel sampling schedule shall be re-examined. Sulfur monitoring shall be conducted weekly during the interim period when this custom fuel sampling schedule is being re-examined;

v. if there is a substantial change in fuel quality due to a change in the natural gas fuel supply, this facility shall notify the City of Canton Health Department, Air Pollution Control Division of such change for re-examination of this custom fuel sampling schedule. This notification shall be in written form and shall be submitted to the City of Canton Health Department, Air Pollution Control Division within fourteen days of such a change. Fuel sulfur monitoring shall be conducted weekly during the interim period when this custom fuel sampling schedule is being re-examined; and

vi. record of sample analysis and fuel supply pertinent to this custom fuel supply pertinent to this custom fuel sampling schedule shall be retained for a period of five years and be available for inspection at the facility by personnel of the federal, state, and local air pollution control agencies.

2. This facility shall record and maintain records of the amounts of natural gas consumed in this emissions unit each month.

3. This facility shall properly install, maintain, and operate a separate natural gas flow rate meter for this emissions unit.

4. This facility shall maintain daily written records of which emissions units of B005, B006, B007,

P003, B008, and combined P003 and B008 were operated and a record of a statement as to whether emissions unit P003, separately or in combination with B008, was operated simultaneously with emissions unit B005, B006, or B007.

5. This facility shall operate the portable gas monitor required in Special Term and Condition C.6. according to its operations manual. Records of any quality assurance or quality control work performed on the portable gas monitor, and, any maintenance work performed on the portable gas monitor, shall be maintained in a bound logbook.

6. This facility shall monitor the exhaust gases from the steam generator which is part of emissions unit B008 with a portable gas monitor or other approved analyzer for the concentrations of NO_x and CO. Emissions unit P003 shall also be in operation during this monitoring. This facility shall also monitor the temperature and velocity of these exhaust gases using a thermocouple and pitot tube. This facility shall monitor the exhaust gases from the stationary gas turbine, emissions unit P003, with a portable gas monitor or other approved analyzer for the percentage of the stoichiometric amount of 0_2. All of these monitoring requirements shall be performed at least one time per calendar month. The frequency of these monitoring requirements may be adjusted at the issuance of the Permit to Operate for this emissions unit. The mass emission rate in the exhaust gases from the steam generator in pounds per hour of NO_x and CO shall be calculated from the measured concentrations, the percentage of the stoichiometric amount of O_2, temperature, and pitot pressure drop.

D. Reporting Requirements

1. NSPS Requirements

Pursuant to the NSPS, the emissions units P003 and B008 owner/operator is hereby advised of the requirement to report the following at the appropriate times:

a. construction date (no later than thirty (30) days after such date);

b. anticipated start-up date (not more than sixty (60) days or less than thirty (30) days prior to such date);

c. actual start-up date (within fifteen (15) days after such date); and

d. the design heat input capacity of the affected facility (submit with the anticipated start-up date report).

Reports are to be sent to:

Ohio Environmental Protection Agency
Permit Management Unit

P. O. Box 1049
Columbus, Ohio 43216-1049

and

The Canton City Health Department
Air Pollution Control Division
420 Market Avenue North
Canton, Ohio 44702-1544

2. The permittee shall submit deviation reports in accord with General Term and Condition A.2.b. of any occurrence when emissions units B005, B006, and B007 were operated when emissions unit P003 was operating separately or in combination with B008. Refer to Special Term and Condition B.2.

E. Testing Requirements

1. Compliance methods

Compliance with the emission limitation(s) in the Air Emission Summary and in the Special Terms and Conditions for this emissions unit shall be determined in accordance with the following method(s):

a. Emission Limitation

5.18 lbs/hr CO

Applicable Compliance Method

Emission testing per 40 CFR, Part 60, Appendix A, Method 10 or 10B.

b. Emission Limitation

22.69 TPY CO

Applicable Compliance Method

Divide the hourly CO emission rate in pounds of CO emitted per hour determined in the emission testing by the cubic feet of natural gas used during the test hour, multiply by the actual annual natural gas usage rate in units of millions of cubic feet per year and then divide by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly

limitation, compliance shall also be shown with the annual limitation.

