State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
SANDUSKY 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: 03-13824

DATE: 10/29/2002

Magnesium Refining Technologies Inc
Chris Kiser
4878 Chaincraft Road 4878 Chaincraft Road
Garfield Hts, OH 44125

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

CC: **USEPA** **NWDO**

OhioEPA

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 10/29/2002**
Terms and Conditions	**Effective Date: 10/29/2002**

FINAL PERMIT TO INSTALL 03-13824

Application Number:	03-13824
APS Premise Number:	0372010227
Permit Fee:	**$800**
Name of Facility:	Magnesium Refining Technologies Inc
Person to Contact:	Chris Kiser
Address:	4878 Chaincraft Road 4878 Chaincraft Road Garfield Hts, OH 44125

Location of proposed air contaminant source(s) [emissions unit(s)]:
301 Sandusky County Rd 177
Bellevue, **Ohio**

Description of proposed emissions unit(s):
Modification to PTI 03-0117 issued 12/22/99 to increase HCL emission limitation and to remove operational restriction requiring the use of Class I scrap.

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 Record keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping 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 record keeping 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
PE	3.68
HCl	4.6
NO_x	32.9
CO	18.4
PE (fugitive)	0.26
HCl (fugitive)	0.80

Emissions Unit ID: **P901**

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	
P901 - 18,000 lb natural gas fired magnesium melt furnace A (Modification to PTI 03-10117 issued 12/22/99 to increase HCl emission limitation and to change operational restriction regarding the use of only Class I scrap).	OAC rule 3745-31-05 (A)(3)	OAC rule 3745-17-11(B) OAC rule 3745-17-07(A) OAC rule 3745-17-08(B) OAC rule 3745-17-07(B)

Applicable Emissions Limitations/Control Measures	
See A.2.a	See A.2.c
Baghouse emissions: 0.42 lb PE/hr, 1.84 TPY	See A.2.d
0.5 lb HCl/hr, 2.2 TPY	
3.75 lbs NO_x/hr, 16.45 TPY	
2.1 lbs CO/hr, 9.2 TPY	
Visible particulate emissions from the baghouse shall not exceed 3 percent opacity as a six-minute average.	
Fugitive Emissions:	
0.13 ton PE/yr	
0.45 ton HCl/yr	
Visible fugitive particulate emissions from building roof vents shall not exceed 10 percent opacity as a three-minute average.	
There shall be no visible emissions from any other building opening, including doors, windows, air intake vents, etc. other than the baghouse stack and building roof vent emissions.	
See A.2.b	See A.2.b

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse with a 90% capture efficiency and a 95% removal efficiency for PE.*

BAT control requirements for this emissions unit has also been determined to include the use of pre-coated aluminum silicate bags and a continuous aluminum silicate feed system to the baghouse achieving a 97% removal efficiency for HCl (87.3% overall control efficiency based on 90% capture efficiency from utilization of same capture system used for PE).

*The 95% removal efficiency for PE is based on the removal efficiency between the inlet and outlet of the baghouse only. The inlet to the continuous aluminum silicate feed system shall not be used as the inlet to the control system for purposes of determining removal efficiency.

BAT requirements also include compliance with the terms and conditions of this permit.

2.b The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-05

2.c Magnesium Refining Technologies Inc. is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.d This emissions unit is exempt from the visible particulate emissions limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 10 inches of water.

2. The feed rate of aluminum silicate, in pounds per hour, to the baghouse control system shall be maintained at a value not less than 11.90 pounds per hour.

3. All roof vents in the melt room shall remain closed.

4. The pemittee shall initiate and complete the baghouse cleaning cycle once every 24 hours of

operation or whenever it is observed that the differential pressure drop across the baghouse is equal to or greater than 7 inches of water, whichever occurs first.

5. The permittee shall limit the entire cleaning cycle for the baghouse, from start to finish, to 30 minutes during all hours of operation.

6. The permittee shall, after completion of each cleaning cycle, pre-coat the baghouse with 40 pounds of pearlite if the differential pressure across the baghouse is greater than or equal to 7 inches of water, and 80 pounds of pearlite if the differential pressure across the baghouse is less than 7 inches of water.

7. The permittee shall, at the beginning of each cleaning cycle, reduce the airflow to 10% of the normal flow through the baghouse by shutting down the inlet makeup air fans and turning down the damper to 10%.

