



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

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: 16-02143

DATE: 8/21/2001

Matheson Tri Gas Inc
Les Gibson
1650 Enterprise Pkwy
Twinsburg, OH 44087

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, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

ARAQMD



**Permit To Install
Terms and Conditions**

**Issue Date: 8/21/2001
Effective Date: 8/21/2001**

FINAL PERMIT TO INSTALL 16-02143

Application Number: 16-02143
APS Premise Number: 1677130034
Permit Fee: **\$400**
Name of Facility: Matheson Tri Gas Inc
Person to Contact: Les Gibson
Address: 1650 Enterprise Pkwy
Twinsburg, OH 44087

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

**1650 Enterprise Pkwy
Twinsburg, Ohio**

Description of proposed emissions unit(s):

NOx Cylinder Purge, Shot Blasting.

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

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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.

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14. Construction Compliance Certification

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

15. Fees

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

B. Permit to Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	8.8
PM	2.2

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 (NOx Cylinder Purge) draining of residual nitrogen oxides (NOx) from compressed gas cylinders, air emissions of NOx vented to and controlled by a wet scrubber	OAC rule 3745-31-05	2.0 pounds/hour & 8.8 tons/year of NOx Air emissions of NOx shall be properly contained and vented to a wet scrubber system; the containment system shall be sufficient to essentially eliminate fugitive emissions of NOx from the emissions unit to the extent possible with good engineering design; and the wet scrubber system shall be properly operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

2. Additional Terms and Conditions

- 2.a The hourly and annual NOx emission limits are based upon the potential to emit. Therefore, no record keeping, deviation reporting, or emissions calculations are required to demonstrate compliance with these limits.

B. Operational Restrictions

- 1. All NOx emissions shall be vented to the scrubber at all times while the emissions unit is operating.

2. The pressure drop across the scrubber shall be continuously maintained within the operating range specified by the manufacturer, in inches of water, at all times while the emissions unit is in operation. Operation of the scrubber outside of this specified range is not necessarily indicative of an emission violation, but rather serves as a trigger level for maintenance and/or repair activities, or further investigations to establish corrective action.
3. The scrubber water flow rate shall be maintained at the manufacturer's recommended value, in gallons per minute, at all times while the emissions unit is in operation.
4. The pH of the scrubber liquor shall be maintained within the operating range recommended by the manufacturer.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall document when the wet scrubber system was not in service when the emissions unit was in operation.
2. The permittee shall employ properly installed, calibrated, operated and maintained equipment, in accordance with the manufacturer's recommendations, instructions and operating manuals, to monitor the pH of the scrubber liquor and continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation.
3. The permittee shall collect and record the following information each day the emissions unit is operating:
 - a. the static pressure drop across the scrubber, in inches of water, on a once per shift basis;
 - b. the scrubber water flow rate, in gallons per minute, on a once per shift basis;
 - c. the pH of the scrubber liquor on a once per shift basis; and
 - c. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

D. Reporting Requirements

1. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any record showing that the wet scrubber system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

2. The permittee shall submit quarterly deviation (excursion) reports to the Director (the appropriate District Office or local air agency) that identify all periods of time during which the following scrubber parameters were not maintained at or within the required levels:
 - a. the pressure drop across the scrubber;
 - b. the scrubber water flow rate; and
 - c. the pH of the scrubber liquor.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 2 of this permit.

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations: 2.0 pounds/hour & 8.8 tons/year of NO_x

Applicable Compliance Method: The above emission limitations are based on the potential to emit, as demonstrated below:

$$E_h = (P_{max})(EF); \text{ and}$$

$$E_y = (E_h)(8760 \text{ hours/year})(1 \text{ ton}/2000 \text{ lbs})$$

Where,

$E_h = 2.0$ pounds/hour of NO_x [hourly potential to emit];

$E_y = 8.8$ tons/year of NO_x [yearly potential to emit];

$P_{max} = 2.5$ cylinders/hour [maximum hourly cylinder process rate];

$EF = 0.8$ pound of NO_x/cylinder [NO_x emission factor determined from application].