c. Emission Limitation

16.4 lbs/hr NO_x

Applicable Compliance Method

Emission testing per 40 CFR, Part 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

d. Emission Limitation

71.83 TPY NO_x

Applicable Compliance Method

Divide the hourly NO_x emission rate in pounds of NO_x emitted per hour determined in the emission testing by the cubic feet of natural gas used during the test hour, multiply by the actual annual natural gas usage rate in units of missions of cubic feet per year and then divide by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

e. Emission Limitation

The opacity of emissions from the bypass stack shall not exceed 20%, as a 6-minute average, except for 6 consecutive minutes in any hour when opacities up to 60%, as a 6-minute average, are permitted.

Applicable Compliance Method

Method 9 as per OAC Rule 3745-17-03 (B)(1).

f. Emission Limitation

Less than 0.040 lb PM per MMBTU actual heat input.

Applicable Compliance Method

AP-42, Table 3.1-2a dated 4/00 lists the uncontrolled, PM (filterable) emission factor for natural gas-fired turbines as 0.0019 lb/MM Btu fuel input. Because 0.0019 lb PM per MM

BTU actual heat input is less than 0.040 lb PM per MM BTU actual heat input, compliance with this limit is shown.

g. Emission Limitation

No more than 200 PPMv NO_x at 15% oxygen and dry basis from the bypass stack.

Applicable Compliance Method

Emissions testing per 40 CFR 60.335 (b), 60.335 (c), and 60.335 (f).

h. Emission Limitation

No fuel which contains greater than 0.8% by weight sulfur shall be burnt in this stationary gas turbine

Applicable Compliance Method

Monitor the sulfur content of the fuel using a method listed in 40 CFR Part 60.335 (d) following the custom fuel sampling schedule in Special Term and Condition C.1.b.

i. Emission Limitation

No more than 150 PPMv SO_2 at 15% oxygen and dry basis from the bypass stack.

Applicable Compliance Method

Compliance was demonstrated with emissions testing in September 1997 and continuing compliance shall be demonstrated with the custom fuel sampling schedule in Special Term and Condition C.1.b.

2. Intent to Test Requirements for Nitrogen Oxides and Carbon Monoxide emissions for emissions units P003 and B008

a. Not later than 30 days prior to the proposed test date(s), this facility shall submit a written "Intent to Test" notification for each emissions unit to the Canton City Health Department, Air Pollution Control Division, 420 Market Avenue, North, Canton, Ohio 44702-1544, phone (330) 489-3385, fax (330) 489-3335. Failure to submit such notification for review and approval prior to the test(s) may result in the Canton City Health Department's refusal to accept the results of the emission test(s).

b. The "Intent to Test" notification shall include but not be limited to the following facility proposed items:

i. describe in detail the test methods and procedures;

ii. the emissions units operating parameters;

iii. the time(s) and date(s) of the test(s);

iv. the person(s) who will be conducting the test(s);

v. a listing of the emissions unit numbers with an identification of which operation, process, or activity corresponds to each emissions unit number for all operations, processes, or activities that could vent exhaust gases to the test stack;

vi. a listing of which operation, process, or activity of all operations, processes, or activities that could vent exhaust gases to the test stack which are not included in an Ohio EPA air permit;

vii. a simple, non-dimensional sketch showing the ducting and stack arrangement including the relative position of all operations, processes, or activities that could vent exhaust gases to the test stack; and

viii. a statement as to whether there are any other emissions, i.e. emissions not being emitted from the test stack but being emitted into the air at other location(s) besides the test stack, for each operation, process or activity that could vent exhaust gases to the test stack.

3. Emission testing requirement for emissions units P003 and B008

a. During all runs of the emissions tests, the portable gas monitor and the associated temperature measurement device(s) and pitot tubes shall be operated and the items required to be recorded in Special Term and Condition C.6 of emissions unit B008 shall be measured and recorded.

b. Personnel form the Canton City Health Department, DAPC shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

c. A comprehensive written report on the results of the emission(s) test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton City Health Department, DAPC within 30 days following completion of the test(s). This report shall also include the information required to be recorded in item E.3.a above.