8. The permittee shall cover both crucibles with flux to control burning during the cleaning operation.

9. The permittee shall clean the bags in the baghouse using the high volume low pressure reverse air-cleaning system.

10. The permittee shall only use Class 1, Clean Magnesium Scrap (clean scrap) and/or dross ingot chunks consisting of clean magnesium dye casting residues and clean painted castings at this facility. Class 1, clean scrap is described as:

a. Free from paint, dirt, and grease;

b. Dry and must not include water;

c. Does not present an abnormally high level of oxidation;

d. Free of floor sweepings, drippings, dross sludge, and flux residues;

e. Free of radioactive materials;

f. Free from extraneous materials and other metals and alloys, including but without limiting the generality of foregoing:

i. Combustible material;

ii. Foreign metallic materials (steel, copper, etc.);

iii. Closed pressurized vessels and containers such as lighters, fire extinguishers, aerosol bottles;

iv. Flammable materials or containers which may have contained such materials, and;

v. Plastic or metallic inserts in magnesium parts.

C. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units P001 & P002 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model. The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the MAGLC. The following summarizes the results of the modeling for the "worst case" pollutants:

Pollutant: HCl
TLV (mg/m^3): 5.50
Maximum Hourly Emission Rate (lbs/hr): 1.0
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 7.26
MAGLC (ug/m^3): 130.95

Pollutant: MgO
TLV (mg/m^3): 10
Maximum Hourly Emission Rate (lbs/hr): See Air Emissions Summary PM_{10} rates
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 6.1
MAGLC (ug/m^3): 238

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. Changes in the composition of the materials used, or the use of new materials, that would

result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

3. For purposes of determining the aluminum silicate feed rate to the baghouse control system, the permittee shall collect and record the following information each time the baghouse control system in replenished with aluminum silicate:

a. The amount of aluminum silicate placed into the system feed hopper, in pounds;

b. The total number of hours of operation of the baghouse control system since the aluminum silicate feed hoppers was last filled;

c. The average hourly aluminum silicate feed rate to the baghouse control system i.e., (C.3.a)/(C.3.b), in pounds per hour (average)

4. The permittee shall properly install, operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse every six (6) hours of operation.

5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for the following: (a) any visible particulate emissions from the building housing this emissions unit, (b) any visible particulate emissions from the building roof vents. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. The color of the emissions;

b. The total duration of any visible emission incident; and

c. Any corrective actions taken to eliminate the visible emissions.

6. The permittee shall maintain the following records for each baghouse cleaning cycle:

a. Hours of operation between baghouse cleaning cycles;

b. The length of time for each cleaning cycle, in minutes;

c. The differential pressure across the baghouse after completion of each cleaning cycle;

d. The amount of aluminum silicate (pre-coat) fed to the baghouse after completion of each cleaning cycle;

e. At the beginning of each cleaning cycle, the percent reduction in air flow through the baghouse.

7. The permittee shall maintain daily records that document any time periods when:

a. All roof vents in the melt room were not closed

b. Crucibles were not covered with flux to control burning during the cleaning operation;

c. The bags in the baghouse were not cleaned using the high volume low pressure reverse air-cleaning system.

d. The permittee uses any material other than Class 1, Clean Magnesium Scrap and/or dross ingot chunks, the permittee shall maintain a record of the type and quantity of material melted in this emissions unit.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any and all exceedances of the following:

a. All periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

b. Any time period when the feed rate of aluminum silicate to the baghouse control system was below 11.90 pounds per hour.

c. Any baghouse cleaning cycle which lasted more than thirty minutes.

d. Any time when it is observed that the baghouse differential pressure exceeded 7 inches of water and the baghouse was not cleaned.

e. Any day during which the baghouse was not cleaned at least once every 24 hours of operation.

f. Any time when less than the amount of pearlite required in section B.6 was added to the baghouse after completion of the cleaning cycle.

These deviation reports shall be submitted in accordance with the general terms and conditions of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the building housing the emissions and/or from the building roof vents, and (b) describe any corrective actions taken to eliminate the visible

particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing any of the following:

a. Any time when all roof vents in the melt room were not closed.

b. Any time when the crucibles were not covered with flux to control burning during the cleaning operation.

c. Any time the bags in the baghouse were not cleaned using the high volume low pressure reverse air-cleaning system.

d. Any time when a material other than Class I, Clean Magnesium Scrap and/or dross ingot chunks were used in this emissions unit.