If necessary, the permittee may be required to demonstrate compliance of the above limitations by testing in accordance with the procedures specified in US EPA Method 7E.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified

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Facility ID: 1677130034

Emissions Unit ID: **P002**

permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

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

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 (Cylinder Blaster) shot blast cleaning of compressed gas cylinder exteriors, process cyclone recycles shot blast material, air emissions of particulate matter (PM) vented to and controlled by a baghouse	OAC rule 3745-31-05	5% opacity from any stack, as a 6-minute average 0.5 pound/hour & 2.2 tons/year of PM Air emissions of PM shall be properly contained by an enclosure system and vented to a baghouse; the enclosure system shall be sufficient to essentially eliminate visible particulate emissions of fugitive dust from the emissions unit to the extent possible with good engineering design; and the baghouse shall be properly operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.
	OAC rule 3745-17-07 OAC rule 3745-17-11	The emission limitations required by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05.

2. Additional Terms and Conditions

- 2.a The above hourly PM emission limitation (regulated per OAC rule 3745-31-05) is greater

than the potential to emit for this emissions unit, as determined from permit application data. Therefore, no record keeping, reporting, or emissions calculations are required to demonstrate compliance with this emission limit.

B. Operational Restrictions

1. The permittee shall employ the baghouse at all times this emissions unit is in operation.
2. Except for an initial operating period after filter media replacement to attain design filtering efficiency, the pressure drop across the baghouse shall be continuously maintained within the operating range specified by the manufacturer, in inches of water, at all times while the emissions unit is in operation. Operation of the baghouse outside of this specified range is not necessarily indicative of an emission violation, but rather serves as a trigger level for maintenance and/or repair activities, or further investigations to establish corrective action.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall document when the baghouse system was not in service when the emissions unit was in operation.
2. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse serving this emissions unit, while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).
3. The permittee shall record the pressure drop across the baghouse on a daily basis.

D. Reporting Requirements

1. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any record showing that the baghouse was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse serving this emissions unit did not comply with the allowable range specified above.
3. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition 2 of this permit.

E. Testing Requirements

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

- a. Emission Limitation: 5% opacity from any stack, as a 6-minute average

Applicable Compliance Method: If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitations: 0.5 pound/hour & 2.2 tons/year of PM

Applicable Compliance Method: The above emission limitations are greater than the potential to emit, as demonstrated below:

$$E_h = (P_{\max})(EF); \text{ and}$$

$$E_y = (E_h)(8760 \text{ hours/year})(1 \text{ ton}/2000 \text{ lbs})$$

Where,

$$E_h = 0.182 \text{ pound/hour of PM [hourly potential to emit];}$$

$$E_y = 0.797 \text{ ton/year of PM [yearly potential to emit];}$$

$$P_{\max} = 10 \text{ cylinders/hour [maximum hourly cylinder process rate];}$$

$$EF = 0.0182 \text{ pound of PM/cylinder [PM emission factor determined from application].}$$

If necessary, the permittee may be required to demonstrate compliance of the above limitation by testing in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(10).

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

NEW SOURCE REVIEW FORM B

PTI Number: 16-02143 Facility ID: 1677130034

FACILITY NAME Matheson Tri Gas Inc

FACILITY DESCRIPTION NOx Cvlinder Purge. Shot Blasting. CITY/TWP Twinsburg

Emissions Unit ID: P003

SIC CODE 2813 SCC CODE 4-90-002-99 EMISSIONS UNIT ID P002

EMISSIONS UNIT DESCRIPTION (NOx Cylinder Purge) draining of residual nitrogen oxides (NOx) from compressed gas cylinders, air emissions of NOx vented to and controlled by a wet scrubber

DATE INSTALLED 4/90

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					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides				2.0 lbs/hr	8.8
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

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

wet scrubber

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 containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 16-02143

Facility ID: 1677130034

FACILITY NAME Matheson Tri Gas Inc

FACILITY DESCRIPTION NOx Cvlinder Purge. Shot Blasting.

CITY/TWP Twinsburg

Emissions Unit ID: **P003**

Modeling form/results	<input type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PTI Application (complete or partial)*	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BAT Study	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other/misc.	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* 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 ENTER PTI NUMBER HERE

A. Source Description

B. Facility Emissions and Attainment Status

C. Source Emissions

D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

Emission calculations are included in Section E "Testing Requirements" of the PTI special T/Cs.

Please complete:

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

<u>Pollutant</u>	<u>Tons Per Year</u>
NOx	8.8
PM	2.2