4. Emission testing requirement for emissions unit P003

a. The emission testing shall be conducted within 3 months of the issuance of this PTI..

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Nitrogen Oxides (NO_x), and Carbon Monoxide (CO), and, with the allowable emission concentration for Nitrogen Oxides (NO_x).

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rates: For NO_x, Methods 7, 7A, 7B, 7C, 7D, or 7E of 40 CFR Part 60, Appendix A; for CO, Method 10 or 10B of 40 CFR Part 60, Appendix A.

d. The test method which shall be employed to demonstrate compliance with the allowable emission concentrations for NO_x are the test methods and procedures in 40 CFR 60.335 (b), 60.335 (c), or 60.335 (f).

e. Four test runs shall be performed at 30, 50, 75, and 100% of the peak load, or at four points in the normal operating range of the turbine (including the minimum and peak load) to demonstrate compliance with the allowable emission concentration for NO_x.

F. Miscellaneous Requirements

1. NSPS Requirements

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

Emissions unit P003 is 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 and including 40 CFR Part 60 Subpart GG Standards of Performance for Stationary Gas Turbines, except as clarified as follows:

2. Emissions unit P003 shall not be subject to the following 40 CFR NSPS requirements:

a. 60.334 (b), for NOx, as indicated in accord with Special Term and Condition B (2)(a)(i);

b. 60.334 (c)(1), (3) & (4)

3. This permit to install (PTI) supersedes PTI 15-1251 issued January 8, 1997 for P003.

4. By request of the applicant and pursuant to OAC rule 3745-35-07, special term and condition II.B.2 of this PTI for this emissions unit is a federally enforceable requirement.

Emissions Unit ID: **B008**

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

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
B008 - 82.5 MMBTU/hr (87.0 gigajoules/hr), natural gas fired, supplemental duct burner and steam generator which constitutes a steam generating unit. B008 is the rear part of a combined cycle steam generating system. The exhaust from the supplemental duct burner feeds the steam generator and exits from the steam generator stack. This PTI is a modification of PTI 15-1251 issued 1/8/97 and supersedes PTI 15-1251. This PTI allows an increase in the CO allowables, a decrease in the NOx allowable, the removal of the PM and SO2 hourly and annual mass emission limitations and other minor changes.	OAC rule 3745-31-05(A)(3) OAC rule 3745-35-07(B) OAC rule 3745-17-07(A)(1) OAC rule 3745-17-10	6.92 lbs/hr CO 30.35 TPY CO 0.454 lbs/hr VOC 1.99 TPY VOC 6.27 lbs/hr NO_x 27.46 TPY NO_x See Special Term and Condition A.2.a. Synthetic Minor Limits See Operational Restriction B.2. The opacity of emissions from any stack shall not exceed 20%, as a 6-minute average, except for 6 consecutive minutes in any hour when opacities up to 60%, as a 6-minute average are permitted. 0.020 lb PM per MMBTU actual heat input

2. Additional Terms and Conditions

2.a Additional OAC rule 3745-31-05(A)(3) requirements:

i. Natural gas shall be the only fuel utilized to fire the duct burner; and,

ii. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-10.

B. Operational Restrictions

1. The control equipment including the pilot scanner assembly that provides low NO_x capability for the duct burner shall be operated at all times that the duct burner is operated.

2. This facility shall not operate emissions units B005, B006, and B007 when emissions unit P003 is operating separately or in combination with B008.

C. Monitoring and/or Recordkeeping Requirements

1. This facility shall maintain written records of any and all malfunctions of emissions units P003 and B008 in which there is an emission of air contaminants in violation of the mass emission limitations in this Permit to Install. The records shall contain the items listed in OAC 3745-15-06 (B)(1)(a) through (c). This record keeping requirement is in addition to the requirements in OAC 3745-15-06.