The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the event.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
0.42 lb PE/hr (baghouse)

Applicable Compliance Method:
The emission limitation was developed by adding the controlled emissions from furnace melting operations (0.27 lb/hr) with the controlled emissions from aluminum silicate feed to the baghouse (0.15 lb/hr). The controlled emissions from furnace melting operations were calculated by multiplying an uncontrolled emission factor of 4.0 lbs /ton Mg from AP-42, Table 12.12-2 (revised 11/94) by the maximum furnace capacity of 1.5 tons/hr and applying a 90% capture efficiency and a 95% removal efficiency. The controlled emissions from aluminum silicate feed to the baghouse were calculated by multiplying a feed rate of 3 lbs/hr by a 95% removal efficiency. If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission testing using Methods 1-5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:
1.84 tons PE/year (stack)

Applicable Compliance Method:

The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Emission Limitation:
0.13 ton PE/yr (fugitive)

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an uncontrolled emission factor of 4.0 lbs /ton Mg from AP-42, Table 12.12-2 (revised 11/94) by the maximum furnace capacity of 1.5 tons/hr, apply a capture efficiency of 90% for the baghouse control system and a control efficiency of 95% for the building enclosure. Multiply by a maximum operating schedule of 8760 hours per year, and divide by 2000 lbs/ton.

d. Emission Limitation:
0.5 lb HCl/hr (stack)

Applicable Compliance Method:
The 0.5 lb/hr limitation is based on the emissions unit's potential to emit. The potential to emit is based on a March 6-8, 2002 stack test. Therefore, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance. If required, compliance with the hourly HCl limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 26.

e. Emission Limitation:
2.2 tons HCl/yr (stack)

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hour per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

f. Emission Limitation:
0.45 ton HCl/yr (fugitive)

Applicable Compliance Method:
The permittee shall demonstrate compliance by applying a 90% capture efficiency to an uncontrolled mass emission rate of 4.49 tons HCl per year. The uncontrolled mass emission rate was determined by multiplying an uncontrolled emission rate of 1.026 lbs HCl/hr (as determined by a stack test on 11/98) by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton.

g. Emission Limitation:
3.75 lbs NO_x/hr

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an emission factor of 2.5 lbs NO_x/ton of magnesium produced (FIRE 6.23 Data System, released Oct 2000 - SCC Code 304000601) by the maximum furnace capacity of 1.5 tons/hr. If required, compliance with the hourly NO_x limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 7.

h. Emission Limitation:
16.42 tons NO_x/yr

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

i. Emission Limitation:
2.1 lbs CO/hr

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an emission factor of 1.4 lbs CO/ton of magnesium produced (Table 4.1-3 from Background Report for AP-42 Section 12.12, 11/94) by the maximum furnace capacity of 1.5 tons/hr. If required, compliance with the hourly CO limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 10.

j. Emission Limitation:

9.2 tons CO/yr

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

k. Emission Limitation:
Visible particulate emissions from the baghouse shall not exceed 3 percent opacity as a six-minute average.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with USEPA Reference Method 9 of 40 CFR Part 60, Appendix A.

l. Emission Limitation:
Visible fugitive particulate emissions from building roof vents shall not exceed 10 percent opacity as a three-minute average.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with USEPA Reference Method 9 of 40 CFR Part 60, Appendix A.

m. Emission Limitation:
There shall be no visible emissions from any other building opening, including doors, windows, air intake vents, etc. other than the baghouse stack and building roof vent emissions.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A, Method 22.

F. Miscellaneous Requirements

None

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	
P902 - 18,000 lb natural gas fired magnesium melt furnace B (Modification to PTI 03-10117 issued 12/22/99 to increase the HCl limitation and to change operational restriction requiring the use of only Class I scrap)	OAC rule 3745-31-05 (A)(3)	OAC rule 3745-17-11(B) OAC rule 3745-17-07(A) OAC rule 3745-17-08(B) OAC rule 3745-17-07(B)

Applicable Emissions Limitations/Control Measures	See A.2.c See A.2.d
See A.2.a	
Baghouse emissions: 0.42 lb PE/hr, 1.84 TPY	
0.5 lb HCl/hr, 2.2 TPY	
3.75 lbs NO_x/hr, 16.45 TPY	
2.1 lbs CO/hr, 9.2 TPY	
Visible particulate emissions from the baghouse shall not exceed 3 percent opacity as a six-minute average.	
.Fugitive Emissions:	
0.13 ton PE/yr	
0.45 ton HCl/yr	
Visible fugitive particulate emission from building roof vents shall not exceed 10 percent opacity as a three-minute average	
No visible emissions from any other building opening, including doors, windows, air intake vents, etc. other than the baghouse stack and building roof vent emissions.	
See A.2.b	
See A.2.b	