2. This facility shall maintain daily written records of which emissions units of B005, B006, B007, P003, B008, and combined P003 and B008 were operated and a record of a statement as to whether emissions unit P003, separately or in combination with B008, was operated simultaneously with emissions unit B005, B006, or B007.

3. All records required by this Permit to Install shall be maintained in a bound logbook and retained on file for a period of not less than five years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any authorized representative of the Director, for review at the facility during normal business hours.

4. This facility shall operate the portable gas monitor required in Special Term and Condition C.6. according to its operations manual. Records of any quality assurance or quality control work performed on the portable gas monitor, and, any maintenance work performed on the portable gas monitor, shall be maintained in a bound logbook.

5. NSPS Requirements

   a. This facility shall record and maintain records of the amount of fuel consumed in this emissions unit each day.

   b. This facility shall properly install, maintain, and operate a separate natural gas flow rate meter for this emissions unit.

6. This facility shall monitor the exhaust gases from the steam generator which is part of emissions unit B008 with a portable gas monitor or other approved analyzer for the concentrations of NO_x and CO. Emissions unit P003 shall also be in operation during this monitoring. This facility shall also monitor the temperature and velocity of these exhaust gases using a thermocouple and pitot tube. This facility shall monitor the exhaust gases from the stationary gas turbine, emissions unit P003, with a portable gas monitor or other approved analyzer for the percentage of the stoichiometric amount of 0_2. All of these monitoring requirements shall be performed at least one time per calendar month. The frequency of these monitoring requirements may be adjusted at the issuance of the Permit to Operate for this emissions unit. The mass emission rate in the exhaust gases from the steam generator in pounds per hour of NO_x and CO shall be calculated from the measured concentrations, the percentage of the stoichiometric amount of O_2, temperature, and pitot pressure drop.

D. Reporting Requirements

1. This facility shall submit written reports to the Canton City Health Department, Air Pollution Control Division. These reports shall be submitted by January 31 of the current year and shall cover the previous calendar year. The report is in addition to the requirements in OAC 3745-15-06. The annual report shall include:

   a. all of the malfunctions and the items listed in OAC 3745-15-06 (B)(1)(a) through (c) required to be recorded in Special Term and Condition C.1;

   b. the calculated mass emission rates in pounds per hour of NOx and CO in the exhaust gases from the steam generator, which is part of emissions unit B008, determined from all of the portable gas analyzer measurements required in Special Term and Condition C.6. and a table of all the values used in these calculations. Also, a sample calculation of these mass emission rates including the general equations used shall be included in this annual report; and

   c. a statement as to whether emissions unit P003 separately or in combination with B008 was

operated simultaneously with emissions unit B005, B006, or B007 on any day, and, a listing of such days, if any.

2. The permittee shall submit deviation reports in accord with General Term and Condition A.2.b. of any occurrence when emissions units B005, B006, and B007 were operated when emissions unit P003 was operating separately or in combination with B008. Refer to Special Term and Condition B.2.

3. This facility shall submit written reports to Canton City Health Department, Air Pollution Control Division whenever a calculated mass emission rate in pounds per hour of NO_x or CO required to be recorded in Special Term and Condition C.6. (from the portable monitor measurements) exceeds 22.7 pounds per hour or 12.1 pounds per hour, respectively. These reports shall be submitted within fourteen days of the day when the measurements were made with the portable analyzer.

E. Testing Requirements

1. Compliance with the emission limitation(s) in the Air Emission Summary and in the Additional Terms and Conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation

      6.92 lbs/hr CO

      Applicable Compliance Method

      Emission testing per 40 CFR Part 60, Appendix A, Method 10 or 10B.

   b. Emission Limitation

      30.35 TPY CO

      Applicable Compliance Method

      Divide the hourly CO emission rate in pounds of CO emitted per hour determined in the emission testing by the cubic feet of natural gas used during the test hour, multiply by the actual annual natural gas usage rate in units of millions of cubic feet per year and then divide by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

c. Emission Limitation

0.454 lbs/hr VOC

Applicable Compliance Method

Compliance shall be determined by calculation. The emission factor from FIRE 6.23 for SCC 1-02-006-02 is 5.5 pounds of VOC emitted per million standard cubic feet of natural gas burned. VOC emissions in pounds per hour are equal to 5.5 lbs VOC/MM SCF times 1 SCF/1000 BTU times 82.5 MM BTU/hr which equals 0.454 lbs/hr VOC.