2. Additional Terms and Conditions

2.a "Best Available Technology" (BAT) control requirements for this emissions unit has been determined to be the use of a baghouse with a 90% capture efficiency and a 95% removal efficiency for PE.*

BAT control requirements for this emissions unit has also been determined to include the use of pre-coated aluminum silicate bags and a continuous aluminum silicate feed system to the baghouse achieving a 97% removal efficiency for HCl (87.3% overall control efficiency based on 90% capture efficiency from utilization of same capture system used for PE).

*The 95% removal efficiency for PE is based on the removal efficiency between the inlet and outlet of the baghouse only. The inlet to the continuous aluminum silicate feed system shall not be used as the inlet to the control system for purposes of determining removal efficiency.

BAT requirements also include compliance with the terms and conditions of this permit.

2.b The emission limitation specified by this rule is less stringent that the emission limitation established pursuant to OAC rule 3745-31-05

2.c Magnesium Refining Technologies Inc. is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

2.d This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-17(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 10 inches of water.

2. The feed rate of aluminum silicate, in pounds per hour, to the baghouse control system shall be maintained at not less than 11.90 pounds per hour.

3. All roof vents in the melt room shall remain closed.

4. The permittee shall initiate and complete the baghouse cleaning cycle once every 24 hours of

operation or whenever it is observed that the differential pressure drop across the baghouse is equal to or greater than 7 inches of water, whichever occurs first.

5. The permittee shall limit the entire cleaning cycle for the baghouse, from start to finish, to 30 minutes during all hours of operation.

6. The permittee shall, after completion of each cleaning cycle, pre-coat the baghouse with 40 pounds of pearlite if the differential pressure across the baghouse is greater than or equal to 7 inches of water, and 80 pounds of pearlite if the differential pressure across the baghouse is less than 7 inches of water.

7. The permittee shall, at the beginning of each cleaning cycle, reduce the airflow to 10% of the normal flow through the baghouse by shutting down the inlet makeup air fans and turning down the damper to 10%.

8. The permittee shall cover both crucibles with flux to control burning during the cleaning operation.

9. The permittee shall clean the bags in the baghouse using the high volume low pressure reverse air-cleaning system.

10. The permittee shall only use Class 1, Clean Magnesium Scrap (clean scrap) and/or dross ingot chunks consisting of clean magnesium dye casting residues and clean painted castings at this facility. Class 1, clean scrap is described as:

a. Free from paint, dirt, and grease;

b. Dry and must not include water;

c. Does not present an abnormally high level of oxidation;

d. Free of floor sweepings, drippings, dross sludge, and flux residues;

e. Free of radioactive materials;

f. Free from extraneous materials and other metals and alloys, including but without limiting the generality of foregoing:

i. Combustible material;

ii. Foreign metallic materials (steel, copper, etc.);

iii. Closed pressurized vessels and containers such as lighters, fire extinguishers, aerosol bottles;

iv. Flammable materials or containers which may have contained such materials, and;

v. Plastic or metallic inserts in magnesium parts.

C. Monitoring and/or Record keeping Requirements

1. The permit to install for emissions units P001 & P002 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model. The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the MAGLC. The following summarizes the results of the modeling for the "worst case" pollutants:

Pollutant: HCl
TLV (mg/m^3): 5.5
Maximum Hourly Emission Rate (lbs/hr): 1.0
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 7.26
MAGLC (ug/m^3): 130.95

Pollutant: MgO
TLV (mg/m^3): 10
Maximum Hourly Emission Rate (lbs/hr): See Air Emissions Summary PM_{10} rates
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 6.1
MAGLC (ug/m^3): 238

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. Changes in the composition of the materials used, or the use of new materials, that would

result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

2. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. Where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

3. For purposes of determining the aluminum silicate feed rate to the baghouse control system, the permittee shall collect and record the following information each time the baghouse control system in replenished with aluminum silicate:

a. The amount of aluminum silicate placed into the system feed hopper, in pounds;

b. The total number of hours of operation of the baghouse control system since the aluminum silicate feed hoppers was last filled;

c. The average hourly aluminum silicate feed rate to the baghouse control system i.e., (C.3.a)/(C.3.b), in pounds per hour (average)

4. The permittee shall properly install, operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse every six (6) hours of operation.