d. Emission Limitation

1.99 TPY VOC

Applicable Compliance Method

Compliance shall be demonstrated by multiplying the allowable hourly emission limitation by the actual annual operating hours, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

e. Emission Limitation

6.27 lbs/hr NO_x

Applicable Compliance Method

Emission testing per 40 CFR Part 60, Appendix A, Method 7, 7A, 7B, 7C, 7D, or 7E.

f. Emission Limitation

27.46 TPY NO_x

Applicable Compliance Method

Divide the hourly NOx emission rate in pounds of NOx emitted per hour determined in the emission testing by the cubic feet of natural gas used during the test hour, multiply by the actual annual natural gas usage rate in units of millions of cubic feet per year and then divide by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

g. Emission Limitation

The opacity of emissions from the steam generator stack shall not exceed 20%, as a 6-minute average, except for 6 consecutive minutes in any hour when opacities up to 60%, as a 6-minute average are permitted.

Applicable Compliance Method

Method 9 as per OAC Rule 3745-17-03 (B)(1).

h. Emission Limitation

0.020 lb PM per MMBTU actual heat input

Applicable Compliance Method

AP-42, Table 1.4-2 dated 7/98 lists the PM (filterable) emission factor for natural gas combustion sources as 1.9 lb/MM scf fuel input. Multiplying this emission factor by 1 scf per 1,000 BTU for natural gas gives an emission factor of 0.0019 lb/MM BTU. Because 0.0019 lb PM per MM BTU actual heat input is less than 0.020 lb PM per MM BTU actual heat input, compliance with this limit is shown.

2. Emission Testing Requirements

a. Intent to Test Requirements for Nitrogen Oxides and Carbon Monoxide Emissions for emissions units P003 and B008

i. Not later than 30 days prior to the proposed test date(s), this facility shall submit a written "Intent to Test" notification for each emissions unit to the Canton City Health Department, Air Pollution Control Division, 420 Market Avenue, North, Canton, Ohio 44702-1544, phone (330) 489-3385, fax (330) 489-3335.

Failure to submit such notification for review and approval prior to the test(s) may result in the Canton City Health Department's refusal to accept the results of the emission test(s).

ii. The "Intent to Test" notification shall include but not be limited to the following facility proposed items:

(a) describe in detail the test methods and procedures;

(b) the emissions units operating parameters;

(c) the time(s) and date(s) of the test(s);

(d) the person(s) who will be conducting the test(s);

(e) a listing of the emissions unit numbers with an identification of which operation, process, or activity corresponds to each emissions unit number for all operations, processes, or activities that could vent exhaust gases to the test stack;

(f) a listing of which operation, process, or activity of all operations,

processes, or activities that could vent exhaust gases to the test stack which are not included in an Ohio EPA air permit;

(g) a simple, non-dimensional sketch showing the ducting and stack arrangement including the relative position of all operations, processes, or activities that could vent exhaust gases to the test stack; and

(h) a statement as to whether there are any other emissions, i.e. emissions not being emitted from the test stack but being emitted into the air at other location(s) besides the test stack, for each operation, process or activity that could vent exhaust gases to the test stack.

b. Emission testing requirement for emissions units P003 and B008

i. During all runs of the emissions tests, the portable gas monitor and the associated temperature measurement device(s) and pitot tubes shall be operated and the items required to be recorded in Special Term and Condition C.6. of emissions unit B008 shall be measured and recorded.

ii. Personnel form the Canton City Health Department, DAPC shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

iii. A comprehensive written report on the results of the emission(s) test(s) shall be signed by the person or persons responsible for the tests and submitted to the Canton City Health Department, DAPC within 30 days following completion of the test(s). This report shall also include the information required to be recorded in E.2.b.i. above.

c. Emission testing requirement for emissions unit B008 operating in combination with emissions unit P003

i. the permit allowable mass emissions for the operation of emissions unit B008 in combination with emissions unit P003, the combined cycle steam generating system, are equal to the sum of the permit allowable mass emissions for emissions units P003 and P008. These permit allowable mass emissions are: 12.1 lbs/hr CO, 53.04 TPY CO, 0.454 lbs/hr VOC, 1.99 TPY VOC, 22.7 lbs/hr NO_x, and 99.29 TPY NO_x.

ii. The emission testing shall be conducted within 3 months of the issuance of this PTI.

iii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for Nitrogen Oxides (NO_x), and Carbon Monoxide (CO).

iv. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rates: For NO_x, Method 7, 7A, 7B, 7C, 7D, or 7E of 40 CFR Part 60, Appendix A; for CO, Method 10 or 10B of 40 CFR Part 60, Appendix A.

v. The heat input (HHV) to the duct burner shall be determined for each test run.

vi. The heat input (HHV) to the turbine shall be determined for each test run.

F. Miscellaneous Requirements

1. NSPS Requirements

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

Emissions unit B008 is 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 and including 40 CFR Part 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, except as clarified as follows:

Emissions unit B008 shall not be subject to the following 40 CFR NSPS requirements

a. 60.42c;

b. 60.43c;

c. 60.44c;

d. 60.45 c;

e. 60.46c;

f. 60.47c;

g. 60.48c (a) (2), (3), and (4); and

h. 60.48c (b), (c), (d), (e), (f), and (h).

2. This permit to install (PTI) supersedes PTI 15-1251 issued January 8, 1997 for B008.

3. By request of the applicant and pursuant to OAC rule 3745-35-07, special term and condition II.B.2 of this PTI for this emissions unit is a federally enforceable requirement.

NEW SOURCE REVIEW FORM B

PTI Number: 15-01449 Facility ID: 1576000431

FACILITY NAME Greif Brothers Corp - Massillon Mill

FACILITY DESCRIPTION Cardboard Mill CITY/TWP Massillon (City)

SIC CODE 2621 SCC CODE 2-01-002-01 EMISSIONS UNIT ID P003

EMISSIONS UNIT DESCRIPTION NGF gas turbine

DATE INSTALLED 10/96

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	Attainment			0.040 lb PM/MM BTU actual heat input	
PM_{10}					
Sulfur Dioxide	Attainment			150 PPMv at 15% O2 and dry basis from the bypass stack	
Organic Compounds					
Nitrogen Oxides	Attainment			16.4 lbs/hr	71.83
Carbon Monoxide	Attainment			5.18 lbs/hr	22.69
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS Dc NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Use of low NOx burner and natural gas as fuel.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? No information supplied

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*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 15-01449 Facility ID: 1576000431

FACILITY NAME Greif Brothers Corp - Massillon Mill

FACILITY DESCRIPTION Chapter 31 modification of PTI 15-1251 CITY/TWP Massillon (City)

Emissions Unit ID: **B008**

SIC CODE 2621 SCC CODE 1-02-006-02 EMISSIONS UNIT ID B008

EMISSIONS UNIT DESCRIPTION NGF duct burner and heat recovery steam generator. Chapter 31 modification of PTI 15-1251 issued 1/8/97 to increase the CO hourly and annual allowables.

DATE INSTALLED 10/96, Part of the turbine failed and was replaced in 1998.

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	Attainment				0.020 lb PM/MM BTU actual heat input
PM_{10}					
Sulfur Dioxide	Attainment				
Volatile Organic Compounds				0.454 lbs/hr	1.99
Nitrogen Oxides	Attainment			6.27 lbs/hr	27.46
Carbon Monoxide	Attainment			6.92 lbs/hr	30.35
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS GG NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?
Use of low NOx gas turbine and natural gas with minimal amounts of sulfur compounds as fuel.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? No information supplied.