5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for the following: (a) any visible particulate emissions from the building housing this emissions unit, (b) any visible particulate emissions from the building roof vents. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. The color of the emissions;

b. The total duration of any visible emission incident; and

c. Any corrective actions taken to eliminate the visible emissions.

6. The permittee shall maintain the following records for each baghouse cleaning cycle:

a. Hours of operation between baghouse cleaning cycles;

b. The length of time for each cleaning cycle, in minutes;

c. The differential pressure across the baghouse after completion of each cleaning cycle;

d. The amount of aluminum silicate (pre-coat) fed to the baghouse after completion of each cleaning cycle;

e. At the beginning of each cleaning cycle, the percent reduction in air flow through the baghouse.

7. The permittee shall maintain daily records that document any time periods when:

a. All roof vents in the melt room were not closed

b. Crucibles were not covered with flux to control burning during the cleaning operation;

c. The bags in the baghouse were not cleaned using the high volume low pressure reverse air-cleaning system.

d. The permittee uses any material other than Class 1, Clean Magnesium Scrap and/or dross ingot chunks, the permittee shall maintain a record of the type and quantity of material melted in this emissions unit.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify any and all exceedances of the following:

a. All periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

b. Any time period when the feed rate of aluminate silicate to the baghouse control system was below 11.90 pounds per hour.

c. Any baghouse cleaning cycle which lasted more than thirty minutes.

d. Any time when it is observed that the baghouse differential pressure exceeded 7 inches of water and the baghouse was not cleaned.

e. Any day during which the baghouse was not cleaned at least once every 24 hours of operation.

f. Any time when less than the amount of pearlite required in section B.6 was added to the baghouse after completion of the cleaning cycle.

These deviation reports shall be submitted in accordance with the general terms and conditions of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the building housing the emissions and/or from the building roof vents, and (b) describe any corrective actions taken to eliminate the visible

particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing any of the following:

a. Any time when all roof vents in the melt room were not closed.

b. Any time when the crucibles were not covered with flux to control burning during the cleaning operation.

c. Any time the bags in the baghouse were not cleaned using the high volume low pressure reverse air-cleaning system.

d. Any time when a material other than Class I, Clean Magnesium Scrap and/or dross ingot chunks were used in this emissions unit.

The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the event.

E. Testing Requirements

1. Compliance with the emission limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:
0.42 lb PE/hr (baghouse)

Applicable Compliance Method:
The emission limitation was developed by adding the controlled emissions from furnace melting operations (0.27 lb/hr) with the controlled emissions from aluminum silicate feed to the baghouse (0.15 lb/hr). The controlled emissions from furnace melting operations were calculated by multiplying an uncontrolled emission factor of 4.0 lbs /ton Mg from AP-42, Table 12.12-2 (revised 11/94) by the maximum furnace capacity of 1.5 tons/hr and applying a 90% capture efficiency and a 95% removal efficiency. The controlled emissions from aluminum silicate feed to the baghouse were calculated by multiplying a feed rate of 3 lbs/hr by a 95% removal efficiency. If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission testing using Methods 1-5 of 40 CFR Part 60, Appendix A..

b. Emission Limitation:
1.84 tons PE/year (stack)

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

c. Emission Limitation:
0.13 ton PE/yr (fugitive)

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an uncontrolled emission factor of 4.0 lbs /ton Mg from AP-42, Table 12.12-2 (revised 11/94) by the maximum furnace capacity of 1.5 tons/hr, apply a capture efficiency of 90% for the baghouse control system and a control efficiency of 95% for the building enclosure. Multiply by a maximum operating schedule of 8760 hours per year, and divide by 2000 lbs/ton.

d. Emission Limitation:
0.5 lb HCl/hr (stack)

Applicable Compliance Method:
The 0.5 lb/hr limitation is based on the emissions unit's potential to emit. The potential to emit is based on a March 6-8, 2002 stack test. Therefore, no record keeping, deviation reporting, or compliance method calculations are required to demonstrate compliance. If required, compliance with the hourly HCl limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 26.

e. Emission Limitation:
2.2 tons HCl/yr (stack)

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hour per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

f. Emission Limitation:

0.45 ton HCl/yr (fugitive)