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*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 15-01449 Facility ID: 1576000431

FACILITY NAME Greif Brothers Corp - Massillon Mill

FACILITY DESCRIPTION Chapter 31 modification of PTI 15-1251 CITY/TWP Massillon (City)

Emissions Unit ID: **B008**

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit hard copy items to **Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to **airpti@epa.state.oh.us**

Please fill out the following. If the checkrow does not work, replace it with an 'X'	Electronic	**Additional information** File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	☐	0000000**c**.wpd	☒	
Modeling form/results	☐	0000000**s**.wpd	☐	☒
PTI Application (complete or partial)*	☐	0000000**a**.wpd	☐	☒
BAT Study	☐	0000000**b.**wpd	☐	☒
Other/misc. (Briefing Memo)	☒	0000000**t**.wpd	☐	☐
Other/misc. (PTI 15-1251)			X	

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

NONE

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

☒ **Synthetic Minor Determination and/or** ☐ **Netting Determination**

Permit To Install **15-01449**

A. Source Description

PTI 15-1251 allowed the installation of a combined cycle steam generating system which consisted of two emissions units, a stationary natural gas fired turbine (P003) and natural gas fired duct burner coupled with a waste heat steam generator (B008). Greif Board is applying for a modification to its PTI 15-1251. PTI 15-1251 will be superseded by PTI 15-01449. The modification is to increase the NOx allowable emissions. The facility will continue to have federally enforceable restrictions to limit the operation of P003 and B008 such that P003 or P003 and B008 is/are not operated simultaneously with B005, B006, or B007 such that the facility does not require a Title V permit.

B. Source Emissions

P003 will have the following limits:

Shall not be operated when B005, B006, or B007 is being operated.

71.83 TPY NOx

22.69 TPY CO

B008 will have the following limits:

Shall not be operated when B005, B006, or B007 is being operated.

27.46 TPY NOx

30.35 TPY CO

B005, B006, and B007 combined have the following limits:

The facility has three existing natural gas boilers, B005, B006, and B007, for which a FESOP has been issued (April 17, 1996) to limit PM, SO_2, and NO_x to 10.8 TPY, 0.324 TPY, and 75.6 TPY respectively, for all three emission units, by limiting natural gas usage to 1,080,000,000 CF/yr. By the annual natural gas restriction, the FESOP also limited CO emissions to 45.36 TPY.

C. Facility Emissions and Attainment Status

On days when B005, B006, and B007 are operated, the facility NOx emissions will be less than on the days when P003 and B008 are operated. Because emissions units B005, B006, and B007 can not be operated simultaneously with P003 and B008, the facility NOx emissions are limited to the emissions units P003 and B008 limits, 71.83 + 27.46 TPY or 99.29 TPY.

On days when B005, B006, and B007 are operated, the facility CO emissions will be less than on the days when P003 and B008 are operated. Because emissions units B005, B006, and B007 can not be operated simultaneously with P003 and B008, the facility CO emissions are limited to the emissions units P003 and B008 limits, 22.69 + 30.35 TPY or 53.04 TPY.

The facility PM, VOC and SO2 potential emissions are less than 100 TPY.

The facility is located in an attainment area for NOx and CO.

D. Conclusion

These restrictions will limit the facility emissions to:

NEW SOURCE REVIEW FORM B

PTI Number: 15-01449 Facility ID: 1576000431

FACILITY NAME Greif Brothers Corp - Massillon Mill

FACILITY DESCRIPTION Chapter 31 modification of PTI 15-1251 CITY/TWP Massillon (City)

Emissions Unit ID: **B008**

99.29 TPY NO_x.

53.04 TPY CO.

All the other pollutants have potential emissions less than 100 TPY. Since the potential of all the pollutants are less than 100 TPY, this facility avoids Title V.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons Per Year
CO	53.04
VOC	1.99
NOx	99.29

33 **NEW SC**

PTI Num

FACILIT

Emissions Unit ID: **B008**

FACILITY DESCRIPTION	Chapter 31 modification of PTI 15-1251 issued 1/8/97 to increase the NOx hourly and annual allowables	CITY/TWP	Massillon (City)