Applicable Compliance Method:
The permittee shall demonstrate compliance by applying a 90% capture efficiency to an uncontrolled mass emission rate of 4.49 tons HCl per year. The uncontrolled mass emission rate was determined by multiplying an uncontrolled emission rate of 1.026 lbs HCl/hr (as determined by a stack test on 11/98) by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton.

g. Emission Limitation:
3.75 lbs NO_x/hr

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an emission factor of 2.5 lbs NO_x/ton of magnesium produced (FIRE 6.23 Data System, released Oct 2000 - SCC Code 304000601) by the maximum furnace capacity of 1.5 tons/hr. If required, compliance with the hourly NO_x limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 7.

h. Emission Limitation:
16.42 tons NO_x/yr

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

i. Emission Limitation:
2.1 lbs CO/hr

Applicable Compliance Method:
The permittee shall demonstrate compliance by multiplying an emission factor of 1.4 lbs CO/ton of magnesium produced (Table 4.1-3 from Background Report for AP-42 Section 12.12, 11/94) by the maximum furnace capacity of 1.5 tons/hr. If required, compliance with the hourly CO limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A, Methods 1-4 and Method 10.

j. Emission Limitation:
9.2 tons CO/yr

Applicable Compliance Method:
The ton per year limitation was developed by multiplying the lb/hr limitation by a maximum operating schedule of 8,760 hours per year and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

k. Emission Limitation:
Visible particulate emissions from the baghouse shall not exceed 3 percent opacity as a six-minute average.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with USEPA Reference Method 9 of 40 CFR Part 60, Appendix A.

l. Emission Limitation:
Visible fugitive particulate emissions from building roof vents shall not exceed 10 percent opacity as a three-minute average.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with USEPA Reference Method 9 of 40 CFR Part 60, Appendix A.

m. Emission Limitation:
There shall be no visible emissions from any other building opening, including doors, windows, air intake vents, etc. other than the baghouse stack and building roof vent emissions.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance in accordance with 40 CFR Part 60, Appendix A, Method 22.

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 03-13824 Facility ID: 0372010227

FACILITY NAME Magnesium Refining Technologies Inc

FACILITY DESCRIPTION Secondary nonferous metals CITY/TWP Bellevue

Emissions Unit ID: **P902**

SIC CODE 3341 SCC CODE 3-04-006-01 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION 18,000 lb natural gas fired crucible magnesium melt furnace A (modification to PTI 03-0117 issued 12/22/99

DATE INSTALLED

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}	Attainment			0.42 lbs/hr	1.8 tpy, 0.79 tpy fugitive
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides	Attainment			3.75 lbs/hr	16.43 tpy
Carbon Monoxide	Attainment			2.1 lbs/hr	9.2 tpy
Lead					
Other: Air Toxics				0.5 lbs/hr HCl	2.2 tpy HCl, 0.45 tpy fugtive

APPLICABLE FEDERAL RULES:

NSPS? n/a NESHAP? n/a PSD? n/a OFFSET POLICY? n/a

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

Enter Determination use of baghouse with a 90% capture efficiency and 95% removal efficiency for PE with use of use of pre-coated aluminum silicate bags and a continuous aluminum silicate feed system to the baghouse achieving a 97% removal efficiency for HCl

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

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

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: HCl, MgO

7051.wpd

NEW SOURCE REVIEW FORM B

PTI Number: 03-13824 Facility ID: 0372010227

FACILITY NAME Magnesium Refining Technologies Inc

FACILITY DESCRIPTION Secondary nonferous metals CITY/TWP Bellevue

Emissions Unit ID: **P902**

SIC CODE 3341 SCC CODE 3-04-006-01 EMISSIONS UNIT ID P002

EMISSIONS UNIT DESCRIPTION 18,000 lb natural gas fired crucible magnesium melt furnace B (modification to PTI 03-0117 issued 12/22/99

DATE INSTALLED

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}				0.42 lbs/hr	1.8 tpy, 0.79 tpy fugitive
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides				3.75 lbs/hr	16.43 tpy
Carbon Monoxide				2.1 lbs/hr	9.2 tpy
Lead					
Other: Air Toxics				0.5 lbs/hr HCl	2.2 tpy HCl, 0.45 tpy fugtive

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

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

Enter Determination: use of baghouse with a 90% capture efficiency and 95% removal efficiency for PE with use of use of pre-coated aluminum silicate bags and a continuous aluminum silicate feed system to the baghouse achieving a 97% removal efficiency for HCl

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

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

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaiminants 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: HCl, MgO